

# WASH-related Needs Assessment in Schools and Health Facilities in Garissa County-Kenya

July 2024 | **Garissa 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.
- Schools in the host community of Garissa faced greater challenges in accessing safe water sources and required more water treatment compared to the Dadaab refugee camp, where water was typically treated at the source.
- Almost all toilets in health facilities within host communities were not adapted for individuals with mobility and/or physical impairments. This limitation restricted access to essential services and increased social isolation compared to the toilets in refugee health facilities.<sup>1</sup>
- In both health and school facilities within the host community, there often were not enough hand-washing stations, with the lack of soap reducing their effectiveness. Additionally, the absence of training on waste disposal protocols increases health risks.

## Context and Rationale

Kenya is highly vulnerable to climate impacts, such as floods and prolonged droughts, mainly due to its limited institutional ability to manage disaster risk and respond effectively.<sup>2</sup> According to the Kenya Red Cross Society (KRCS), as of May 2024, approximately 1,967 schools and 62 health facilities were affected by floods in the most affected areas of Kenya.<sup>3</sup>

As a result of flooding in September 2023, several hospitals in Garissa were submerged, potentially leading to challenges in the healthcare system due to a rise in disease.<sup>4</sup> Furthermore, by May 2024, an estimated 6,400 families (32,000 people) were displaced due to the overflow of the Tana River.<sup>3</sup> The water, sanitation and hygiene (WASH) sector was significantly affected, primarily because of a lack of access to sanitation infrastructure and clean water, leading to water-borne diseases. In Garissa, 33% of households were forced to resort to open defecation due to the absence of latrines. In June 2023, a high proportion of households were considered water insecure, lacking adequate, reliable, or safe water sources, even before being affected by drought or floods.<sup>5</sup>

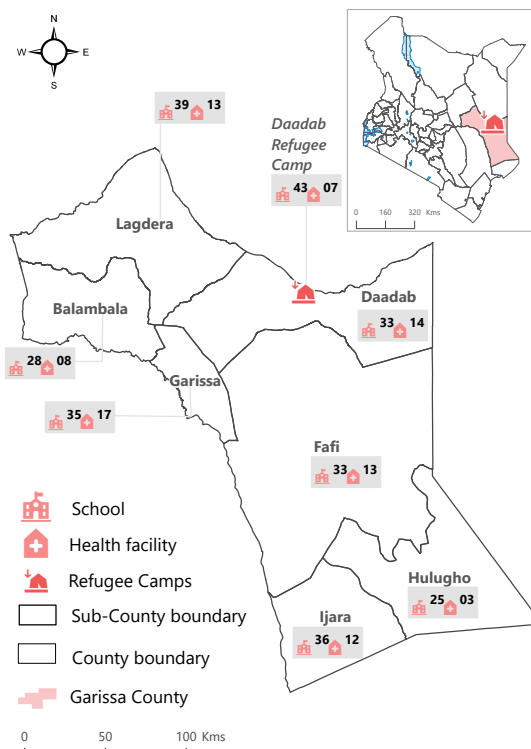
While household-level water quality assessments are routinely conducted in the refugee camps in Garissa, there is a lack of updated WASH data in schools and health facilities, posing a significant health risk for school children and communities that utilize these health facilities.

In response to these challenges, REACH conducted a comprehensive WASH needs assessment in schools and health facilities in Garissa County, to support response prioritization and provide data regarding the needs, the extent of the impact on vulnerable groups, and the coping mechanisms at the institutional level.

## Methodology:

A census methodology was employed to survey all public primary schools and health facilities (HFs) in the host communities and refugee camps in Garissa County, Kenya. The survey included face-to-face structured key informant interviews (KIIs) with heads of facilities, community leaders, and WASH implementing partners. Data was collected between June 18th and July 5th, 2024. A total of 87 health facilities and 268 schools were assessed. It is important to note that while the assessment focused on public primary schools, 6 secondary schools in the Dadaab refugee camp were also included in the study.

