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**41<sup>st</sup> WEDC International Conference, Egerton University, Nakuru, Kenya, 2018****TRANSFORMATION TOWARDS SUSTAINABLE  
AND RESILIENT WASH SERVICES****Household access to safe water, sanitation and hygiene  
in Kajiado County, Kenya***B. Mbogo (Kenya), S. Karanja & D. Lugayo***PAPER 2985**

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*A cross-sectional study was carried out in Kajiado central, East, West and south sub-counties with women aged 18 to 49 years. Survey targeted 768 women of reproductive age. National access to safe water in Kenya is currently at 63% while sanitation lags behind at only 30%. From the survey, access to safe water was found to be 62.3% compared to county average of 66.2%. More than half of the households (59.2%) do not have access to a toilet facility with 98.4% of those without access to a toilet defecating in the bush (Open defecation). Hand washing practice was found to be at 95.3%. However, only 40.3% of the respondents use appropriate hand washing facilities. Access to safe water in the county is still low compared to the national averages. The survey revealed that communities in the county get their water from unsafe sources.*

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**Background**

Access to improved water sources in Kenya is currently at 63% while sanitation lags behind at only 30%. In rural areas, 53% of the population in Kenya source water from unsafe surface sources (lakes, rivers and ponds). Over one-third of the country spends 30 minutes or more to reach their water source (which often requires 2-3 trips to collect each day). The burden is much greater in rural areas where 40% of rural households require 30 minutes or more per 20 Litres collected (1).

According to Kenya demographic and household survey (KDHS 2014), in 49% of households, adult women (over the age of 15) are responsible for water collection. In rural households, adult women are six times more likely to be the ones to fetch water (58% v 9%) than adult men. In urban households, the ratio is 2:1 (22% v 10%). Children under the age of 15yrs responsible for fetching water account for 5% of all households (2).

Although access to safe water in Kajiado County is at 66.2%, there exist great disparities between the rural coverage and the urban coverage (2). For households located 30 minutes or more from their water source, (40% in rural areas) women or children may be required to collect water for over two hours to collect sufficient water for a family of four. Kajiado County being an Arid and Semi-arid Land (ASAL) area, the primary felt need of the communities is access to sustainable safe water. Access to safe water and improved sanitation and hygiene is still a great challenge, with women, girls and children forced to walk over 5 kilometres to fetch the essential commodity. The water collected is normally from contaminated sources therefore making it unsafe for drinking. In terms of women and girls sanitation and hygiene, it poses a risk of water related diseases and infections especially when they use the water for menstrual hygiene. The objectives of this study was assess the extent to which households, facilities and schools have access to and use WASH services in selected sub-counties in Kajiado county.

**Methodology**

This is a cross-sectional study carried out in Kajiado central, Kajiado East, Kajiado West and Kajiado south sub-counties with women aged 18 to 49 years. A two-stage probability sampling strategy was used to select the target population and a total of 768 women of reproductive age were targeted in the survey. Data was collected using Open Data Kit platform (ODK), a mobile data collection tool. Quantitative data was

collected electronically using ODK platform. The questionnaires were programmed using ODK build and the tool installed in all mobile devices. Each research assistant was assigned an android mobile phone which they used to administer the questionnaire. Once they completed each questionnaire, they saved the forms on the device and submitted the filled questionnaires to the Amref server.

Checks that were put in place while programming the questionnaire (relevance and constraint) to ensure completeness of data and that those interviewed were within the inclusion criteria. Another level of verification was done by the ODK aggregate administrator who was a member of the investigative team that was with the team in the field. Any erroneous entries were verified and corrected appropriately. The final file was then downloaded, data cleaned and exported to SPSS for analysis. Data was analysed descriptively.

The protocol was approved by the Amref Health Africa Ethics and Scientific Review Committee and all participants provided written informed consent prior to being interviewed.

## Results

The study response rate was 95.3% hence we managed to interview 732 women of reproductive age. The results below are organized into access to water, sanitation and hygiene.

