THE STATE OF WATER AND SANITATION STATISTICS IN UGANDA

Data | Trends | Gaps | Opportunities

Africa Statistics Week

UBOS Conference Hall

18th November 2026

Presentation Outline

- Measurement Frameworks
- Sources of data
- The three Pillars of WASH measurement
- Data gaps and opportunities

WASH Indicator Measurement Frameworks: Global to National Alignment

UN Sustainable Development Goals (SDG 6)

- **Governing Standard:** WHO/UNICEF Joint Monitoring Programme (JMP) & UN-Water.
- **Core Shift:** Moves from basic infrastructure to 'safely managed' services.
- **Water (SDG 6.1.1):** Improved source on premises, available when needed, free from E. coli & chemical hazards.
- **Sanitation & Hygiene (6.2):** Safe excreta disposal/treatment & basic handwashing with soap and water.

WASH Indicator Measurement Frameworks: Global to National Alignment

AU Agenda 2063 & Africa Water Vision 2063

- **Agenda 2063 Goal 1:** Tracks basic access to safe water (1.17.27) and improved sanitation (1.18.28).
- **African Ministers' Council on Water (AMCOW) Commitments:** Tracks Open Defecation Free (ODF) progress & 0.5% GDP sanitation financing.
- **Africa Water Vision 2063:** Evaluates circular sanitation economies & transboundary basin governance.
- **Focus:** Positions water & sanitation as core drivers of socio-economic security.

WASH Indicator Measurement Frameworks: Global to National Alignment

Uganda NDP IV (2025/26 – 2029/30)

- **Programme Approach:** Embeds WASH across cross-cutting national development programmes.
- **Human Capital Dev.:** Monitors household, school, and healthcare facility WASH service tiers.
- **Natural Resources, Environment, Climate Change, Land and Water Management (NRECCLWM) Programme:** Tracks catchment protection, wetland restoration, and water quality compliance.
- **Agro-Industrialization:** Measures Water for Production storage capacity and functional irrigation.

WASH Indicator Measurement Frameworks: Global to National Alignment

Ministry of Water & Environment (MWE)

- **11 Golden Indicators:** Rural/urban access (1 km / 0.2 km), functionality, equity, & water quality.
- **Gender Governance:** Tracks % of Water & Sanitation Committees with women in key leadership.
- **Spatial & Quality MIS:** Uganda Water Atlas & UNBS drinking water compliance surveillance.
- **Climate Resilience:** WASH National Adaptation Plan (2026–2030) infrastructure tracking.

Summary Matrix: WASH Measurement Tiers & Data Architecture

Framework Tier	Governing Body / Policy	Core Measurement Focus	Some Primary Data Sources
Global (UN SDG 6)	WHO/UNICEF JMP & UN-Water Integrated Monitoring	Safely managed drinking water (on-premises, available, E. coli/chemical free), safe sanitation, & basic hygiene.	UBOS Surveys (UDHS, UNHS, NPHC) & National Water Quality Reports
Continental (AU 2063)	AU Agenda 2063, Africa Water Vision 2063 & AMCOW	Basic water & sanitation access (Indicators 1.17.27 & 1.18.28), ODF status, & 0.5% GDP sanitation financing.	UBOS Official Statistics, AMCOW & Annual Sector Reports
National (NDP IV)	Government of Uganda (2025/26 – 2029/30)	Programme-based service delivery across households, schools, healthcare facilities, & water resource protection.	UBOS & Multi-Ministerial MIS (MWE, MoH, MoES)
Sectoral (MWE)	Ministry of Water & Environment (11 Golden Indicators)	Access distance (1 km rural / 0.2 km urban), functionality, equity, UNBS water quality, & women in WSC leadership.	MWE Sector Performance Report (SPR) & Uganda Water Atlas

Key Statistical Takeaway: UBOS household surveys provide the population-level denominators for SDG 6, Agenda 2063, and NDP IV outcomes, while MWE MIS tracks supply-side infrastructure functionality, water quality compliance, and gender governance.

Where Uganda's WASH statistics come from

Different data systems answer different questions.

HOUSEHOLD SURVEYS	UDHS 2022 (including field water tests) • UNHS/UHIS • previous UDHS rounds, NSDS, Labourforce surveys
CENSUSES	National Population and Housing Census Baseline Education Census 2025
ADMINISTRATIVE DATA	MWE / District Water Offices and Local Governments, MLGD, MOH amongst others: water points, functionality, coverage, committees • NWSC utility records
OTHER SOURCES	Statistical Abstracts • SDG monitoring • national and district planning indicators

Source: UBOS, UDHS 2022; NPHC 2024; UHIS; BEC 2025; MWE WASMIS / WEMIS

WATER

we measure whether households or institutions can reliably access safe drinking water. We look at three things: if the water is physically close and available when needed, if it comes from a protected, improved source, and whether it is free from microbial or chemical contamination like E. coli.

Some of the main drinking-water sources



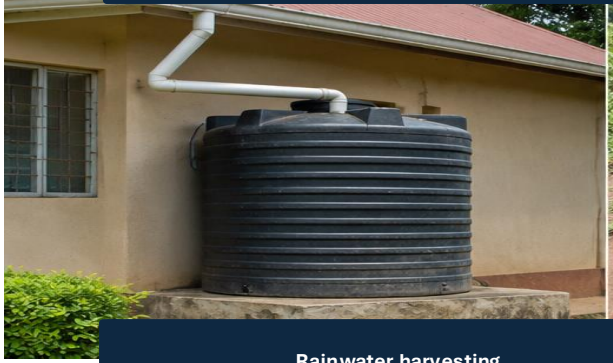
Borehole / hand pump



Public tap / standpipe



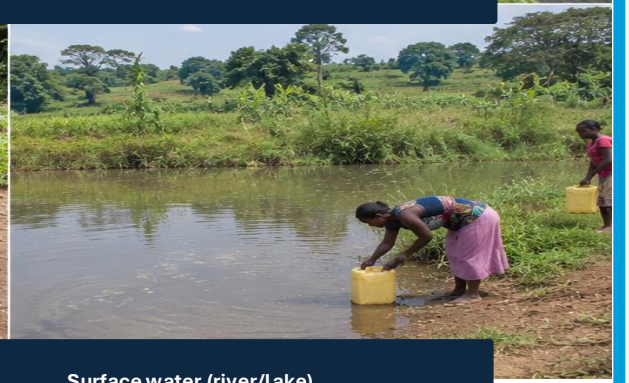
Protected spring



Rainwater harvesting



Unprotected well



Surface water (river/lake)

Source: Illustrative images (not survey evidence); UBOS UDHS 2022, Table 19.1

What does the water standard require?

Indicator	Acceptable GoU Standard	Authority & Measurement Rule
Per Capita Quantity	20 – 25 litres / person / day	MWE National Water Policy (rural & urban)
Distance & Time	≤ 1,000m rural; ≤ 200m urban; ≤ 30 min	MWE policy & UBOS/JMP Basic water rule
Source User Load	≤ 300 persons per public water point	MWE borehole & protected spring design cap
Microbial & Chemical	0 E. coli; Turbidity ≤ 25 NTU; pH 5.5–9.5	UNBS US EAS 12 (Lead & Arsenic ≤ 0.01 mg/L)

What do improved, unimproved, basic and limited mean?

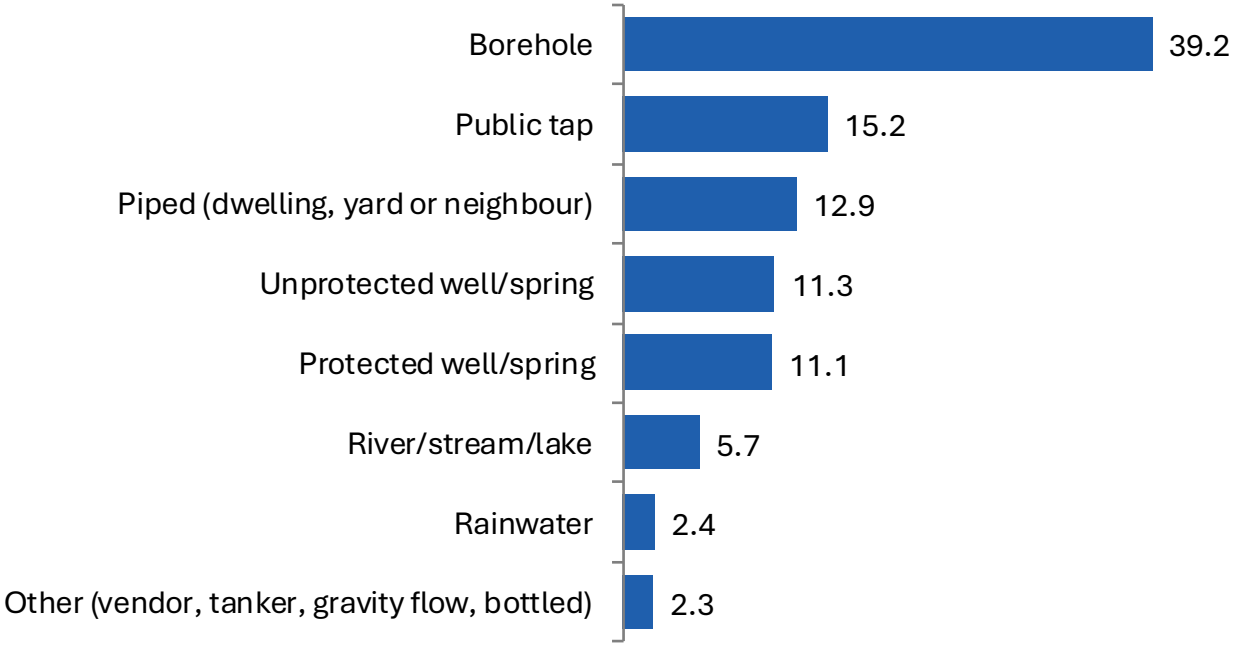
Improved water source	those that, by nature of its construction or through active intervention, is likely to be protected from outside contamination: piped water, borehole, protected well/spring
Unimproved water source	one that does not adequately protect against outside contamination, particularly from faecal matter: Unprotected dug well or unprotected spring; surface water is a separate ladder category

What do improved, unimproved, basic and limited mean?

