FACTSHEET

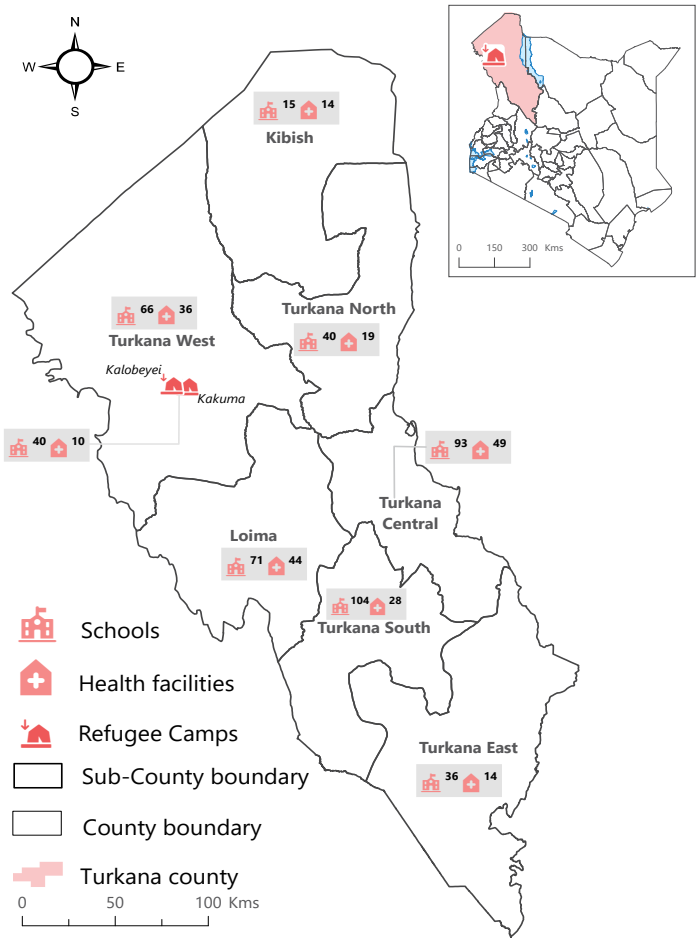
WASH-related Needs Assessment in Schools and Health Facilities in Turkana County

July 2024 | Turkana Host and Refugee Community

Key Messages

- **Inadequate sanitation facilities in both host and refugee communities** contribute to heightened health risks. In particular, schools in the host community had **a high pupil-to-toilet ratio,** highlighting the need for improved sanitation infrastructure.
- In the host and refugee community, **health facilities' and schools' hand-washing facilities were often inadequate,** with a lack of soap and water reducing the effectiveness of hand-washing. In addition, there was a notable **absence of signs for proper waste disposal** and the majority of the **staff were not trained on waste disposal** protocols, posing further health risks.
- In the host community, **sanitation facilities were the most commonly reported priority Water Sanitation and Hygiene (WASH) need in HFs and schools**, while in the refugee community, **water was identified as the primary** WASH need for most HFs and schools.

Coverage



Context and Rationale

Kenya's vulnerability to climate impacts, such as floods and prolonged droughts, can partly be attributed to its current institutional limitations in disaster risk management and effective response measures.[1] According to the Kenya Red Cross Society (KRCS), approximately 1,967 schools and 62 HFs were affected by the floods in the most affected locations in Kenya as of May 2024.[2]

The floods experienced in the last quarter of 2023 caused extensive damage to property and infrastructure in Turkana County, impacting the host community, refugees, and internally displaced persons (IDPs). Some WASH facilities in schools and health facilities (HFs) were damaged due to the large number of people seeking refuge in these institutions. For example, Tarach Secondary School in Kakuma served as a rescue center for IDPs, while other facilities were completely destroyed. In Turkana North, Kerio Delta and Lokangae Early Childhood Development Centre (ECD) and Lokangae Health Facilities were submerged.[3] The refugee influx into camps in Turkana[4] also added to the constraints on WASH facilities.

While household-level water quality assessments are routinely conducted in the refugee camps located in Turkana, there is a lack of updated WASH data in schools and HFs, posing a significant health risk for school children and communities that utilize these HFs.

In light of the above reasons, REACH undertook a comprehensive WASH needs assessment in schools and HFs in Turkana and Garissa Counties. The aim is to inform UNICEF programming and to support other partners' response prioritization by providing data regarding the needs, the extent of the impact on vulnerable groups, and coping mechanisms at the institutional level.

Methodology

A census methodology was used, targeting all public primary schools and HFs in the host communities and refugee camps in Turkana County in Kenya. This involved face-to-face structured key informant interviews (KIIs) with heads of facilities, community leaders, and WASH implementing partners. Data was collected between 18th June and 5th July 2024. A total of 214 HFs and 464 schools were assessed. It is worth noting that, whereas the assessment targeted public primary schools, 9 secondary schools from the refugee community were included in the study at the request of partners implementing WASH initiatives in the camps.