### Access to water

Access to safe water was found to be 62.3% compared to county average of 66.2% and the national average of 62.0%. Generally, the water is from community boreholes with 47.5% of the respondents reporting that the water is available throughout the year while 35.2% reporting that the water availability is unpredictable. The survey showed that women (91.1%) and girls (5.4%) are primarily responsible for fetching water with a mean distance to water source being 2.2 kilometres and the maximum being 20 kilometres. The average amount of time spent to fetch water in the county was found to be approximately 2 hours with the minimum amount of time reported being 1.5 hours while the maximum amount of time taken was reported to be 7 hours. The highest water contaminator was found to be watering animals around water sources (51.5%), Washing clothes (42.8%) and Bathing (27.2%). However, community awareness to make water safe was found to be high with measures taken to make water safe were reported as boiling (60.4%), Chemical treatment (44.1%) and (18.0%) do nothing. Traditional methods of water treatment accounted for 22.5%. Further, access to a toilet was found to be 40.9%. The above results are summarized in the table 1 below:

Kajiado County is majorly semi arid water is retained in riverbeds under sand where communities draw from scoop holes which are not safe sources. Due to the high cost of sinking boreholes, only a few have been done leaving the larger population remains underserved. Management of these boreholes has been left largely to elected community leaders who have limited skills in management and this has left majority of them broken down without being repaired in good time hence affecting water availability and reliability. Consequently, cultural gender division of roles has placed the responsibility of fetching water to women and girls. This is intertwined with the roles of domestic work such as cooking, laundry, feeding and cleaning children which by their very nature require water.

### Sanitation

The survey revealed that more than half of the households (59.2%) do not have access to a toilet facility. The mean distance to the toilet was found to be 36.5m with the maximum distance reported being 300m. Further, 75.3% of the respondents reported that the toilet facilities are shared. Out of those who reported that they do not have access to a toilet, 98.4% of them reported that they defecate in the bush (Open defecation). The rest reported to be using a neighbour's or nearby church's toilet. The low access to and utilization of toilet facilities could be attributed to lack of awareness, attitudes and total ignorance of effects of open defecation to their health. Other reasons were for lack of toilets were: Its expensive (58.4%); I don't see the need (21.9%); Culture forbids (5.1%); I don't like the smell (2.3%) and other reasons accounted for (12.2%).

### Hand washing practices

The survey revealed that 95.3% of the respondents reported practicing handwashing. However, only 40.3% of the respondents reported to use appropriate hand washing facilities. (Leaky tin, tap outside house, tap inside house, and pour water using a container). Hand washing without proper materials like soap and clean water can lead to re contamination and spread of water related diseases.

## Conclusion

Access to safe water in the county is still low compared to the national averages. The survey revealed that communities in the county get their water from unsafe sources. To exacerbate the matter, the unsafe water sources are not reliable. Water is mainly from community boreholes which are normally a distant from homesteads and the water collected per day is normally not enough for all the household uses. Open defecation is still widely practiced in this community.

## Lessons learnt

1. **Involvement of women:** Women play a crucial role in accelerating access to sanitation and hygiene services at household level and so there is need to explicitly involve them right from triggering to follow-ups, verification and certification. This however should not be mistaken to mean that men have no role in sanitation. They are equally important in that they are the resource providers and are needed by the women to actually construct the latrines.
2. **Involvement of key community leaders:** Community leaders are highly respected in the Maasai community and when these leaders pass a message, it is heard and acted upon by everyone. These leaders should be targeted as sanitation ambassadors to encourage the communities and accelerate uptake and use of improved sanitation facilities.
3. **Prepaid metering of communal water sources:** Financial sustainability of community water project can be ensured through pre-paid metering of water supply. This reduces non-revenue water losses, and ensures transparent management of water revenues through an online dashboard.

Indicator	All four sub-counties	Kajiado South	Kajiado West	Kajiado Central	Kajiado East
Proportion of household with access to safe water	62.3%	72.7%	11.6%	75.0%	52.7%
Proportion of households with main source of water as borehole	42.5%	30.9%	6.3%	62.1%	56.5%
Proportion of respondents stating fetching water is responsibility for women and girls	96.5%	98.3%	98.9%	95.3%	94.6%
% of household stating water collected is enough water for household use	56.6%	42.7%	6.3%	47.1%	32.2%
Highest contaminator of water Animal Washing clothes Bathing	51.5% 42.8% 29.2%	-	-	-	-
Proportion of respondents practicing hand washing	95.3%	95%	100%	96.7%	91.8%
Percentage of target population practicing appropriate hand washing behavior	40.3%	-	-	-	-

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