## Assessment coverage



**268**  
Schools  
assessed

**87**  
Health facilities  
(HFs) assessed

Location:	HFs	Schools
Garissa	80	225
Dadaab camp	7	43

Location:	Key Informants	
	CLs <sup>i</sup>	IPs <sup>ii</sup>
Garissa	89	13
Dadaab camp	10	7

<sup>i</sup>Community leaders (CLs), included village/camp leaders, chiefs, ward administrators women leaders and youth leaders, leaders for persons with disabilities

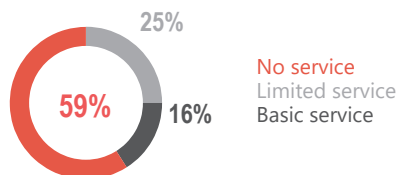
<sup>ii</sup>Implementing partners (IPs)

## Schools

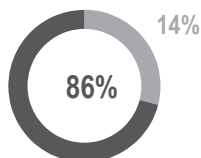
### Water Availability

#### Proportion of schools by drinking water service based on JMP<sup>6</sup>

Garissa host (n=225)



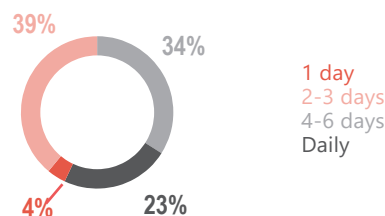
Dadaab (n=43)



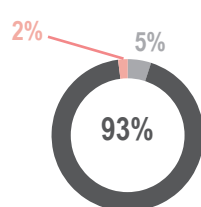
While refugee schools generally had access to improved drinking water sources, challenges existed in the Garissa host community. Approximately half of schools (50%) in Garissa County relied on unimproved water sources, and 9% did not have access to any water.

#### Proportion of schools by frequency of water availability at the facility within one week

Garissa host (n=225)



Dadaab (n=43)



Infrequent water availability in schools in Garissa County was primarily caused by damaged water stations. Approximately 66% of key informants at schools reported that their water stations were functioning with either minor or major damages. Of these, over half (58%) indicated that the damage were commonly due to leaking taps or pipes.

#### Common reported damages to water stations, by proportion of schools with major or minor damages\*

Garissa host (n=225)

66% had minor to major damages. Of these:



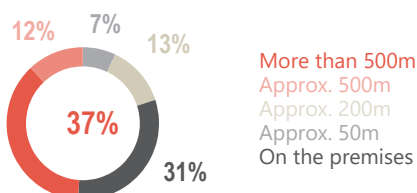
Dadaab (n=43)

67% had minor to major damages. Of these:

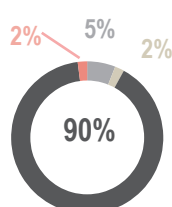


#### Distance (in meters) from the main source of drinking water to the school\*\*

Garissa host (n=225)



Dadaab (n=43)



#### Water stations to population (pupils and staff) ratios in schools\*

Garissa host (n=225)

1:424

Dadaab (n=43)

1:218

\*Respondents could select multiple options hence the findings may exceed 100%

\*\*Due to rounding up, percentages may be less than or exceed 100%.

\*\*\*The ratio was derived by dividing the population of pupils and staff per school, by the number of functional water stations (tap stands or boreholes) available.

Schools in the Garissa host community had a higher population-to-water-station ratio compared to those in the Dadaab camp. This situation could lead to long queues, causing learners to skip hand-washing or resulting in overuse and damage to the limited stations, which would disrupt water access.

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

Garissa host (75%, n=169)

Dadaab camp (99%, n=42)

10,000 L

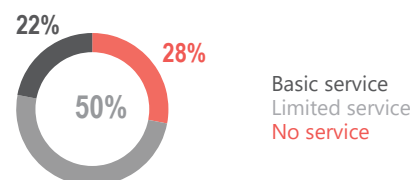
9,037 L

25% of schools in the host communities reportedly lacked water storage tanks or containers.

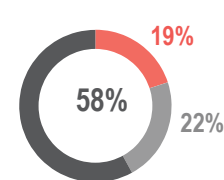
## Sanitation

#### Proportion of schools by the main sanitation service based on JMP<sup>6</sup>

Garissa host (n=225)



Dadaab (n=43)



In the Garissa host community, 18% of schools relied on unimproved sanitation facilities, while 10% had no sanitation facilities at all. Similarly, in the Dadaab camp, 19% of schools used unimproved sanitation, increasing the risk of spreading disease-causing parasites.