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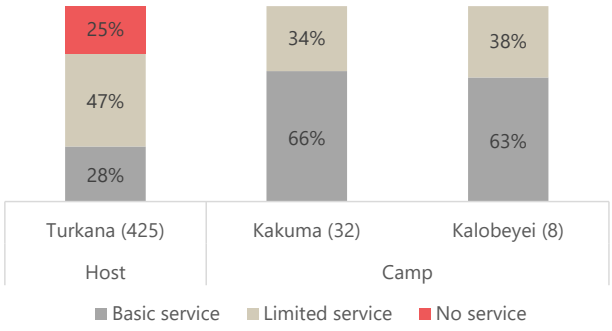
Schools

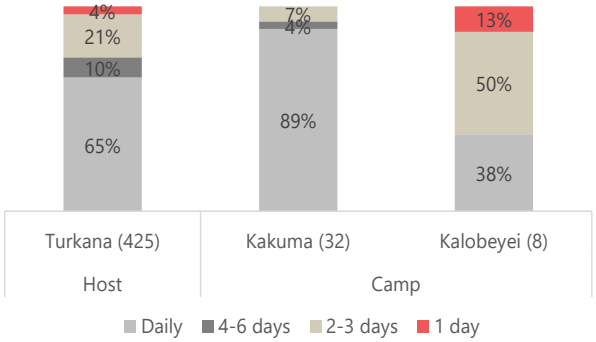
Water Availability

Proportion of schools by access to basic water services according to Joint Monitoring Analysis (JMP)[5]

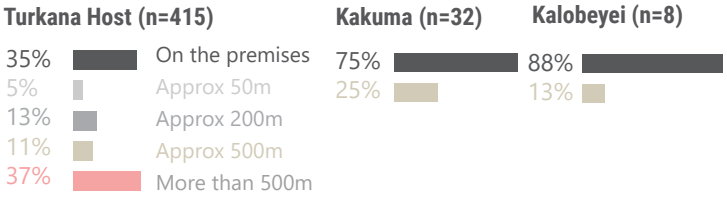


About two thirds of the schools in the refugee community were accessing basic water service. However, schools in the host community were facing more challenges, with a quarter (25%) of the schools lacking any water service. Furthermore, **76% of schools in the host community reported using untreated water**. The limited or non-existent services could hinder sanitation and hence, predisposing the learners to water-borne diseases and increased cases of absenteeism.

Proportion of schools by frequency of water availability at the facility within one week[6]



Proportion of the schools by location (in meters) of the main water supply for drinking[6]



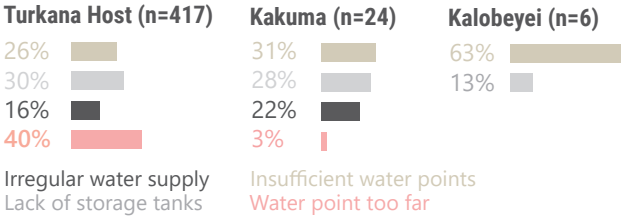
According to WHO guidelines, a safe and reliable water source should be located within 500 meters of a school.[9]

Proportion of schools with water storage tanks/containers and average capacities in litres (L)

	%	Median Capacity (L)
Turkana-Host (425)	66%	10,000
Kakuma (n=32)	94%	16,483
Kalobeyei (n=8)	100%	26,375

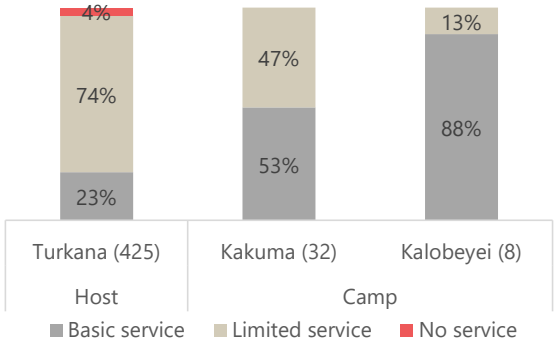
The average water storage capacity is directly related to the population served. For example, although schools in Kalobeyei's had the highest average storage capacity, these schools also cater to a significantly larger population. **Insufficient water supply** and **damage to water infrastructure** (storage tanks, taps) were also cited as major contributors to inconsistent water provision.