Basic drinking water (National distance measure)	Improved source within 1 km
Limited drinking water (National distance measure)	Improved source beyond 1 km

Source: WHO/UNICEF JMP drinking-water and sanitation ladders; NPHC/UDHS source and toilet categories

Percentage of households by main source of drinking water

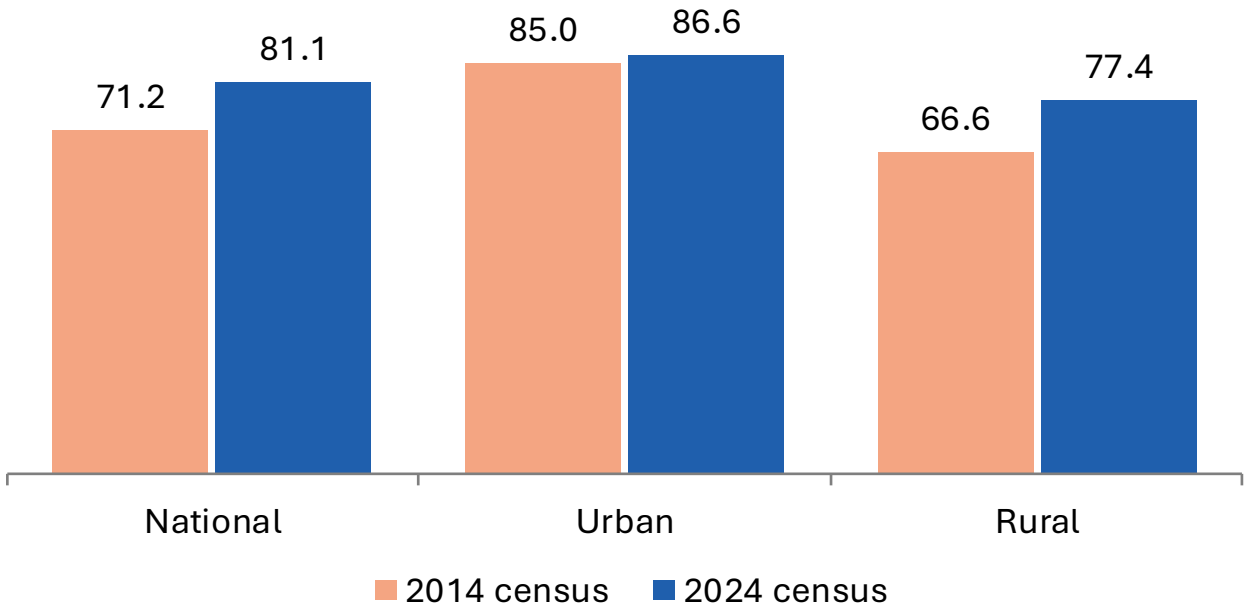


Boreholes (39.2%) are the leading drinking-water source

Tap water (Public tap and piped) constitutes 28.1%

Source: UBOS, NPHC 2024 Final Report Vol. 1, Table 11.5 (piped and other categories combined); UDHS 2022, Table 19.1

Trends in the percentage of households using an improved drinking-water source by residence.

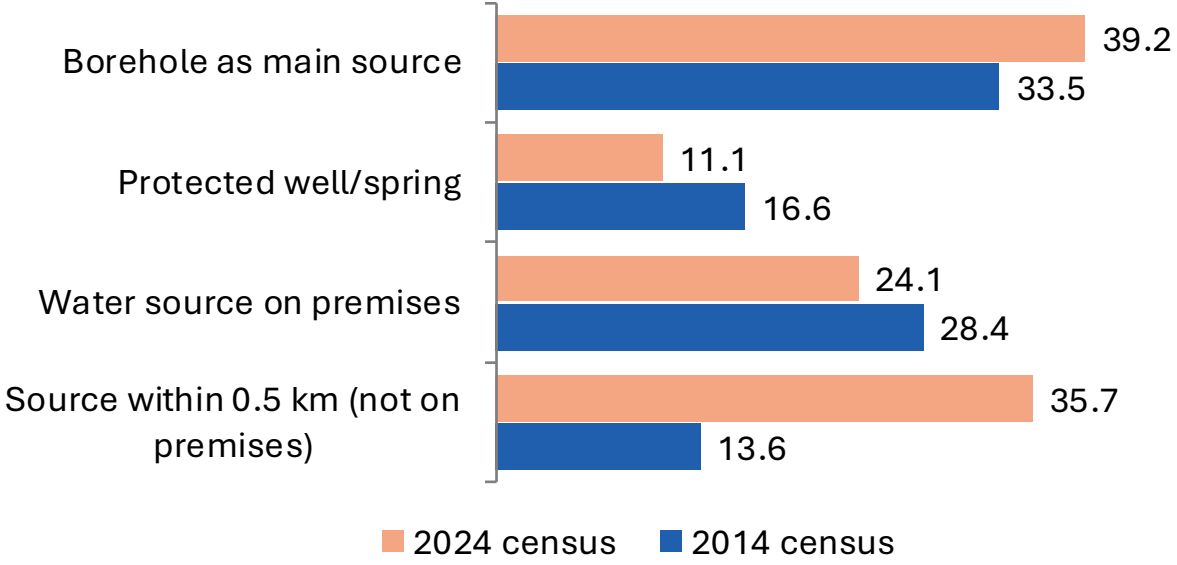


Improved water use rose, most in rural areas

**Note: Source classification and coverage changed between censuses*

Source: UBOS, NPHC 2014 Main Report (Fig. 5.1, Table 5.3); NPHC 2024 Final Report Vol. 1, Table 11.5

Trends in the percentage of households by main source of drinking water (2014 and 2024)



What changed: more boreholes and nearby sources (those within 0.5kms), less water on premises

Water on the premises fell from 28.4% to 24.1% nationally; in urban areas from 54.7% to 37.2%.

Source: UBOS, NPHC 2014 Main Report, Tables 5.3–5.4; NPHC 2024 Final Report Vol. 1, Table 11.5

Distance is part of access—not the same as safety

24.1%
Households with drinking water on premises

70.0%
Households within 1 km of an improved source

Government service-access benchmark

MWE: ≤1 km rural; ≤200 m urban.

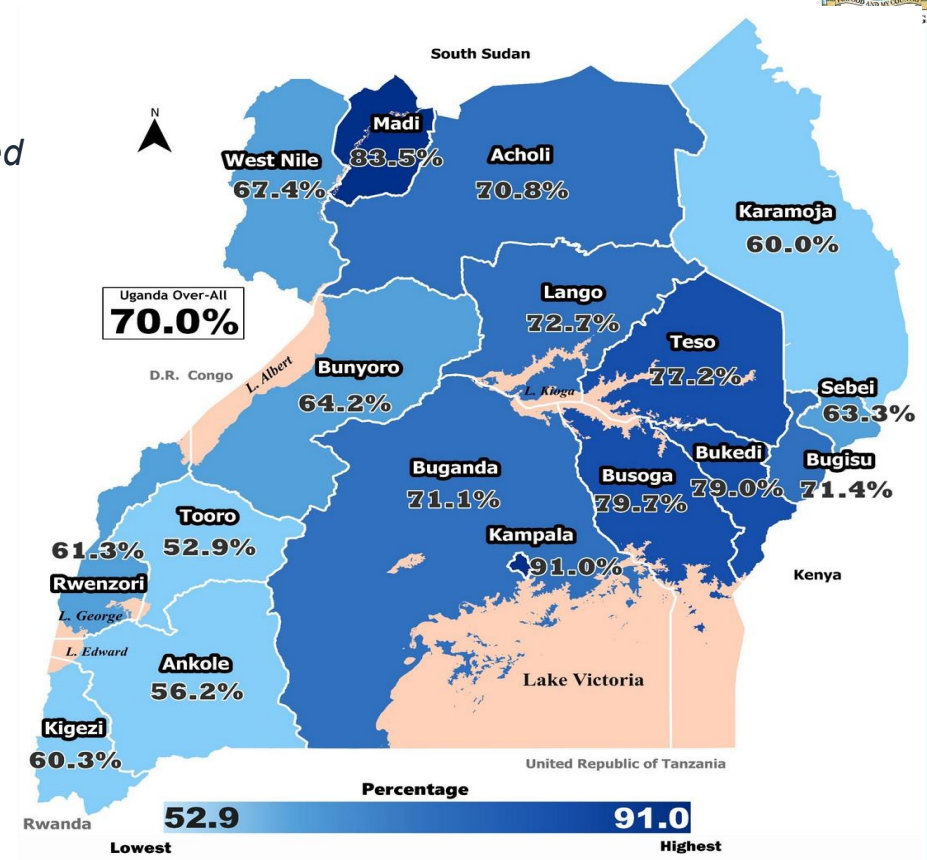
Source: NPHC 2024 Vol. I, Table 11.5; MWE sector Water Supply Indicators

Geographical inequality in drinking-water access

Percentage of households within 1km of an improved source varies by subregion

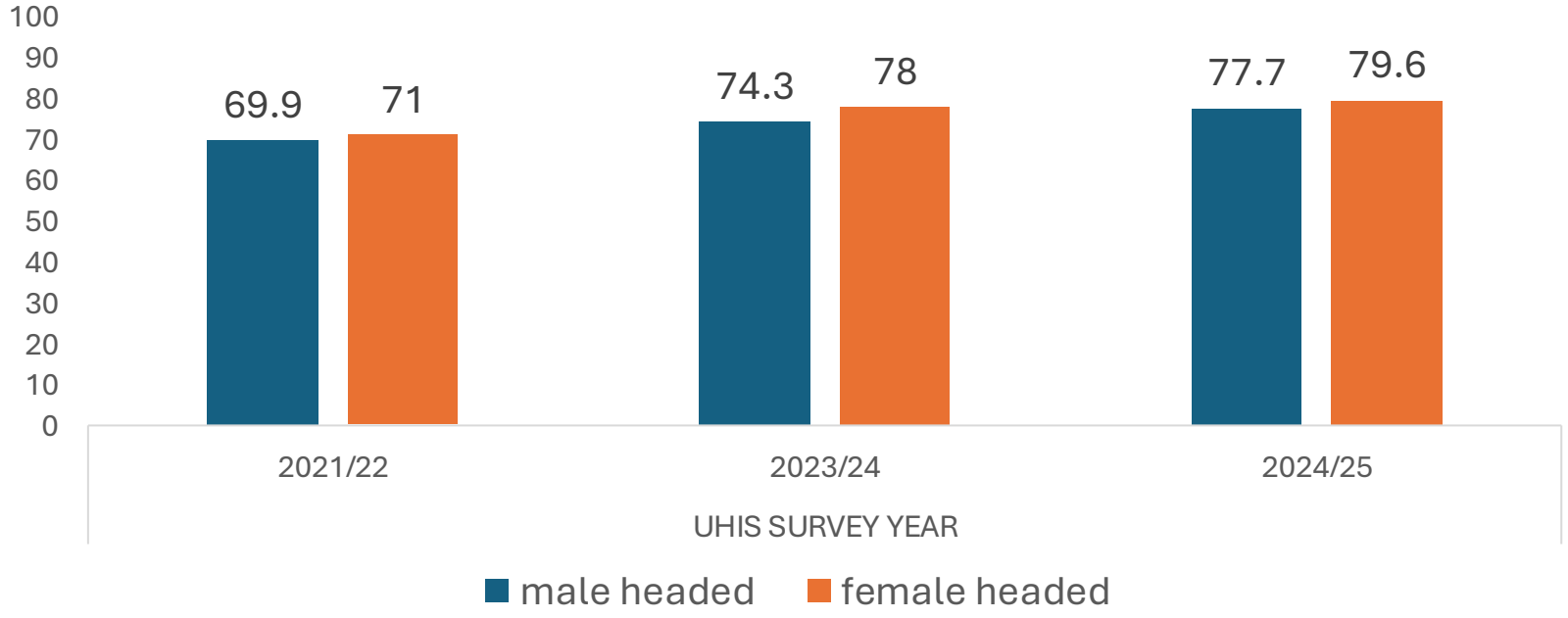
70% of Households are within one Km of an improved Water Source

Highest: Kampala 91.0%
Lowest: Tooro 52.9%



Source: NPHC 2024 Vol. I, Figure 11.3; % of households within 1 km of improved source

Percentage of households within 1km of improved water source by sex of household head



Source: UBOS, UHIS 2021/22–2024/25, Table 5.2

Basic and limited drinking-water services (1 km measure)

Percentage of households.