#### Proportion of gender-separated pupil toilets in schools



Gender separated toilets

Garissa host (n=225)

82%

Dadaab (n=43)

100%

#### Toilet-to-pupil ratios in schools\*

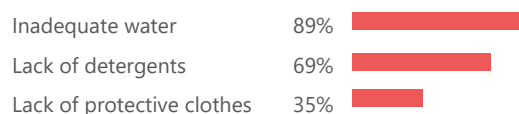
	Toilet-pupil-Ratio		% that attained national ratio	
	Garissa	Dadaab	Garissa	Dadaab
Male	1:68	1:42	18%	15%
Female	1:57	1:38	17%	20%

#### Proportion of schools that cleaned student toilets using soap or detergents

Garissa host (n=225)

84% of schools did not clean student toilets every day

#### Most common reasons for infrequent cleaning of toilets in Garissa host schools (n=189)\*\*

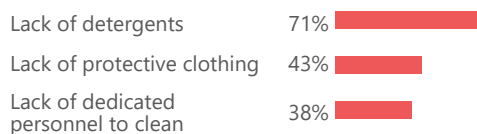


\*The recommended learner-to-toilet ratio at primary school level is one toilet for 25 girls, and one toilet for 30 boys and urinal facility.

\*\*Due to rounding up, percentages may be less than or exceed 100%.

**Dadaab camp (n=43)** **64%** of schools did not clean student toilets every day

**Most common reasons for infrequent cleaning of toilets in Dadaab\***

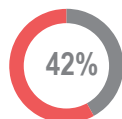


**Proportion of schools with at least one toilet adapted for persons with mobility or physical impairment**

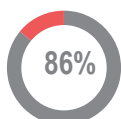
**Garissa host (n=225)**

**Dadaab (n=43)**

Over half of toilets in schools in the host communities of Garissa were **NOT adapted for persons with mobility and/or physical impairment**, leading to social isolation and reduced access to education and healthcare for these individuals.



Yes  
No



86%

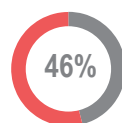
In contrast, 86% of schools in the Dadaab refugee camp had toilets that were adapted for persons with mobility and/or physical impairment. These included features like clear paths, handrails, and sufficient space for wheelchair users.

**Proportion of facilities with at least one toilet adapted for children aged 5 years or younger**

**Garissa host (n=225)**

**Dadaab (n=43)**

Similarly, over half of the in schools in both the host and refugee communities of Garissa had toilets that are **not adapted for children aged 5 years or younger**. This may reduce access to education for younger children who have attained school-going age.



Yes  
No



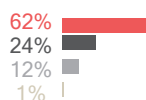
48%

**Hygiene**

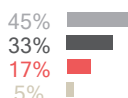
**% of schools by the average number of hand-washing stations**

**Garissa host (n=225)**

**Dadaab (n=43)**



None  
1  
2-5  
6-10



**62%** of schools in the host community lacked hand-washing stations.

The availability of hand-washing devices in schools improves hygiene practices, particularly menstrual hygiene management and reduces the risk of transmission of infectious diseases among pupils.

**Availability of soap and water at the hand-washing (HW) station (observed)**

**Garissa host (n=225)**

**Dadaab (n=43)**

**81% reported not having soap at the HW station**



81%

**68% reported not having soap at the HW station**



68%

**45% lacked water at the HW station**

**15% lacked water at the HW station**

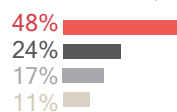
Although 83% of schools in the Dadaab camp and 38% in the host community had at least one hand-washing station, most of these stations did not have soap. **Without soap, students cannot properly remove pathogens from their hands, which greatly diminishes the effectiveness of hand-washing.**

\*Respondents could select multiple options hence the findings may exceed 100%

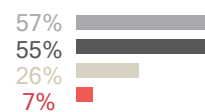
**Top reported Menstrual Hygiene Management (MHM) practices, by proportions of schools\***

**Garissa host (n=225)**

**Dadaab (n=43)**



Education for girls only  
MHM materials  
Bathing areas  
None

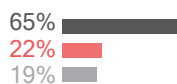


**48%** of the schools in Garissa lacked MHM services. This suggests that girls, particularly from vulnerable households could not access MHM materials, potentially leading to absenteeism during their menstrual periods.

**Top reported menstrual waste disposal methods available in schools**

**Garissa host (n=225)**

**Dadaab (n=43)**



Pit latrines  
Compost pits  
Sanitary bins in the toilets



The most commonly reported challenge in managing menstrual waste in schools, was the **inadequate number of waste disposal bins** (Garissa host, 92%, Dadaab, 95%). Increasing the bins in these facilities will ensure proper disposal and improve hygiene standards.