Common challenges by 92% of schools in the host community, 78% in Kakuma and 75% in Kalobeyei that reported facing challenges related to water.[9]



Sanitation

Proportion of schools by availability of sanitation services according to JMP[5]



Proportion of pupils' toilets separated by gender

Turkana Host (n=425)	Kakuma (n=32)	Kalobeyei (n=8)
92%	88%	100%

Toilet-to-Pupil ratios in schools

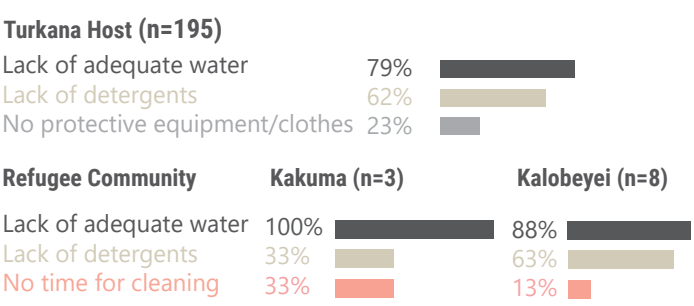
Toilet-to-pupil ratio		Turkana (n=324)	Kakuma (n=32)	Kalobeyei (n=8)	National standards
Gender	Female	1:51	1:80	1:73	1:25
	Male	1:60	1:101	1:90	1:30

None of the schools in Kalobeyei achieved the recommended national toilet-to-pupil ratio for both males and females, and similarly, 96% of schools in Kakuma and 83% in the host community did not meet the standards. The higher ratio indicates that pupils have limited access to toilets, leading to overcrowding and potentially poor hygiene practices.

Proportion of schools that reported cleaning their pupils' toilets using soap or detergents daily

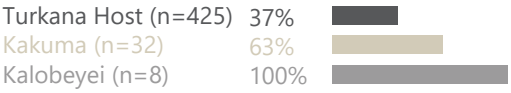
Turkana Host (n=425)	Kakuma (n=32)	Kalobeyei (n=8)
46%	91%	0%

Most common reasons for infrequent cleaning of toilets[9]

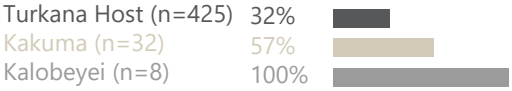


Proportion of institutions with at least one sanitation facility adapted for persons with visual or mobility impairment and children aged 5 and below

Adapted for persons with visual or mobility impairment



Adapted for children aged 5 years or younger



Most toilets in schools in Turkana's host communities were not adapted for learners with visual and mobility impairments or **for children under five**, unlike those in the refugee community. This lack of accessibility features such as clear paths, handrails, and adequate space for wheelchair users limits access to sanitation facilities.[10]

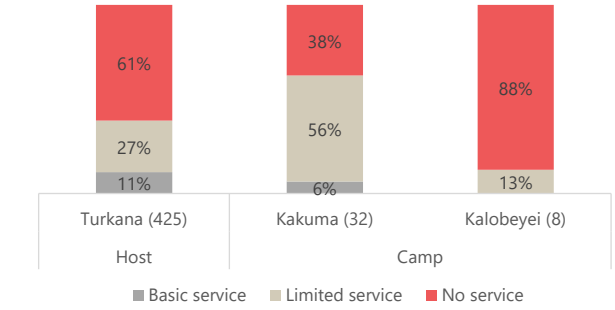
Hygiene

Median number of water stations (taps/ boreholes) to pupils ratios[12]

Location	Host (n=246)	Kakuma (n=32)	Kalobeyei (n=8)
Schools	1:527	1:299	1:1,308

The **high student-to-water station ratio** highlights a critical gap in water stations access especially in Kalobeyei. **Moreover, nearly (42%) of schools in the host community lacked hand-washing stations.** The limited number and the lack of hand-washing stations lead to long queues, which can result in learners either skipping hand-washing or overusing and damaging the limited facilities. This hinder proper hygiene practices, increasing the risk of illnesses.

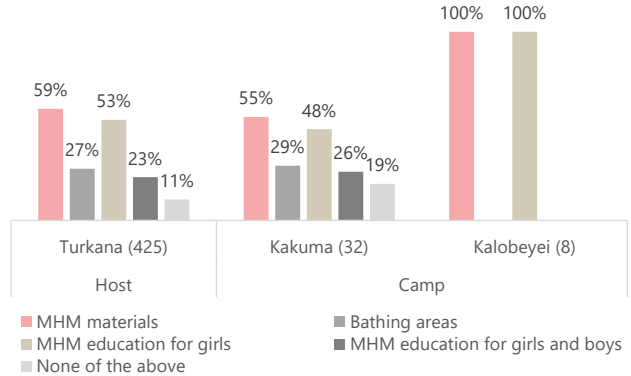
Proportion of schools by availability of hygiene services according to JMP[5]



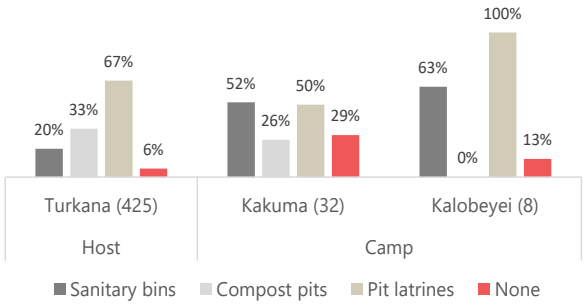
Most schools did not have water and soap at designated handwashing stations. Without these amenities, handwashing becomes far less effective, potentially leading to higher rates of illness within schools and may also hinder their ability to manage menstrual hygiene effectively.