70.0%

Improved source within 1 km (basic)

11.1%

Improved source beyond 1 km (limited)

18.9%

Unimproved drinking-water source

Urban: 79.5% basic, 7.1% limited • Rural: 63.6% basic, 13.8% limited

Source: UBOS, NPHC 2024 Final Report Vol. 1, Table 11.5

What is the water service ladder?

- A five – rung ladder for classification of drinking services as improved or unimproved.
- Its purpose was to benchmark and compare progress towards achieving SDG targets.
- Developed by the Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP)

(WHO/UNICEF 2018).

What is the water service ladder

Safely managed: Drinking water from an improved water source that is located on the premises, available when needed, and free from faecal and priority chemical contamination.

Basic: Drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less.

Limited: Drinking water from an improved source, and round-trip collection time is more than 30 minutes.

What is the water service ladder

Unimproved: Drinking water from an unprotected dug well or unprotected spring.

Surface water: Drinking water directly from a river, dam, lake, pond, stream, canal, or irrigation canal.

UDHS 2022: the JMP drinking-water service ladder

Percent distribution of de jure population by drinking water service ladder



- At least basic: 61.1%
- Limited (>30 min): 20.2%
- Unimproved: 11.5%
- Surface water: 7.1%

61.1% of Households population had access to at least basic water services

Safely managed stood at 15.1%

** "At least basic" includes safely managed services.*

Source: UBOS, UDHS 2022, Table 19.2: UDHS 2022 Water Quality Thematic Report, Table 5.1

Improved source is not equivalent to safely managed

81.4%

2022 UDHS: Population using an improved drinking-water source

15.1%

2022 UDHS: population using safely managed drinking water

Safely managed also requires water on premises, availability and acceptable water quality.

Source: UDHS 2022: UDHS 2022 Water Quality Thematic Report, Table 5.1

WATER QUALITY & SAFETY

The UDHS 2022 water-testing evidence challenges the assumption that improved means safe

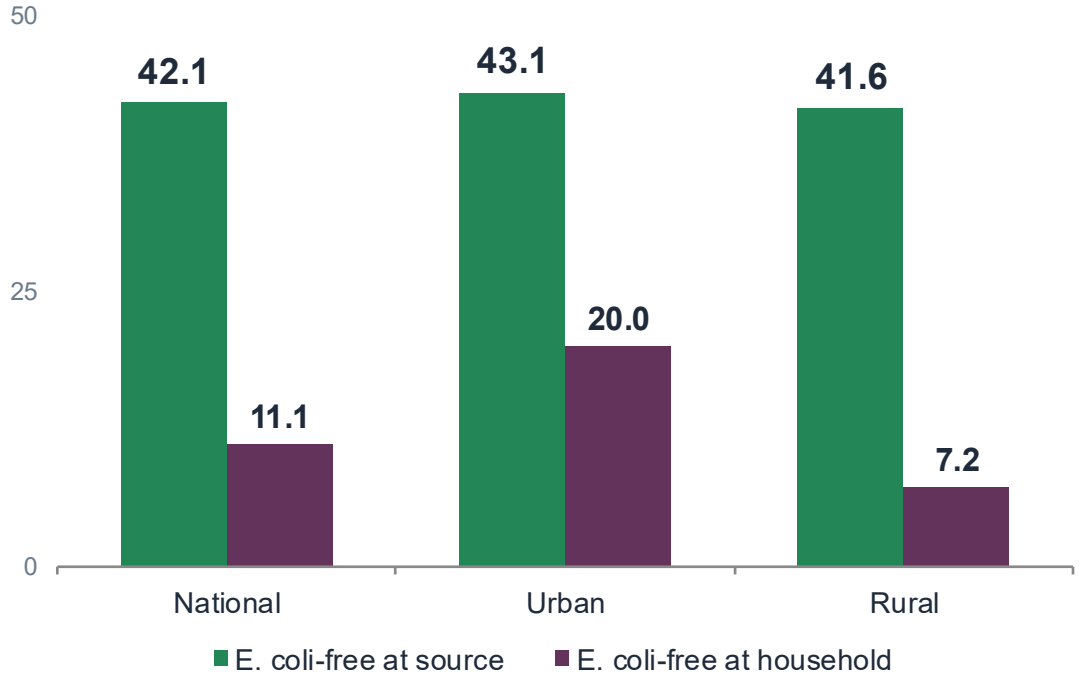
Samples were tested for E. coli, a marker of faecal contamination.

Separate tests allow comparison between source water and water consumed in homes/households

Frameworks used to describe and define water quality health targets

- The World Health Organization drinking water quality guidelines (WHO 2014, 4th Edition)
- East African Community potable water specifications (DEAS 12:2018)

Drinking-water E. coli: source versus household

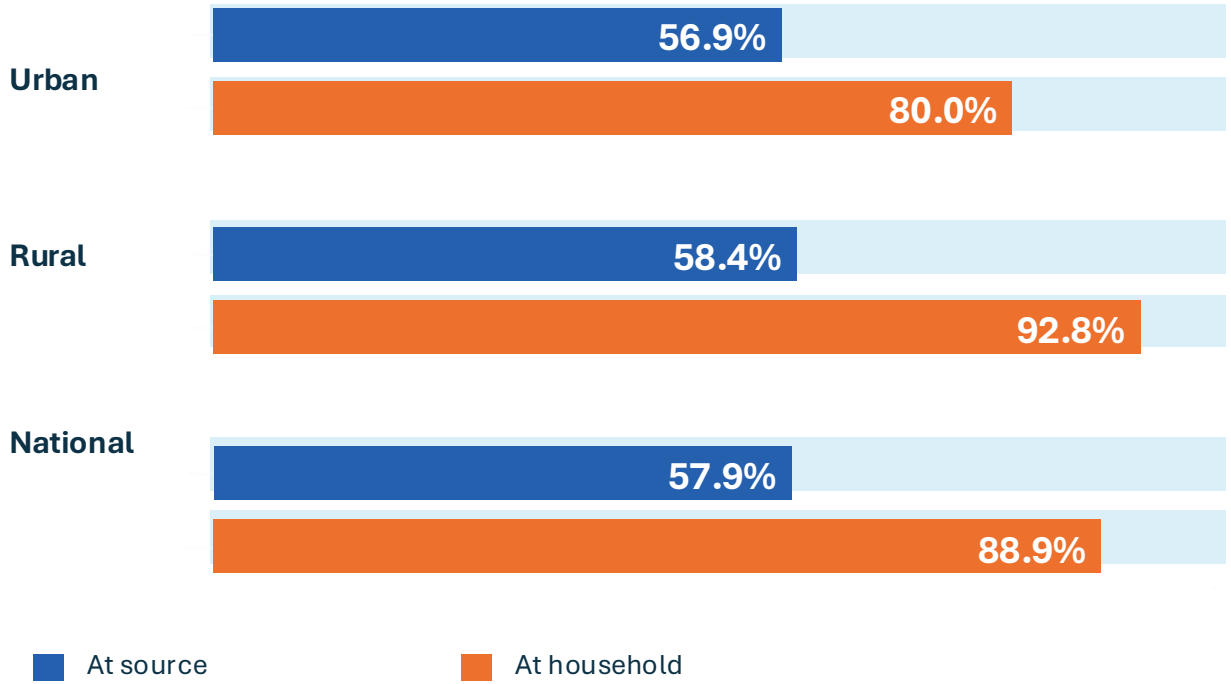


42.1 Percent of sources of Drinking Water and 11.1 percent household drinking water is free from E. coli

57.9% of source samples and 88.9% of household drinking-water samples contained E. coli.

Source: UDHS 2022 Water Quality Thematic Report, Figure 3.1, Tables 3.1 and 3.3b

Population at risk of water borne diseases as a result of drinking water E.coli contamination, (%)



89% of households were at risk of waterborne diseases and illness due to **contaminated drinking water**. The risk due to contaminated sources was 58%

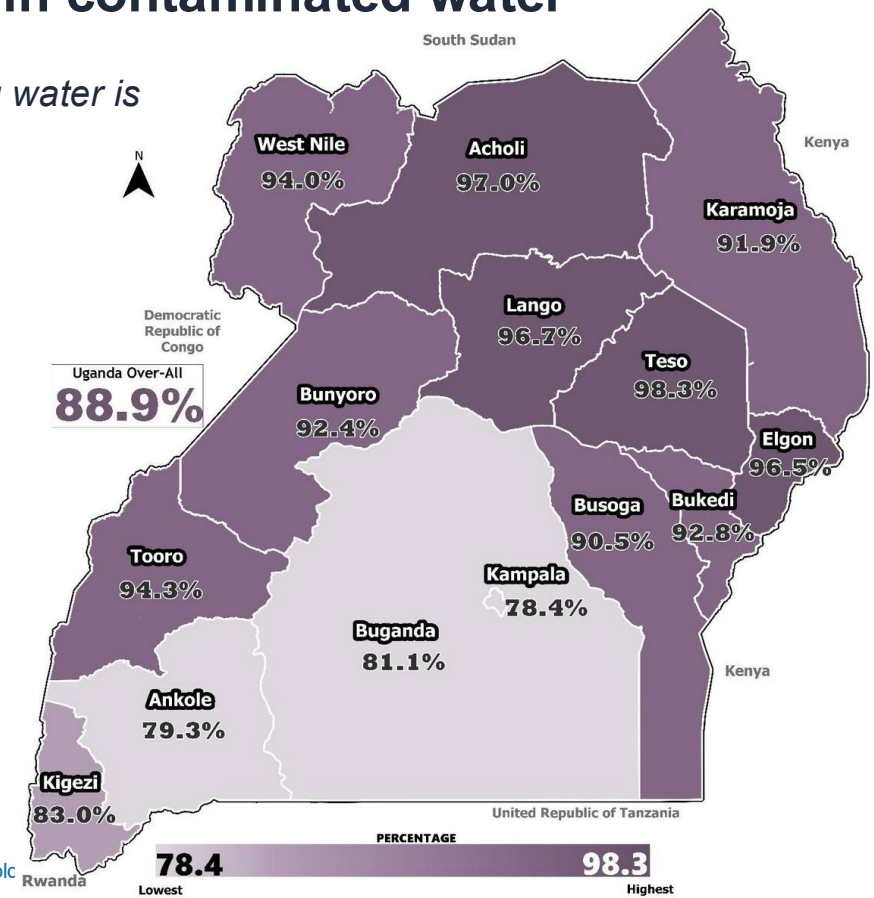
Source: UBOS, Water Quality Thematic Report, Figure 3.4

Geographical variation in contaminated water

Percentage of population whose household drinking water is contaminated with E. coli

98.3%
Teso

78.4%
Kampala



National: 88.9% of household drinking water is E. coli-positive.