**62%** of KIs in the Garissa host community  
**70%** of KIs in the Dadaab camp

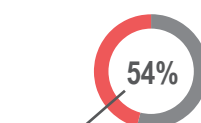
cited inadequate availability of menstrual supplies as the main challenge girls faced with menstrual health.

**Hygiene promotion**

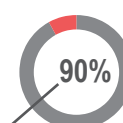
**Proportion of schools that conducted hygiene promotion**

**Garissa host (n=225)**

**Dadaab (n=43)**



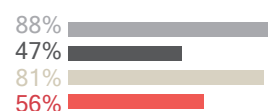
Yes  
No



**78%** of these were conducted in the 30 days before data collection.

**82%** of these were conducted in the 30 days before data collection.

**Most commonly reported behaviour changes among 54% of schools in Garissa host and 90% in Dadaab camp that conducted hygiene promotion programmes, of which 95% and 97% reported behaviour change\***



Proper use of toilets  
Reduced open defecation

Increased hand-washing practices  
Improved latrine cleanliness

Approximately half (54%) of schools in the host community and the majority in the camps (90%) reported conducting hygiene promotion activities. These efforts have led to noticeable positive behaviour changes among learners, particularly in the **proper use of toilets** and a **reduction in open defecation cases** attributed to hygiene promotion.

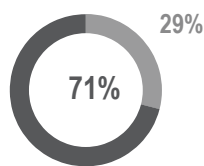
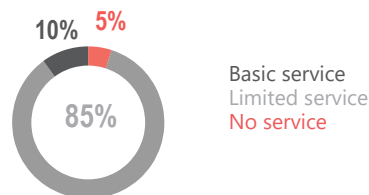


## Sanitation

### Proportion of HFs by the main sanitation service based on JMP standards<sup>6</sup>

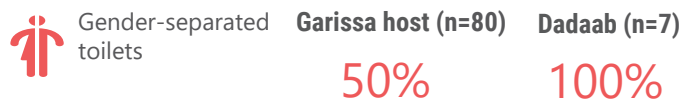
Garissa host (n=80)

Dadaab (n=7)



The majority of health facilities (85%) in the Garissa host community had improved sanitation facilities, while 5% did not have any form of sanitation. Although the presence of improved sanitation facilities indicates progress, the lack of sanitation facilities in 5% of these facilities highlights critical gaps that could compromise the ability to provide safe and hygienic healthcare in the host community.

### Proportion of gender-separated patient toilets in HFs

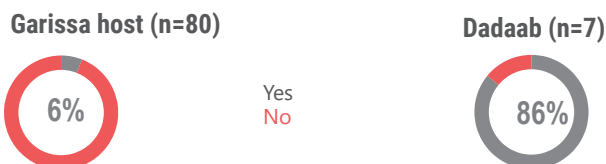


### Toilet-to-Patient ratio in Health Facilities\*

	Toilet-patient-Ratio		% that attained WHO ratio	
	Garissa	Dadaab	Garissa	Dadaab
Male	1:13	1:14	66%	71%
Female	1:17	1:13	48%	86%

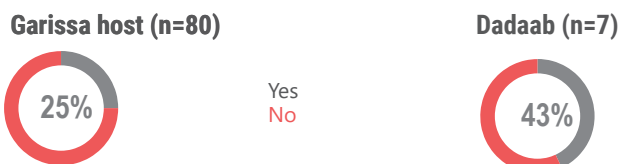
\*The World Health Organization recommends 1 toilet for every 20 users for inpatient setting.

### Proportion of facilities with at least one toilet adapted for persons with mobility or physical impairment



The majority of toilets in HFs in the host communities of Garissa were not adapted for persons with mobility and/or physical impairment. This may lead to social isolation and reduce access to education and healthcare for these individuals.

### Proportion of HFs with at least one toilet adapted for children aged 5 years or younger



In Garissa County, 75% of healthcare facilities in host community lacked at least one sanitation facility designed to accommodate children aged five years and younger. This indicates that facilities are not adequately equipped to meet the sanitation needs of young children, potentially compromising their health, safety, and access to appropriate care.

## Hygiene

### % of facilities by the average number of hand-washing stations



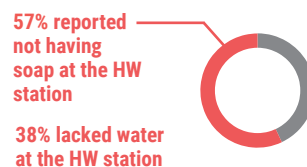
26% of health facilities in the host community lacked hand-washing stations.