Menstrual Hygiene Management (MHM) in schools

Most common MHM practices in schools, by proportions of schools[9]



Top reported menstrual waste disposal methods[9]

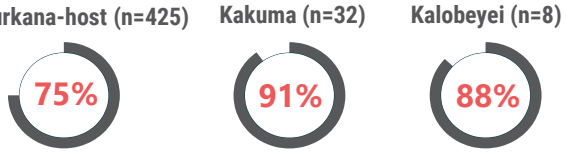


Pit latrines were the most common method for menstrual waste disposal for most schools (67% host, 50% Kakuma, 100% Kalobeyei). This practice causes the pits to fill up more quickly, shortening the functional lifespan of the latrines and increasing the number of non-functional facilities.

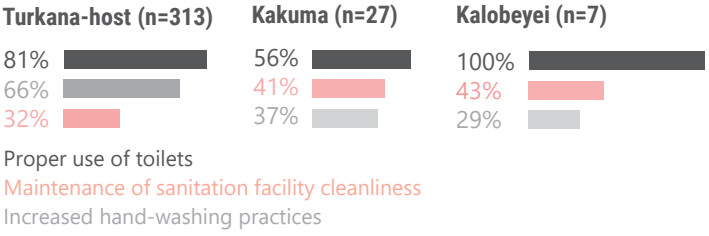
The commonly reported challenges in managing menstrual waste in schools were the **inadequate number of waste disposal bins** and **lack of water and soap for girls in their private spaces to manage menstrual hygiene**.

Hygiene promotion

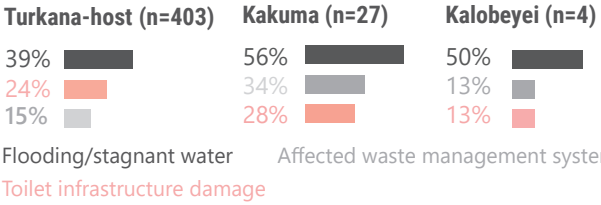
Proportion of schools that conducted hygiene promotion



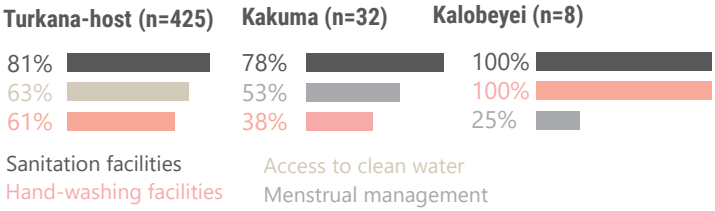
Most commonly reported behaviour changes among 98% of schools in Turkana host, 93% in Kakuma and 100% in Kalobeyei,that reported behaviour change following hygiene promotion programmes[9]



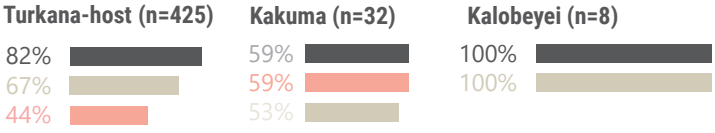
Effects of floods on WASH services[9]



Priority WASH needs[9]



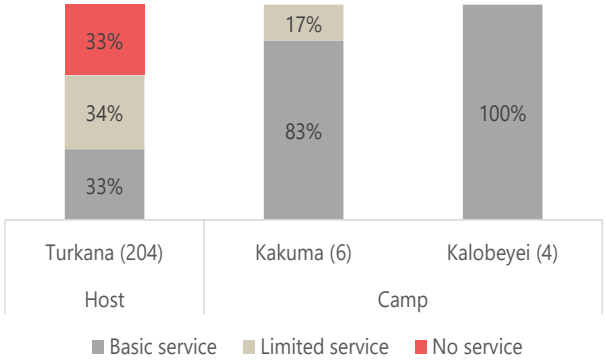
Actions needed to improve WASH in the schools[9]



Health Facilities

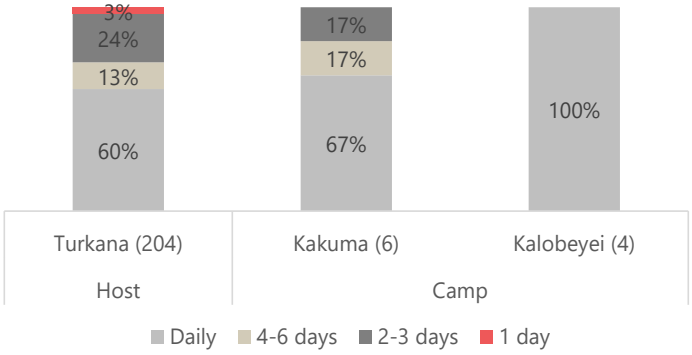
Water Availability

Proportion of HFs by access to basic water services according to JMP[11]