Source: UDHS 2022 Water Quality Thematic Report, Table 3.3b; % contaminated at household

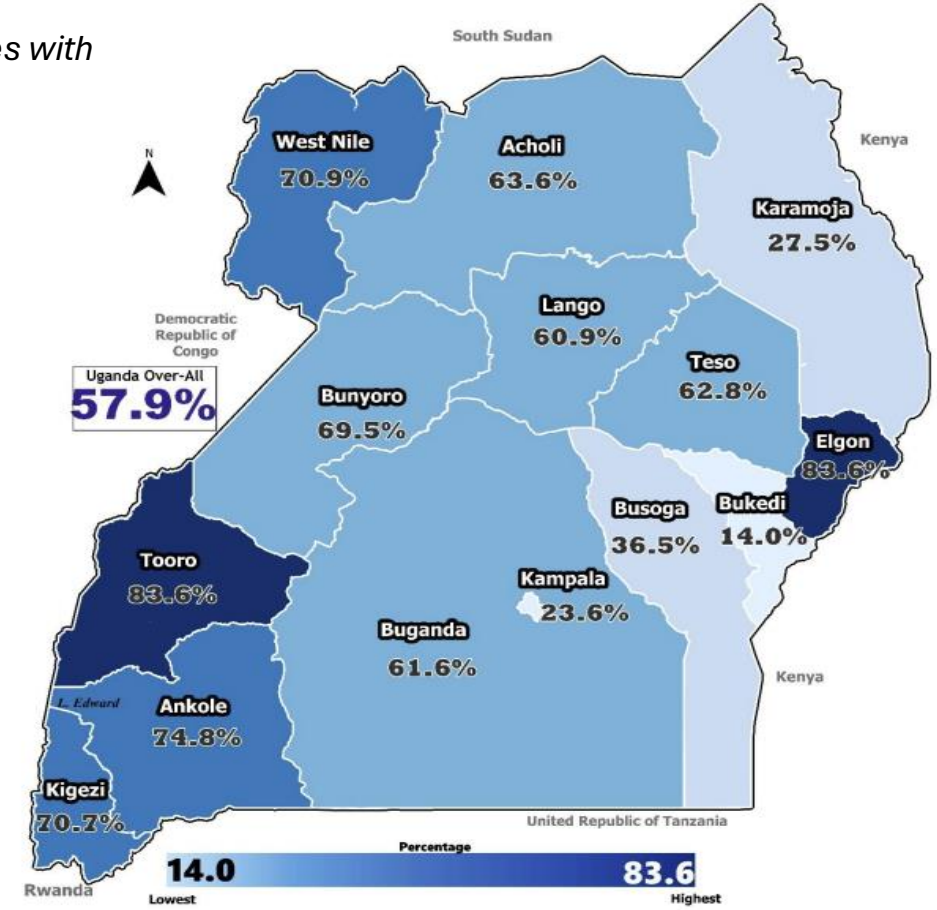
Geographical variation in contaminated source water

Percentage of Improved drinking water sources with E. coli contamination

83.6%
Tooro & Elgon

14.0%
Bukedi

Nationally, 57.9% of improved drinking water sources were contaminated



Safely managed drinking water: a much more demanding standard

15%

National safely managed drinking-water services

31%

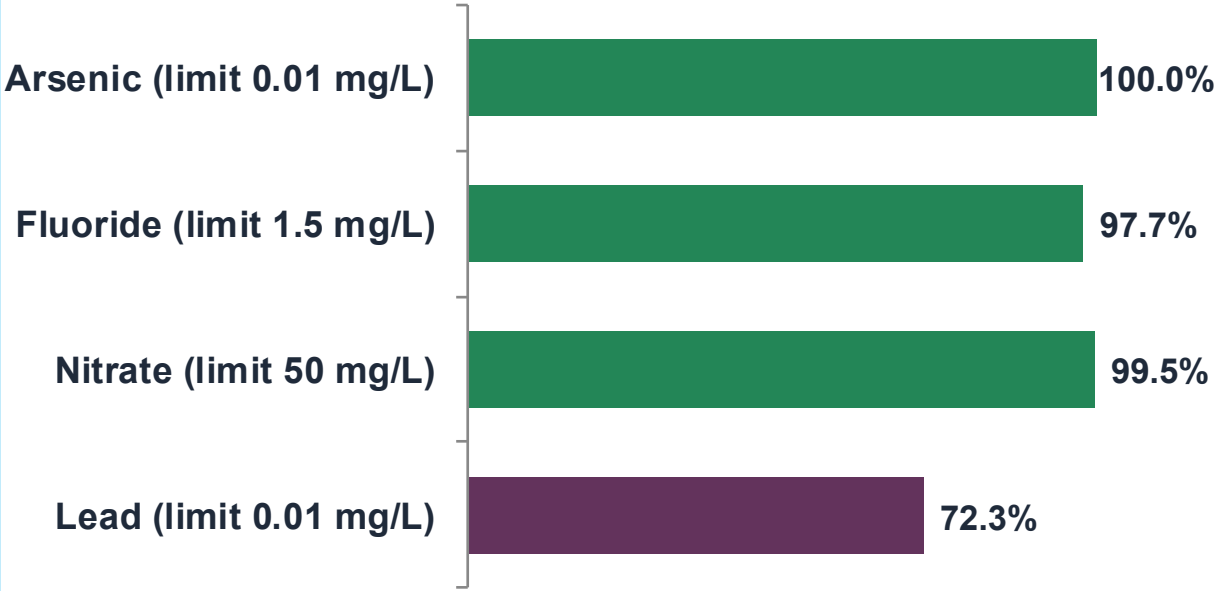
Urban safely managed drinking-water services

8%

Rural safely managed drinking-water services

Source: UBOS, Water Quality Thematic Report, Ch. 5, Table 5.1

Chemical water-quality results and thresholds



Four key chemicals (lead, arsenic, fluorides and nitrates) were tested and their levels determine whether water is safe, with short- and long-term health effects.

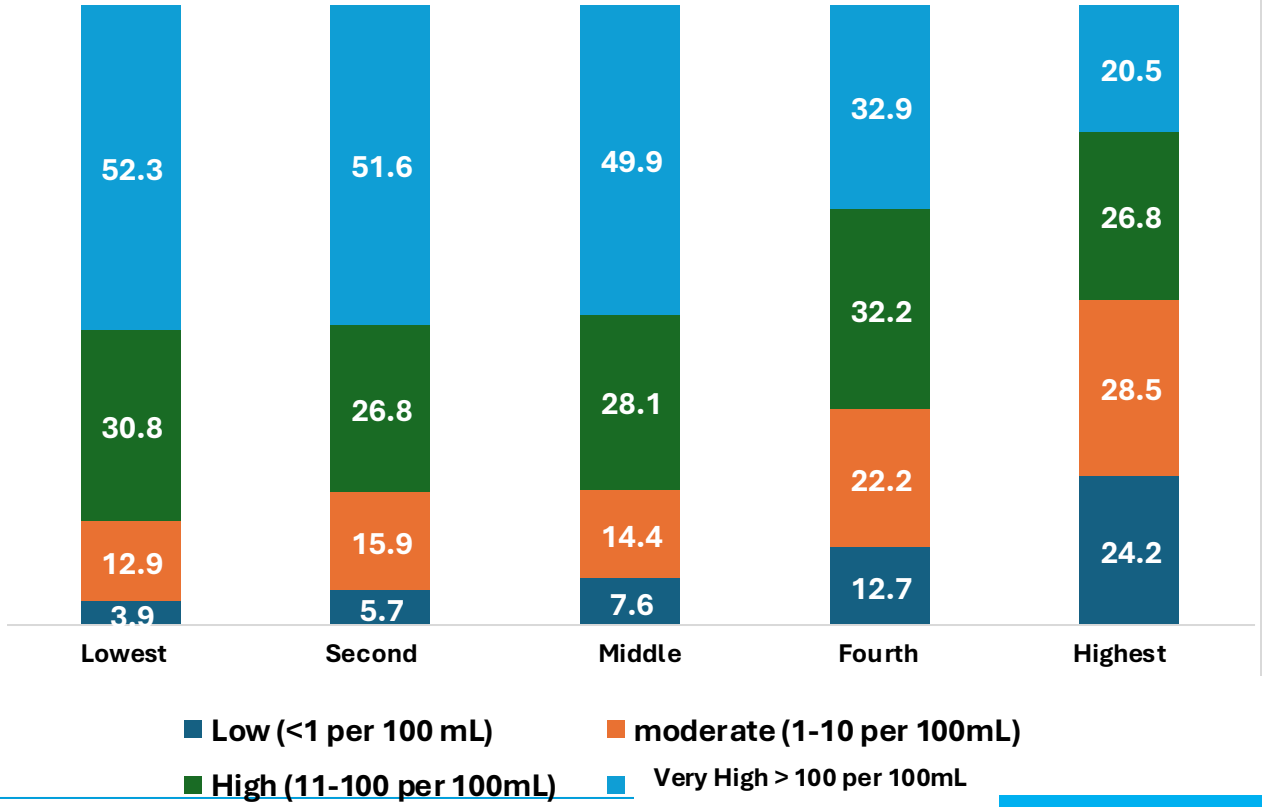
Lead and arsenic were tested in only 27.5% and 28.3% of source samples received, respectively.

Source: UDHS 2022 Water Quality Thematic Report, Tables 2.3, 2.2 and 4.1–4.4

Microbiological (E. coli) Compliance

- Only 42.1% of water sources complied with E. coli safety standards. Compliance drops sharply at the household storage level
- 11.1% of household drinking water complied with E. coli standards due to secondary contamination during transport and handling.
- Chemical Contamination: Arsenic, fluoride, and nitrates largely met acceptable safety thresholds (>98–99.5%).
- Lead unacceptability reached 27.7% in tested sources, posing severe neurological and maternal/child health risks.