The availability of hand-washing devices in health facilities improves hygiene practices, particularly menstrual hygiene management and reduces the risk of transmission of infectious diseases among patients and staff members.

### Availability of soap at the hand-washing (HW) station (observed)

Garissa host (n=80)

Dadaab (n=7)



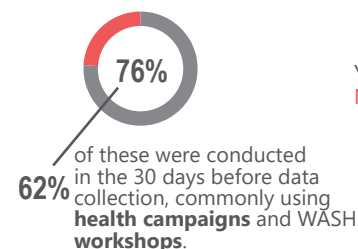
Although the majority (74%) of health facilities in the host community had at least one hand-washing station for patients, 43% lacked soap or detergents. Without soap, healthcare workers, patients, and learners are unable to effectively remove pathogens from their hands, thus reducing the effectiveness of hand-washing.

### Hygiene promotion

#### Proportion of HFs that conducted hygiene promotion

Garissa host (n=80)

Dadaab (n=7)



### Most commonly reported behaviour changes among 76% of HFs in Garissa host and 90% in Dadaab camp that conducted hygiene promotion programmes, of which 97% and 100% reported behaviour change\*

Garissa host (n=80)

Dadaab (n=7)



Proper use of toilets Improved hand-washing techniques Increased hand-washing practices

The majority of health facilities in both the host and refugee communities conducted hygiene promotion programmes, resulting in positive hygiene behaviour outcomes attributed to these activities. This suggests that continued investment in hygiene education could further reinforce positive hygiene practices.

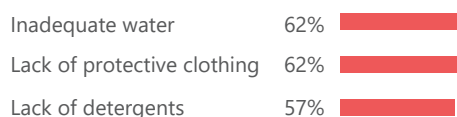
### Cleanliness of the sanitation facilities

Garissa host (n=80)

Dadaab (n=7)



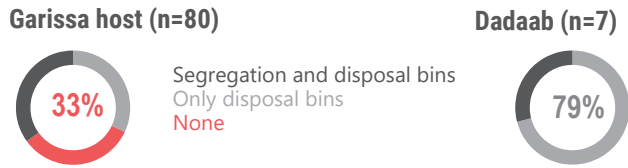
### Most common reasons for infrequent cleaning of patient toilets among the 66% of HFs in the Garissa host community<sup>6</sup>



\*Respondents could select multiple options hence the findings may exceed 100%

## Waste Disposal in health facilities

Proportion of health facilities with guidelines/protocols for waste disposal<sup>8</sup>



In addition, 32% of HFs lacked waste disposal guidelines/protocols. Poor waste management can expose healthcare workers, patients, and the surrounding community to infectious diseases from sharps, contaminated materials, or untreated medical waste.

Top reported methods for infectious waste disposal<sup>8</sup>



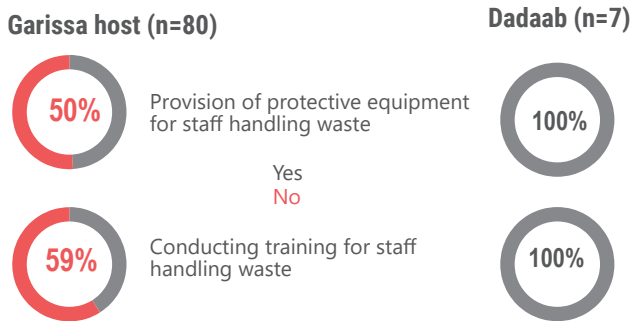
Autoclaved Incinerated (two chambers, 850-1000 degrees)  
 Dumping without treatment  
 Burning in a protected pit  
 Incinerator (other)

Top reported methods for non-infectious medical waste disposal<sup>8</sup>



Not treated but buried in lined, protected pit  
 Dumping without treatment  
 Burning in a protected pit  
 Incinerator (other)

Proportion of HFs by safety measures taken during waste disposal



All KIs in healthcare facilities in Dadaab camp reported that staff handling waste were provided with protective equipment and trained on waste disposal protocols/procedures. On the contrary, staff in only half of the health facilities in the host community were trained and provided with protective equipment. This potentially increases the risk of improper waste handling, which exposes staff, patients, and the surrounding community to health hazards.