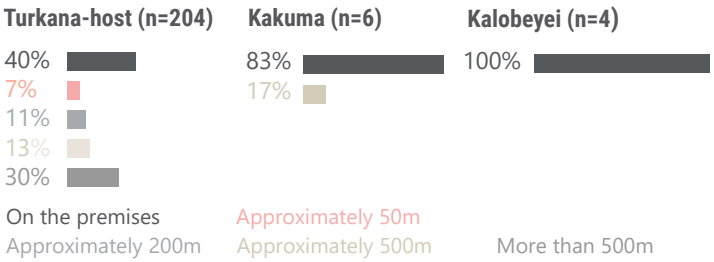


The majority of HFs in the refugee community were accessing basic water services, However, **HFs in the host community were facing more challenges, with one third (33%) of the HFs lacking any water service.** Without reliable water access, health facilities struggle to provide quality care, increasing the risk of healthcare-associated infections, putting both patients and healthcare workers at a greater risk of disease transmission.

Proportion of HFs by frequency of water availability at the facility within one week[6]



Proportion of the HFs by location (in meters) of the main water supply for drinking[7]



According to WHO guidelines, a safe and reliable water source should be located within 500 meters of a HFs.[8]

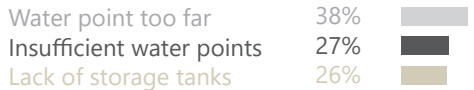
Proportion of schools with water storage tanks/containers and average capacities in litres (L)

	%	Average Capacity (L)
Turkana- Host	73%	10,000
Kakuma	83%	10,000
Kalobeyei	100%	12,500

The average water storage capacity is directly related to the population served. For example, although Kalobeyei's HFs had the highest average storage capacity, these institutions also cater to a significantly larger population especially in the reception centre. **Insufficient water supply** and **damage to water infrastructure** (storage tanks, taps) were also cited as major contributors to inconsistent water provision.

Common challenges by 89% of the HFs in the host community that reported facing challenges related to water.[9]

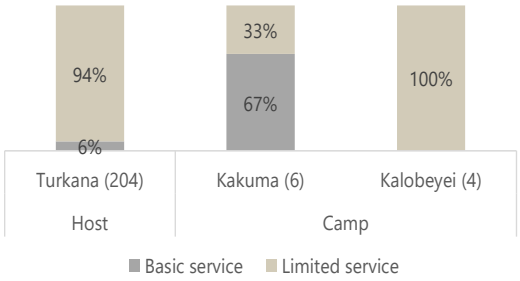
Turkana Host (n=182)



The main challenge reported by HFs in the camp **was insufficient water points,** affecting 17% of facilities in Kakuma and 25% in Kalobeyei.

Sanitation

Proportion of HFs by main type of sanitation services according to JMP[11]



None of toilets in the HFs in Kalobeyei had access to basic sanitation services, all (100%) were classified as having limited sanitation services. Similarly, 94% of HFs in the host community had limited services. This lack severely impacts the ability of these facilities to maintain hygiene standards and control infections.

Proportion of gender-separated toilets

Turkana-host (n=204)	Kakuma (n=6)	Kalobeyei (n=4)
51%	100%	100%

Nearly half of the toilets in the HFs in the host community were not separated by gender. The lack of gender-separated sanitation facilities in many HFs in the host community **compromises the privacy and security needs of both patients.** In addition, 71% reported having lockable doors and 8% had inside lighting in the host HFs, further exacerbating the security concerns.

Toilet-to-Patient ratio in HFs

Toilet-to-patient ratio		Turkana n=204	Kakuma (n=6)	Kalobeyei (n=4)	WHO standards
Gender	Female	1:20	1:21	1:71	1:20
	Male	1:13	1:8	1:49	

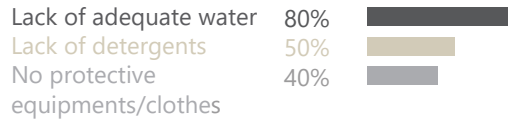
None of the HFs in Kalobeyei met the recommended WHO toilet-to-patient ratio. A key contributing factor is that two health centers located at the reception center serve a large population, placing additional strain on the limited sanitation resources. Overcrowded and inadequate toilet facilities increase the likelihood of infections and potentially deterring patients from seeking healthcare services in these facilities.