Population at risk of faecal contamination by wealth quintile



21% of the population in the Highest wealth quintile were at a high risk of faecal contamination compared to more than **50%** of the population in the Second and lowest quintile

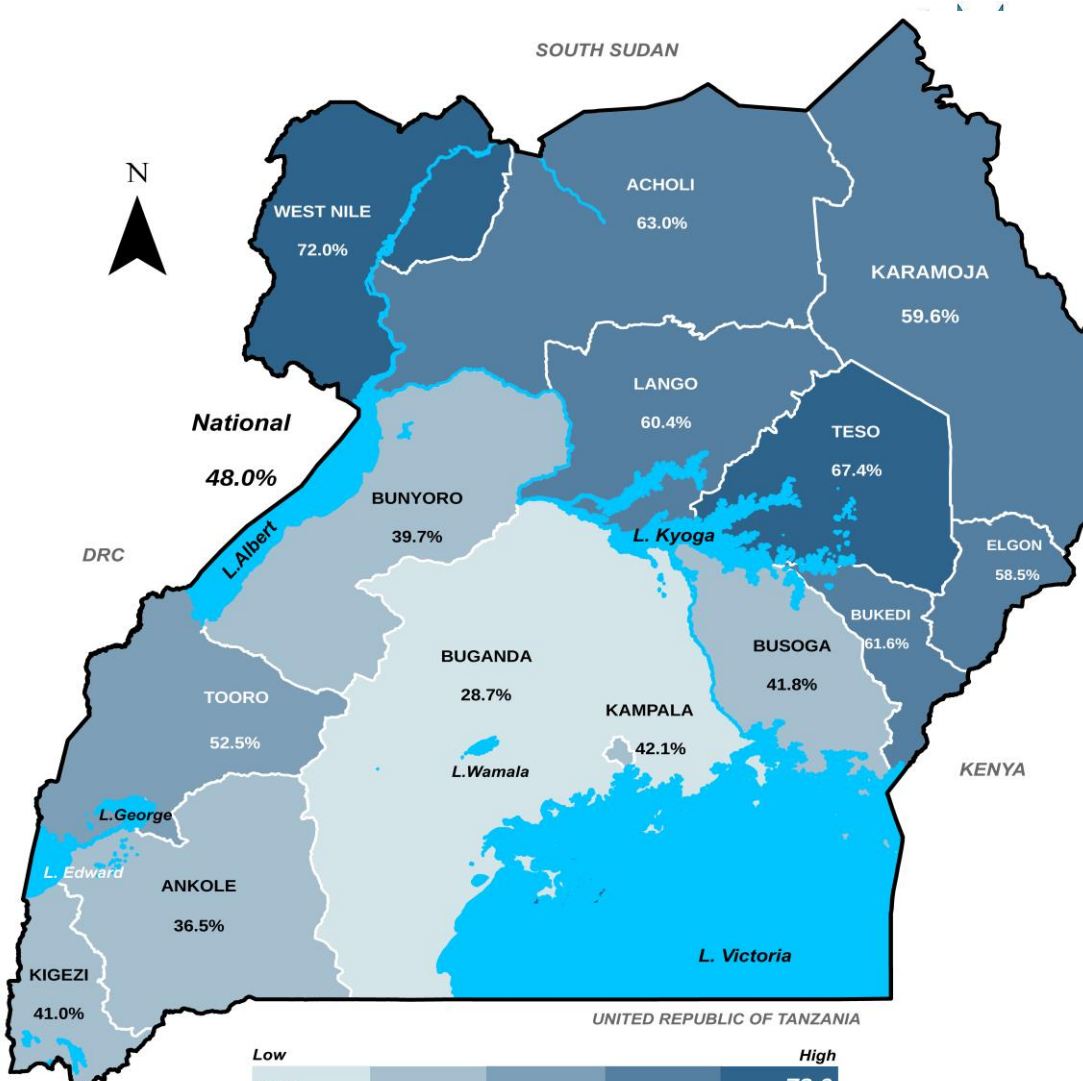
Time-Use, Labor Burden

Female Adults who usually collect water by Subregions, UDHS 2022

Nationally 48% of Female Adults usually collect water

These data establish collection responsibility; they do not directly measure time-use hours or safety incidents.

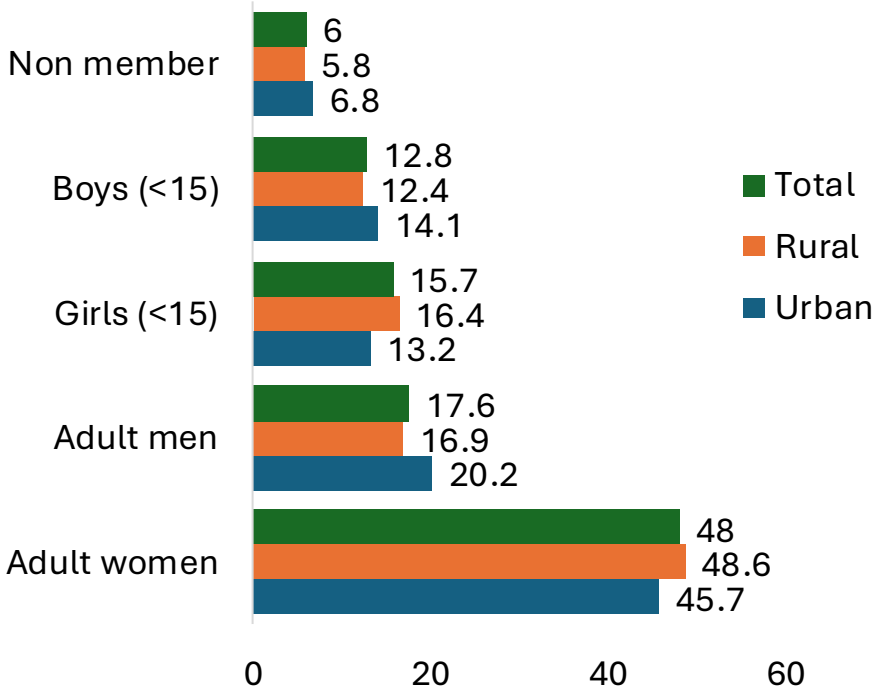
Source: UBOS, UDHS 2022, Table 19.3



Uganda Bureau of Statistics ¤ Plot 9 Colville Street, Kampa
¤ Website: www.ubos.org Tel: +256(0)-41-4706000 ¤ E-mail: ubos@ubos.org ¤ tw
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Who usually collects water?
Women and girls bear most of the task

Persons usually collecting water for people in homes without water on premises.



Adult women and girls together account for about 63.7% of usual water collectors

SANITATION

It measures safe containment and disposal. It is not enough for a latrine to simply exist. We check if it hygienically separates human waste from human contact, if it is private and safe to use, and whether it is shared or private to a household.

SANITATION AND HYGIENE











What does the sanitation standard require?

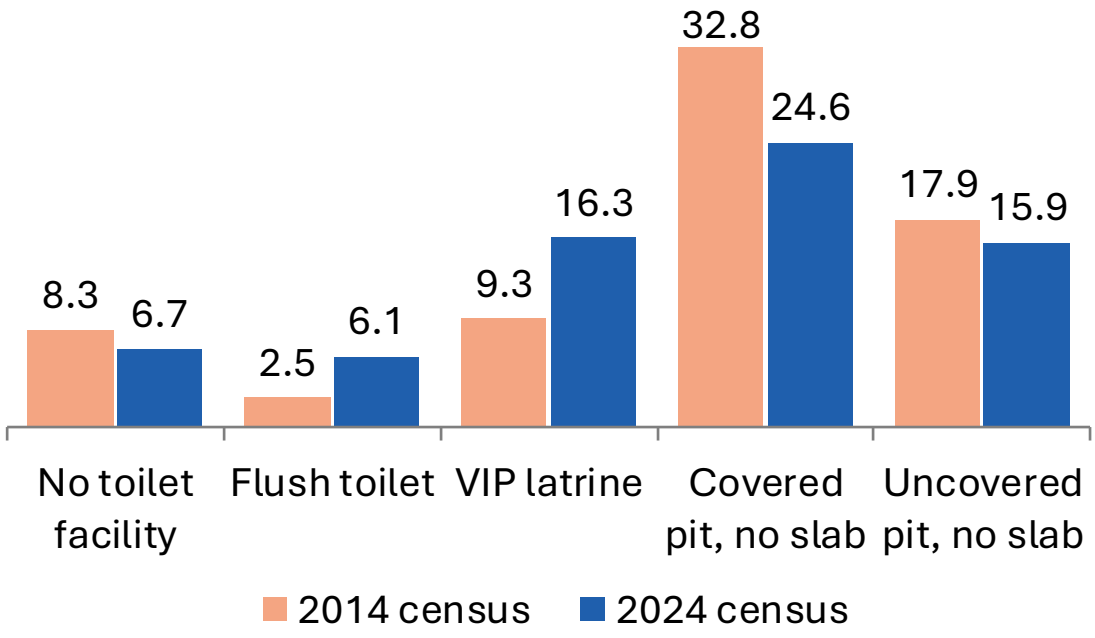
Indicator	Acceptable GoU Standard	Authority & Measurement Rule
Facility Technology	Flush/septic, VIP, or washable slab latrine	MoH National Sanitation Guidelines (improved)
Household Sharing	Private & unshared by other households	UBOS / JMP rule (shared = Limited sanitation)
School Stance Ratio	40:1 day schools; 15:1 boarding schools	MoES minimum school infrastructure standard
Safety & Inclusion	Gender-separated blocks & disability access	MoES & MoH structural privacy & safety rules

What do improved, unimproved and basic mean?