## Effects of floods on WASH services

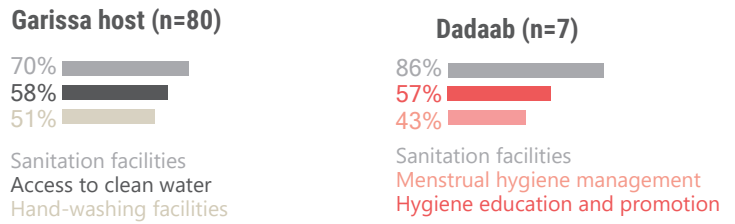
Top reported effects of March-May 2024 rains on WASH services in HFs<sup>\*</sup>



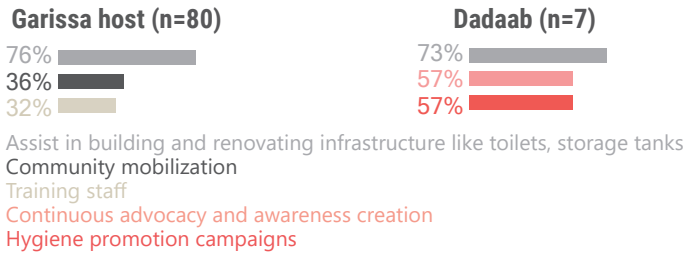
\*Respondents could select multiple options hence the findings may exceed 100%

## Top priority WASH needs in health facilities

Top reported priority needs for HFs at the time of data collection<sup>\*</sup>



Top reported recommendations for improving WASH situation<sup>\*</sup>



The need for adequate sanitation was identified as the top priority in both host and refugee communities, highlighting significant gaps in the availability of proper sanitation facilities. Additionally, key informants emphasized that reconstructing and renovating WASH infrastructure would enhance the communities' overall sanitation conditions.

## Conclusion

- Schools in the host community faced significant sanitation challenges due to a higher student-to-toilet ratio compared to health facilities. This indicates that schools may require additional infrastructure to adequately meet the sanitation needs of the student population.
- The high student-to-water station ratio in Garissa host community schools could potentially lead to frequent breakdowns, disrupting access to water that is critical for maintaining hygiene and sanitation in schools.
- Damage to water stations in health facilities and schools (about two-thirds of all facilities) contributed to potential water shortages, primarily due to leakages. If not addressed, this issue could further compromise water access and hygiene standards in these institutions.
- Toilets in host community health facilities and schools were often not adapted for persons with physical or mobility impairment, limiting their access. This exclusion may lead to social isolation and hinder efforts to promote inclusive practices for people with disabilities. Additionally, most toilets in schools were not designed for younger children (under 5 years old), which can hinder their access to early education.
- Hand-washing stations are critical in improving hygiene and especially menstrual health management, especially in schools. However, 51% of schools in the Garissa host community lacked hand-washing stations, posing a significant barrier to maintaining proper hygiene among students.

## Methodology Overview

The assessment of WASH institutions in Garissa County, including the host community and the Dadaab Refugee complex, 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 Garissa County Government Department of Health and Education and the United Nations High Commissioner for Refugee (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 was used for spatial reference. The coordinates converted into Keyhole Mark-up Language (KML) files, which were 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, 268 public schools (including 6 secondary schools in the Dadaab refugee camps) and 87 public health facilities were assessed. At each institution, the heads of the facilities were interviewed using a structured questionnaire. 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. 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.

## 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.
- **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 were conducted over the phone.
- Findings should be used indicatively and cannot be generalizable to the entire population.

## Endnotes

- <sup>1</sup> Barriers to the access of people with disabilities - [National library of medicine-2022](#).
- <sup>2</sup> Heavy rainfall and floods-[acaps, May 2024](#).
- <sup>3</sup> Heavy rains and floods effects [update-OCHA 2024](#).
- <sup>4</sup> Flash floods in Northern Kenya cause displacement and damaged infrastructure-[ACTED 2023](#).
- <sup>5</sup> El Nino floods worsen humanitarian needs in Kenya, [report in March 2024](#).
- <sup>6</sup> Information on to JMP Methodology for WASH in schools is found [here](#).
- <sup>7</sup> Schools require about 5-10 liters of water per student per day for drinking, and hand-washing.
- <sup>8</sup> WHO recommends that waste should be [segregated](#) at the point of generation into colour coded bins.

## Links to other resources

Assessment Terms of References [TOR](#)  
Dashboard [Spatial visualization of schools and health facilities](#)  
Garissa Sub-county level WASH infrastructure [maps](#).

## 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).