Proportion of HFs that reported cleaning their patients' toilets using soap or detergents daily

Turkana Host (n=204)	Kakuma (n=6)	Kalobeyei (n=4)
46%	100%	100%

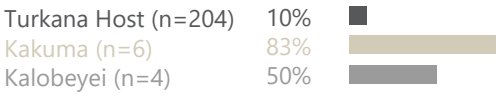
Most common reasons for infrequent cleaning of toilets[9]

Turkana Host (n=110)

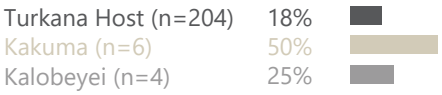


Proportion of HFs with at least one sanitation facility adapted for persons with visual or mobility impairment and children aged 5 and below

Adapted for persons with visual or mobility impairment

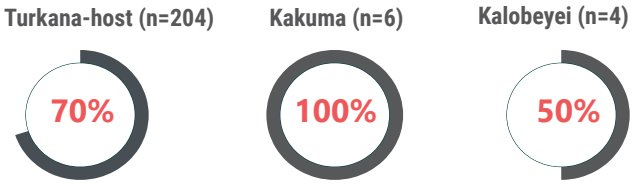


Adapted for children aged 5 years or younger



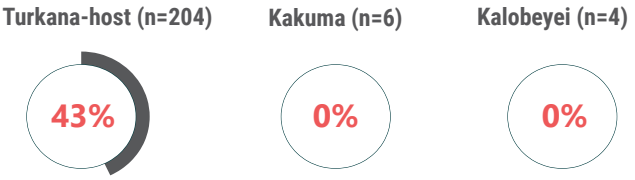
Waste Disposal in HFs

Proportion of HFs with waste disposal guidelines



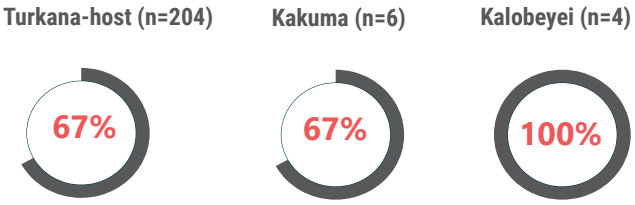
The waste disposal guidelines serve as critical reminders that help healthcare facilities prevent the spread of infectious waste and reduce the risk of injury and infection among staff.[12]

Proportion of HFs with both waste disposal and segregation bins

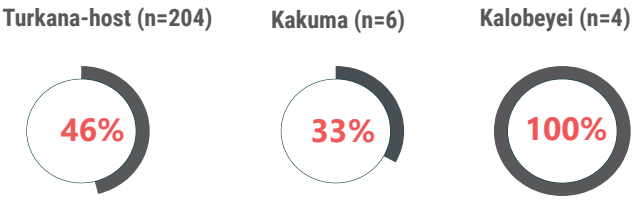


The unavailability of waste segregation bins into at least three required bins (infectious, sharp and general medical waste) increases the risk of infections spreading to staff and patients.

Availability of protective equipment for staff handling waste



Training for staff handling waste



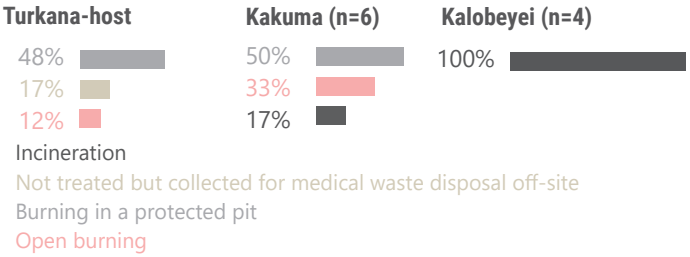
All KIs in HFs in Kalobeyei settlement reported that staff handling waste were provided with protective equipment and trained on waste disposal protocols/procedures.

On the contrary, **staff in only two thirds of facilities in the host community and Kakuma camp were provided with protective equipment and in about one third trained on handling waste**. This further increases the risk of improper waste handling, which exposes staff, patients, and the surrounding community to health hazards.

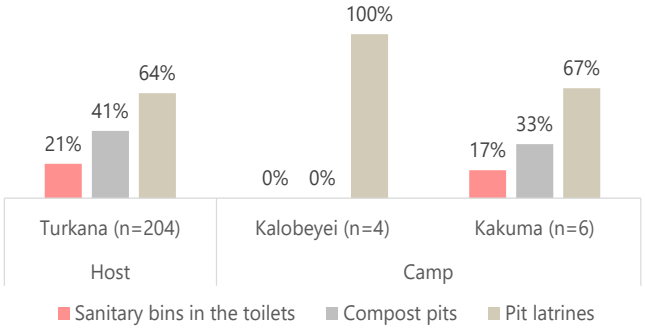
Commonly reported methods for waste disposal

While most HFs reported that they did not store infectious waste for extended periods, the assessment results indicated that waste was collected and disposed of off-site without treatment, and some openly burnt the waste. This practice poses environmental, health, and social risks.

Infectious medical waste disposal[9]



Menstrual waste disposal[9]



Similarly, pit latrines were the common method for menstrual waste disposal for most HFs, (64% host, 67% Kakuma, 100% Kalobeyei). This practice causes the pits to fill up more quickly, shortening the functional lifespan of the latrines and increasing the number of non-functional facilities.