Unimproved Sanitation	sanitation facilities that fail to hygienically separate human excreta from human contact
Improved sanitation	hygienically separates excreta from human contact, such as a slabbed pit or safe flush system
Basic sanitation	Improved sanitation facility that is not shared with another household

Source: WHO/UNICEF JMP drinking-water and sanitation ladders; NPHC/UDHS source and toilet categories

Trends in percentage of households by main toilet type by year



Census 2014–2024: fewer households reported having no toilet facility (8.3% to 6.7%), and there is an increase in those with VIP (9.3% to 16.3%) and flush toilets (2.5% to 6.1%)

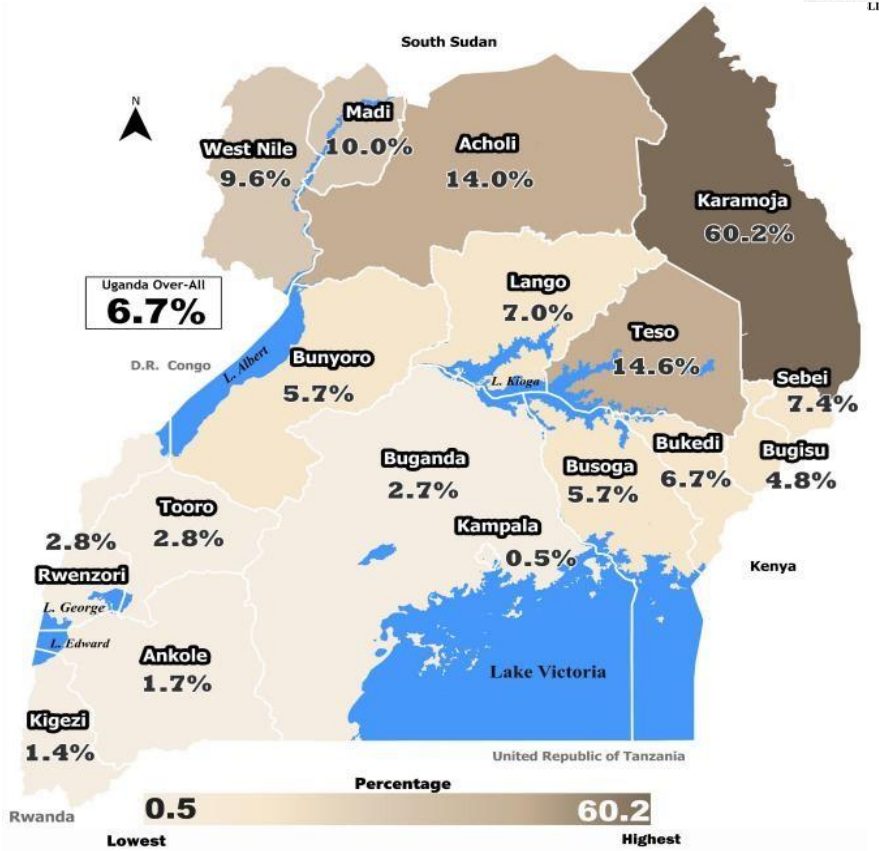
Source: UBOS, NPHC 2014 Main Report, Tables 5.5 and 5.8; NPHC 2024 Final Report Vol. 1, Tables 11.6, 11.7 and 11.9

Percentage of households without a toilet facility by Subregion

60.2%
Karamoja

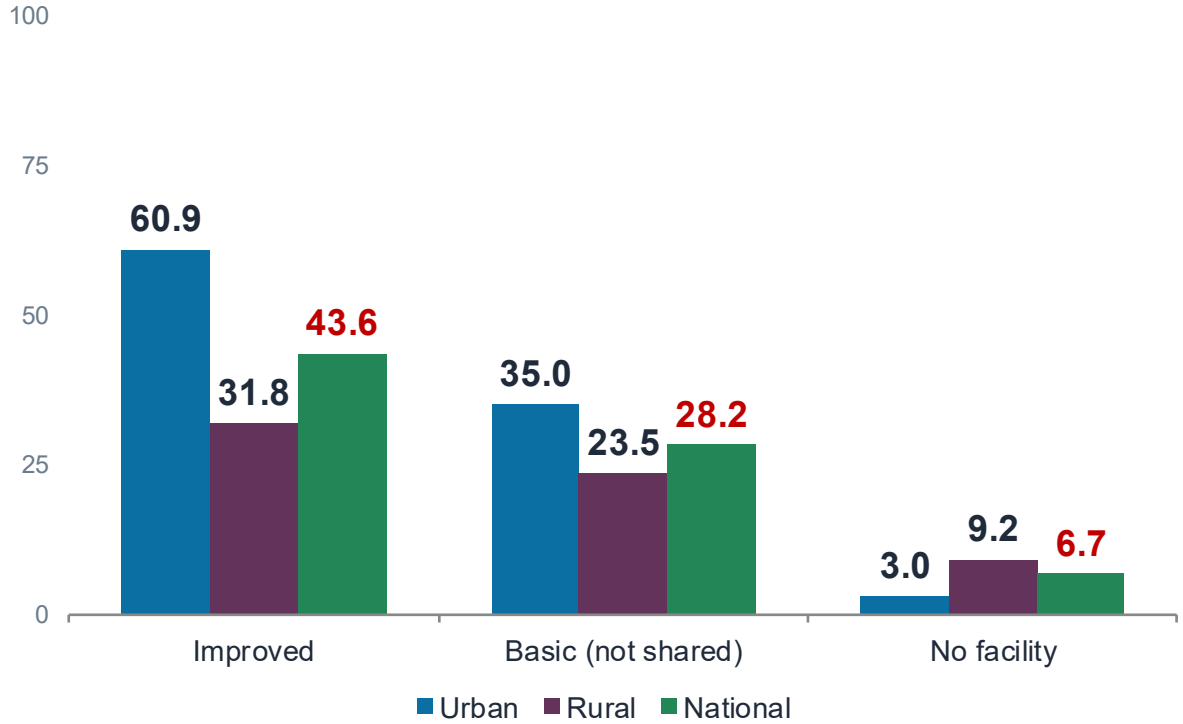
0.5%
Kampala

Uganda: 6.7% of households had no toilet facility.



Source: NPHC 2024 Final Report Vol. I, Figure 11.5; % of households with no toilet

Percentage of households by sanitation type and residence



Less than half (43.6%) used an improved toilet facility

Source: NPHC 2024 Vol. I, Tables 11.6–11.7; percent of households

Percentage of households by type of sanitation facility and sex of household head

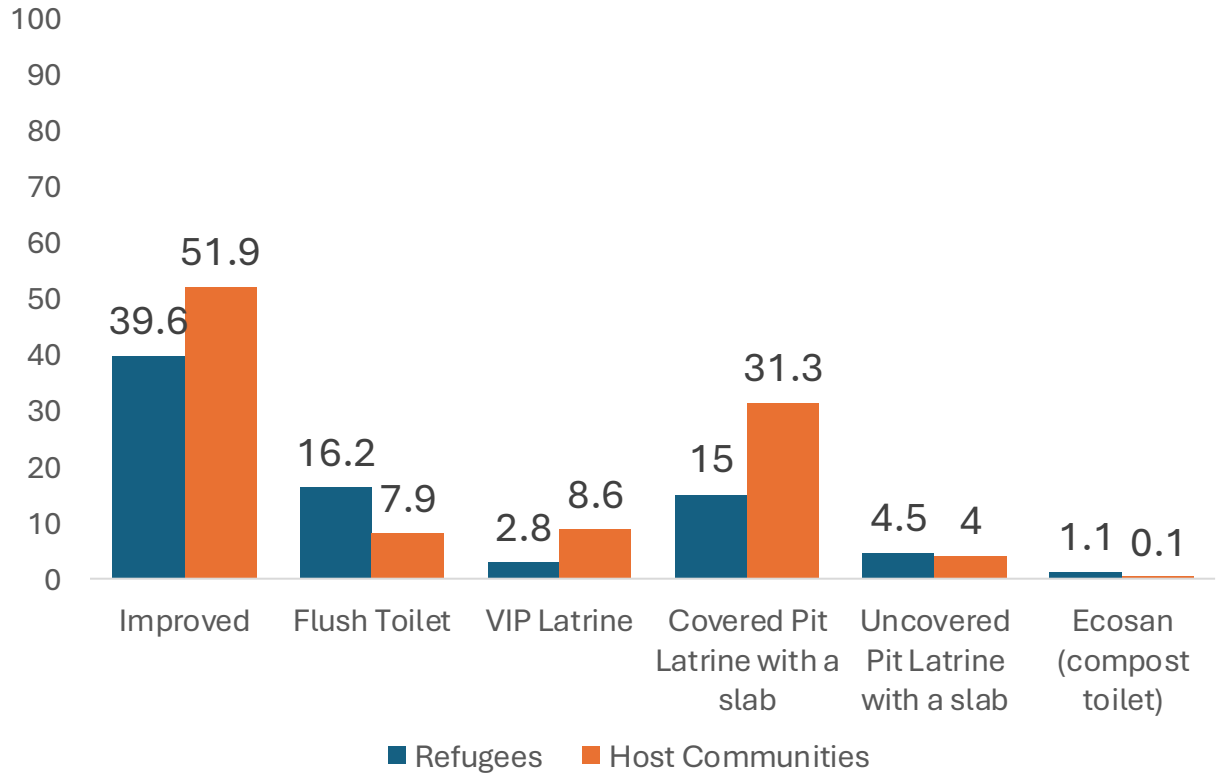
Indicator	Male-headed	Female-headed
Improved toilet facility	42.4%	46.1%
Basic (improved, non-shared)	27.6%	29.2%
Limited (improved, shared)	14.8%	16.8%
No toilet facility	6.6%	6.8%

Overall, 28.2% of households had Basic sanitation (improved, not shared)

Limited (improved shared) was 15.4%

Source: UBOS, NPHC 2024, Table 11.7

TYPES OF IMPROVED TOILET FACILITIES USED BY REFUGEE HOUSEHOLDS

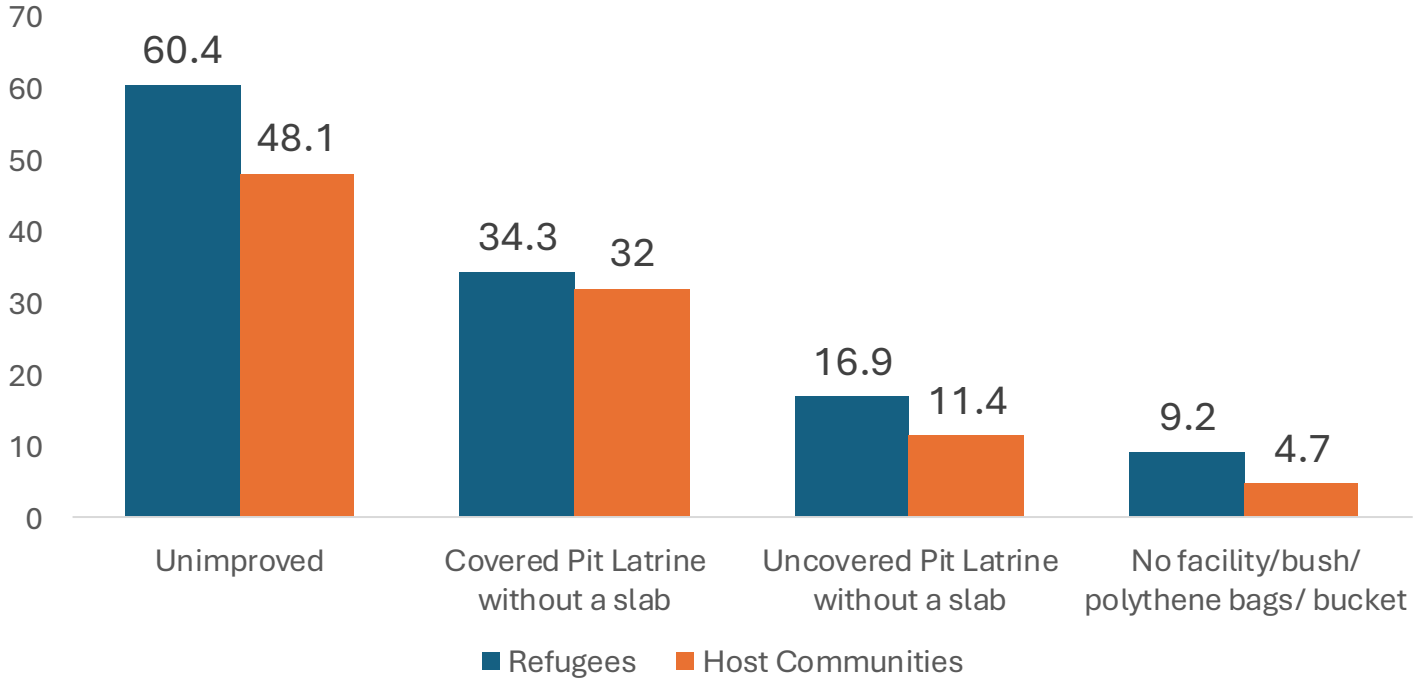


Overall, 40 percent of refugee households used improved toilet facilities, compared to more than half (52%) in host communities.