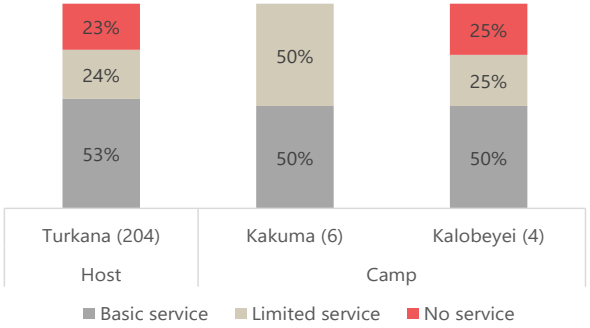
Hand-washing

Average number of water stations (taps/ boreholes) to patients ratios[13]

Location	Turkana Host	Kakuma	Kalobeyei
HFs	1:30	1:26	1:409

The **high patient-to-water station ratio** highlights a critical gap in water stations access. Likewise, HFs, even though in a better situation (apart from Kalobeyei) than schools, they still faced significant limitations. This underscores an urgent need to improve water infrastructure.

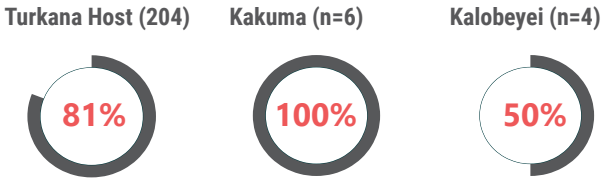
Proportion of schools by availability of hygiene services according to JMP[5]



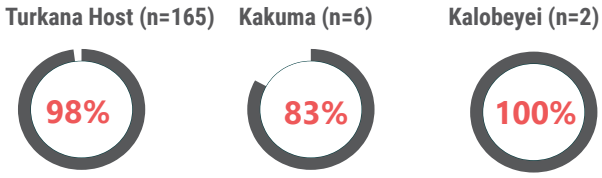
About one quarter of HFs in the host community HFs, and a health center in Kalobeyei did not have soap and water at the hand-washing station (no services). This can lead to the spread of infection within and even outside the HFs.

Hygiene promotion

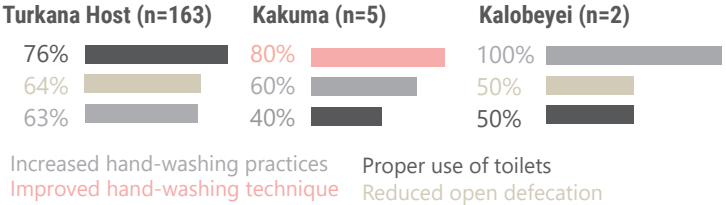
Proportion of HFs reported to have conducted hygiene promotions



Proportion of HFs that reported behaviour change following hygiene promotion

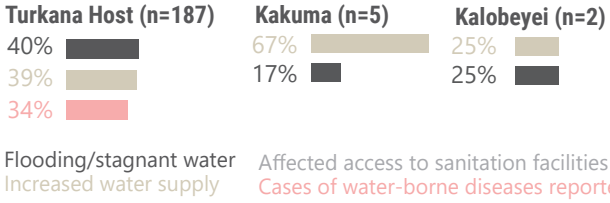


Commonly reported behaviour changes as a result of the hygiene promotion[9]



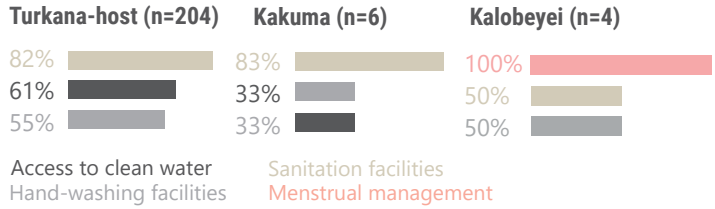
Effects of floods on WASH services

Top reported effects of floods on WASH services in HFs[9]



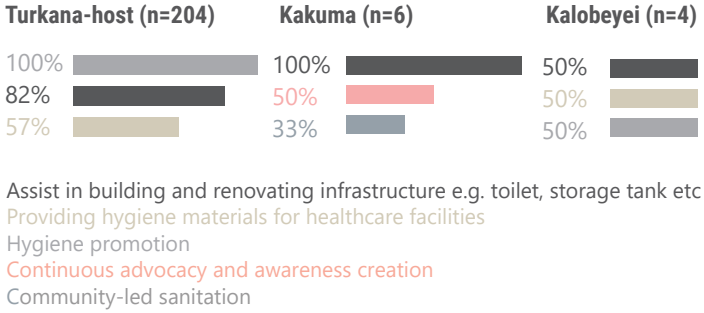
Priority WASH needs in HFs

Top reported priority WASH needs in HFs[9]



Actions needed to improve WASH in the HFs

Top reported recommendations for improving WASH situation/practice in HFs[9]