The use of flush toilets was higher among refugee households (16%) than in host communities (8%)

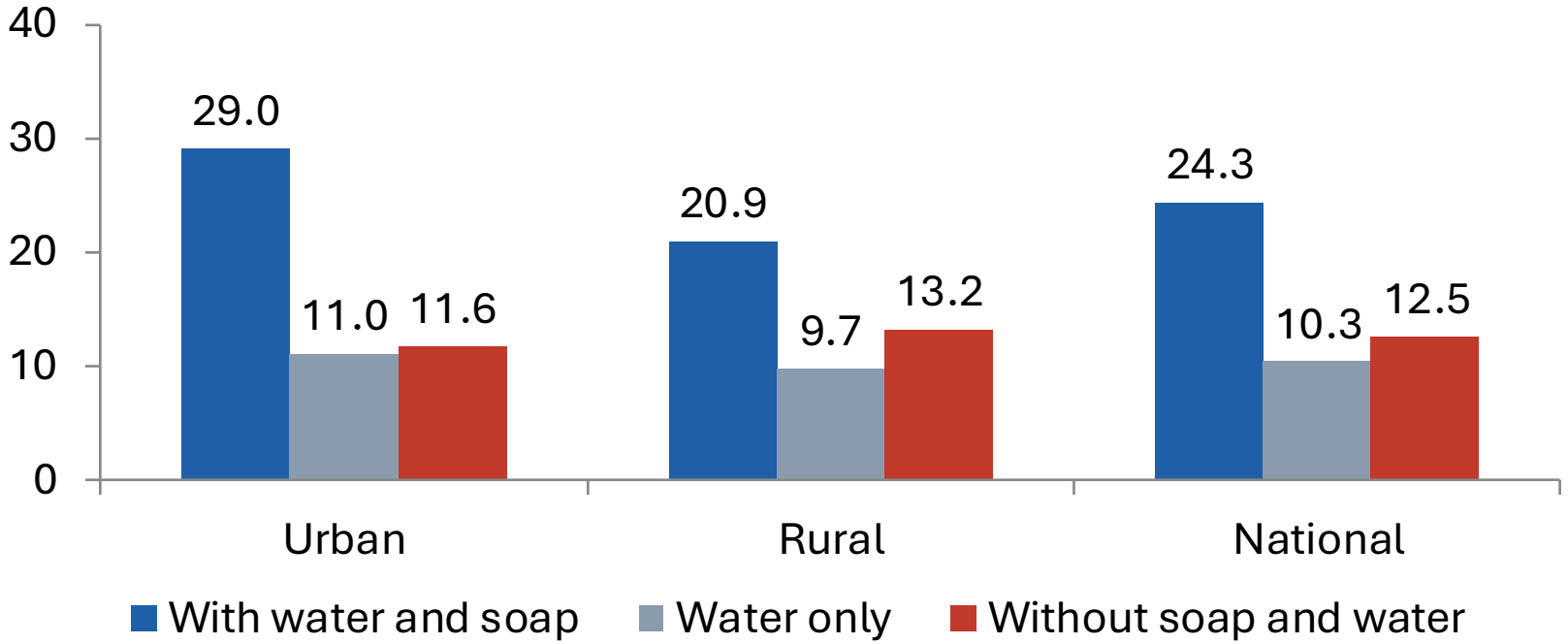
Source: UNHS 2023/24

TYPES OF UNIMPROVED TOILET FACILITIES



Source: UNHS 2023/24

Percentage of households with a toilet that had water and soap for handwashing



Source: NPHC 2024 Final Report Volume 1

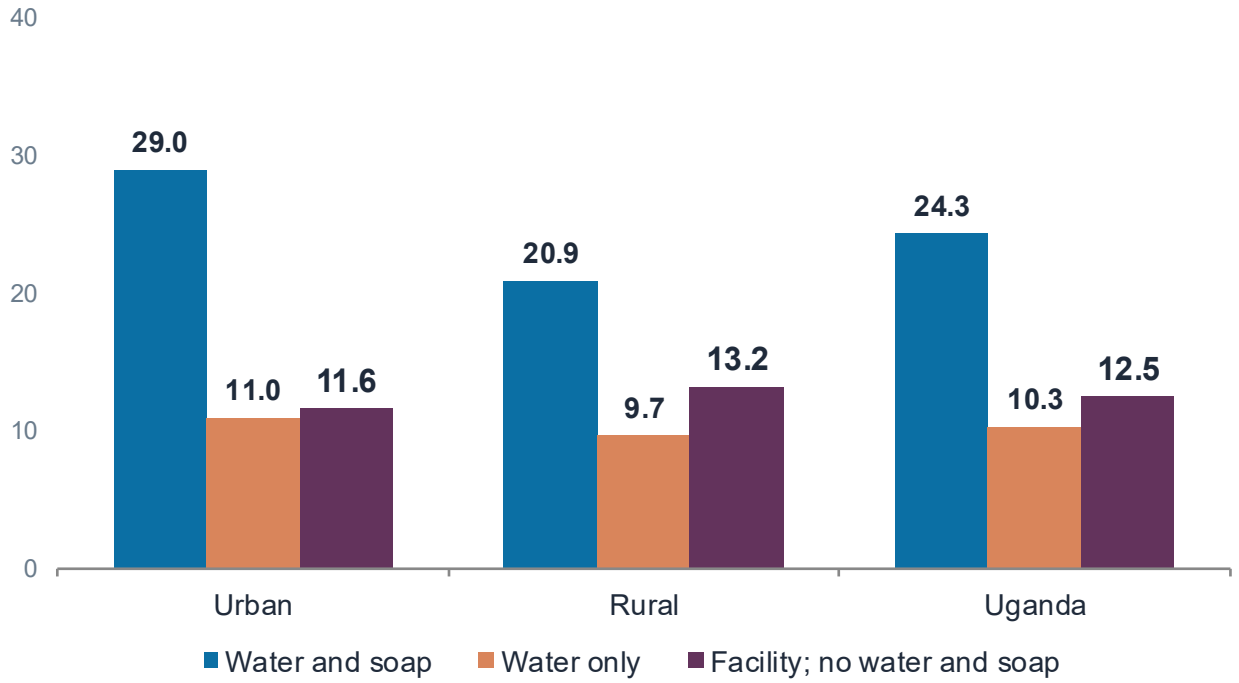
HYGIENE

It measures the enabling environment for personal cleanliness. The primary benchmark is whether a facility has a dedicated handwashing station with both soap and water present at the time of observation, alongside provisions for menstrual hygiene management.

What does the standard require?

Indicator	Acceptable GoU Standard	Authority & Measurement Rule
Handwashing Station	Dedicated fixed or mobile device (e.g. tippy-tap)	MoH & direct physical inspection
Cleansing Agents	Both water AND soap present at visit	JMP 'Basic Hygiene' threshold
Station Placement	Located immediately adjacent to latrine block	MoH & MoES institutional hygiene standards
Menstrual Hygiene	Private washroom, water & lidded disposal bin	MoES & KCCA school/public facility rules

Handwashing next to household toilets by residence (%)

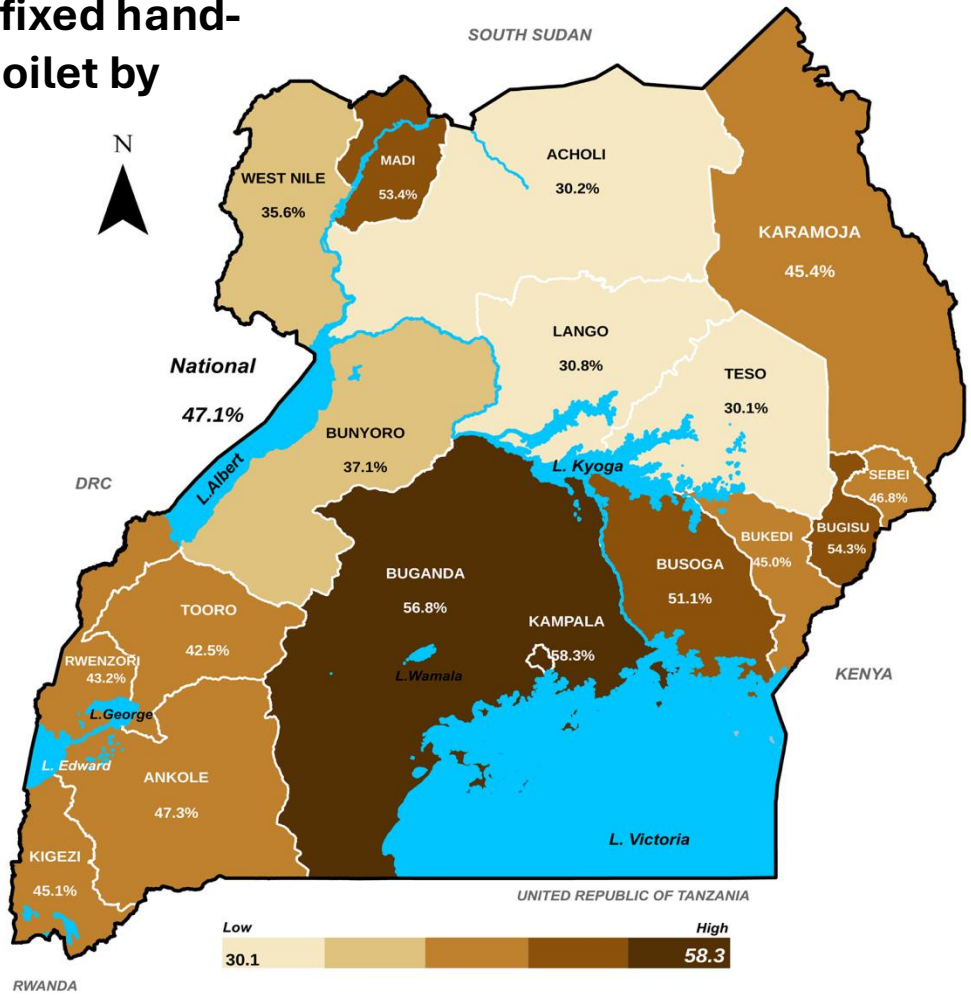


Overall, 24.3% of households had a facility next to the toilet which had water and soap.