Conclusion

- Schools faced significant sanitation challenges due to a higher student-to-toilet ratio compared to health facilities, highlighting a need for additional infrastructure to adequately meet students' sanitation needs. Furthermore, toilets in host community HFs and schools were not adapted for persons with visual and mobility impairments, which limits their access and can lead to social isolation, thereby hindering efforts to promote inclusive practices.
- The high student-to-water station ratio in schools often resulted in frequent breakdowns, disrupting access to water that is critical for maintaining hygiene and sanitation. Additionally, both health and school facilities frequently had inadequate hand-washing facilities, with a lack of soap further reducing their effectiveness and posing significant health risks.
- HFs also faced numerous challenges in waste disposal; unsafe methods and untrained staff handling waste can potentially spread infectious diseases to both staff and patients. Moreover, according to KIs, girls are in need of safe, convenient school sanitation facilities with sustainable disposal systems and a consistent supply of sanitary towels to support MHM.
- Sanitation facilities were the most frequently reported priority WASH needs in healthcare facilities and schools within the host community, while in the camps, access to clean water was the primary need for most healthcare facilities and schools.

Limitations

- **Response bias:** Key informants may provide subjective opinions influenced by personal interests. This can result in biased information that may not reflect the broader population's reality.
- **KI selection bias:** The selection of key informants may introduce bias, as those chosen might be the most accessible, rather than a representative cross-section of the population.
- **Limited representation:** Key informants may not fully represent the views or experiences of the entire population. Their insights are often specific to their roles or areas of expertise, which can lead to biased or incomplete data
- **Because of the inaccessibility** of certain locations and security concerns, some interviews in Turkana East and South were conducted over the phone.
- **Findings should be used indicatively** and cannot be generalizable to the entire population.

Methodology Overview

The assessment of WASH institutions in Turkana County, including the host community, Kakuma refugee camp and Kalobeyei integrated settlement, employed a census methodology with a quantitative approach i.e. all public primary schools and public HFs were targeted. REACH collected secondary information including the list of the schools and HFs from the Government and WASH implementing partner records through the Turkana County Government Department of Health and Education and the United Nations High Commissioner for Refugees (UNHCR). This data included a comprehensive list of public schools and HFs, which was crucial for determining the total number of institutions in the county and for logistical planning. The secondary data also formed the basis for targeting facilities to be mapped through primary data collection and provided standards for categorizing facility types as the coordinates from the list of institutions were used for spatial reference. The coordinates were converted into Keyhole Markup Language (KML) files, and then imported into the maps.me navigation app for the field officers to track. To facilitate the process, REACH applied for a National Commission for Science, Technology and Innovative (NACOSTI) permit to allow access to the public institutions. In total, 464 public schools (including 9 secondary schools in the refugee camps) and 214 public health facilities were assessed. Data was collected through KIIs. At each institution, the heads of the facilities were interviewed using a structured questionnaire. For the MHM section, female teachers were interviewed. Following each interview, the GPS coordinates were recorded and uploaded to ensure accurate location verification and to aid in developing detailed infrastructure maps. The process also included an observational component to evaluate the WASH conditions of the institutions, guided by the interview guide. Additionally, key informant interviews were conducted with community leaders in the host community and refugee camps, key informants from WASH implementing agencies and public health officers from the county/national government. While face-to-face data collection was preferred, remote phone-based data collection was used in areas that were inaccessible or insecure. In these locations, the snowball method was employed to obtain contact information for key informants. Data was collected between 18th June and 5th July 2024.

Assessment Coverage

Population group	Location	HFs assessed	Schools assessed	Community leaders	Implementing partners
Host community	Turkana	204	425	97	14
Refugee Community	Kakuma	6	31	24	5
	Kalobeyei	4	8	0	2
	Total	**214**	**464**	**121**	**21**

Institution	Location	Female[15]	Male[14]
HFs assessed[15]	Turkana host	36	22
	Kakuma	142	54
	Kalobeyei[14]	27	207
Schools assessed	Turkana host	218	231
	Kakuma	851	1,343
	Kalobeyei	1,169	1,536

ABOUT REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).

End notes

[1] Heavy rainfall and floods-acaps, May 2024
[2] Heavy rains and floods effects update-OCHA 2024
[3] Effects of the floods in Turkana county-Turkana County Government, May 2024
[4] Turkana refugee population-July 2024
[5] Joint monitoring programmes for schools
[6] Due to rounding off, some % may not add up to 100%
[7] National Education Sector Support Plan-2018-2022
[8] WHO water distance recommendations
[9] Respondents could select multiple options hence the findings may exceed 100%
[10] Barriers to the access of people with disabilities-National library of medicine, 2022
[11] Joint monitoring for health facilities
[12] Waste segregation WHO recommendations
[13] The ratio was derived by dividing the total population (pupils,staff or patients) per facility, by the number of functional water stations (tap stands or boreholes) available in every institution.
[14] Average female-pupils/patients and staff population while average male-pupils/patients and staff population.
[15] Average number of patients visiting the HFs per day.
[16] Two out of the four HFs in Kalobeyei are at the reception center, which cater for a larger population.
[17] The majority (83%) of the HF in Turkana County are level 2- Health dispensaries that commonly offer outpatient service.