Source: NPHC 2024 Vol. I, Table 11.8; percent of all households

Percentage of households with fixed hand-washing facility next to the toilet by subregion

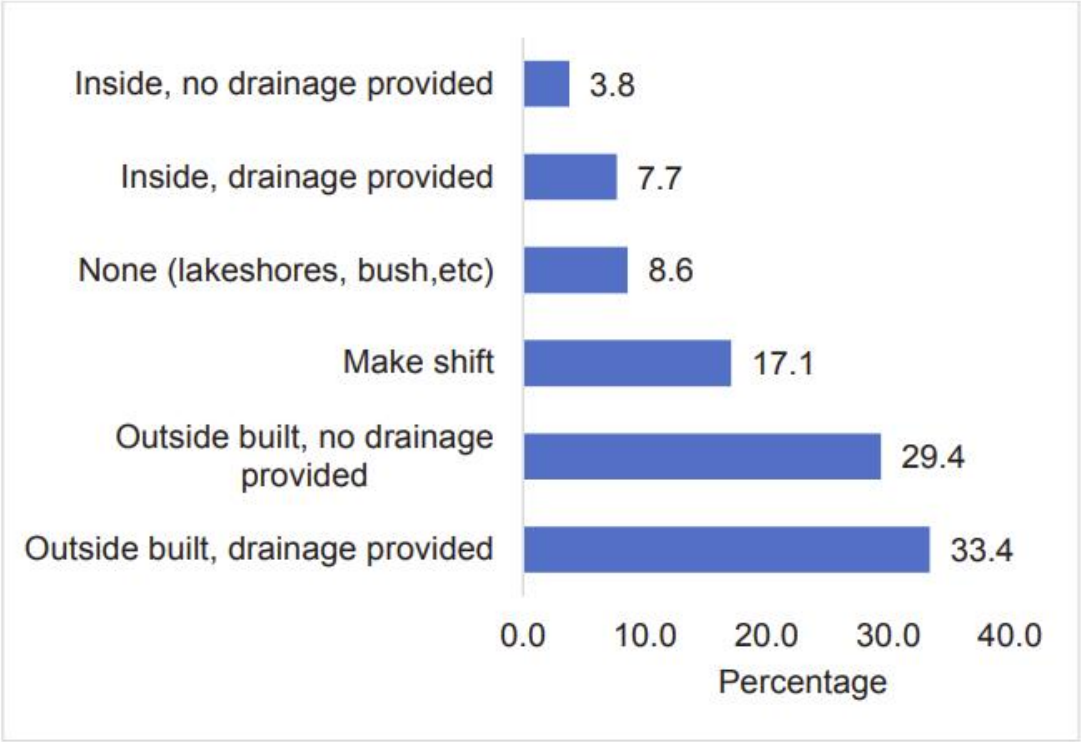
47.1% of households had a fixed handwashing place next to the toilet



Highest: Kampala - 58.3%
Lowest: Teso (30.1%), Acholi (30.2%) and Lango (30.8%)

Source: UBOS, NPHC 2024, Table 11.8

Percentage Distribution of Households by type of Bathroom



8.6 percent of the households had no bathroom facility

Source: UBOS, NPHC 2024, Table 11.8

Solid-waste disposal is a further environmental sanitation challenge

Percentage of households using a method classified as improper.

91.6%
of households dispose of waste improperly

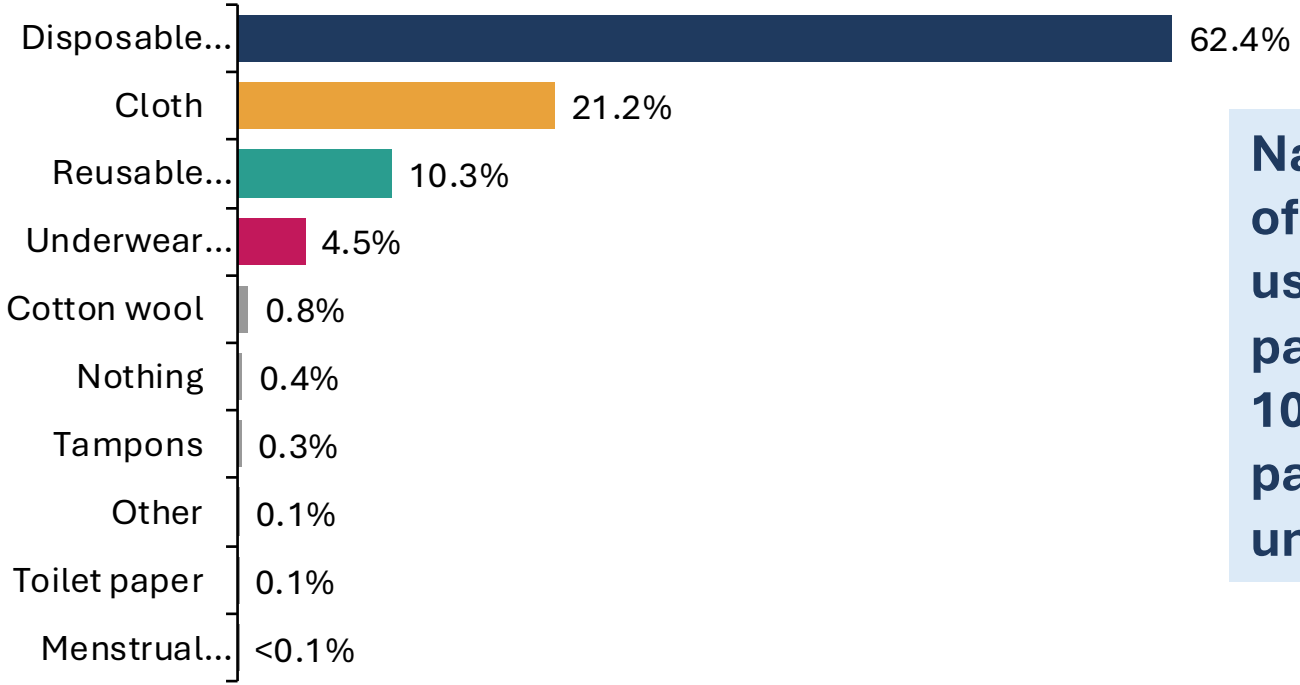
98.3%
Of Rural households dispose of waste improperly

81.8%
Of Urban households dispose of waste improperly

Male-headed: 92.3% **Female-headed: 90.4%**

Source: UBOS, NPHC 2024, Table 11.10

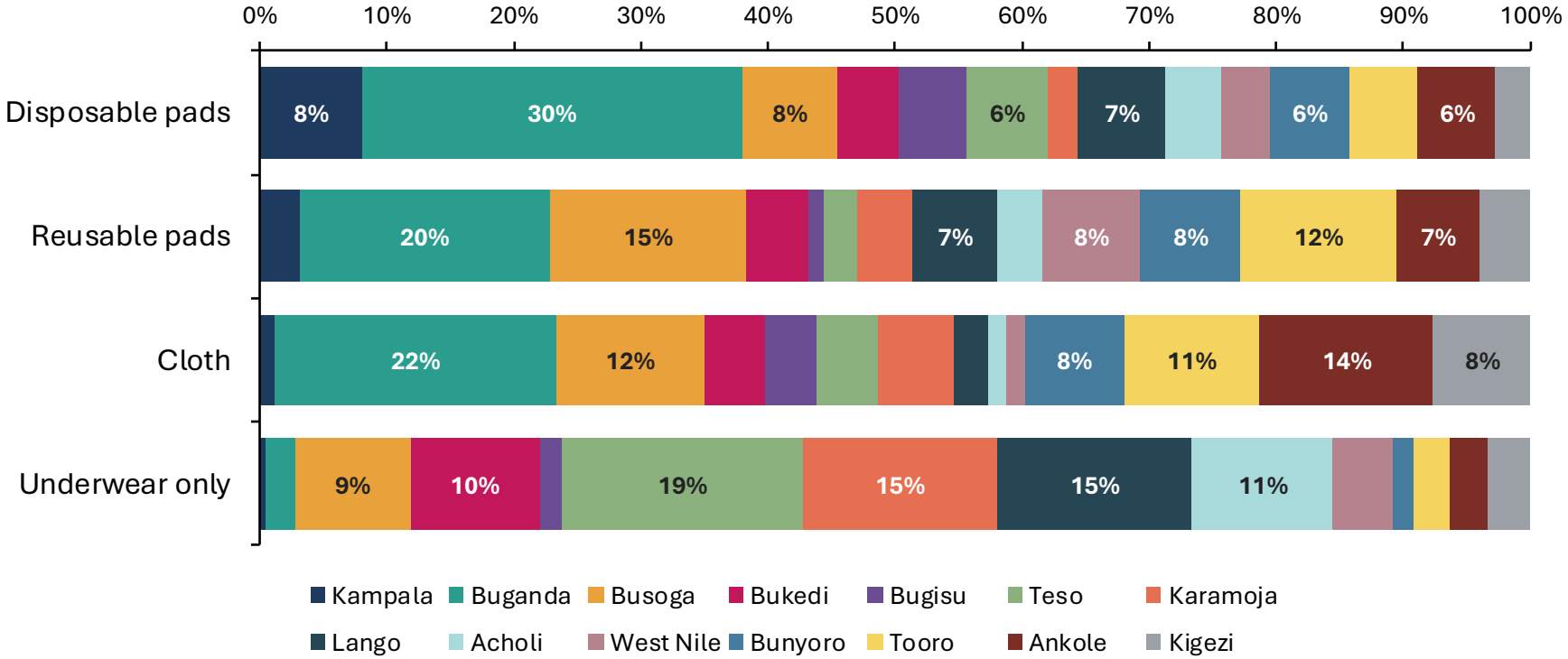
Percentage of women by the main material used to collect or absorb your menstrual blood during your last menstrual period



Source: UDHS 2022

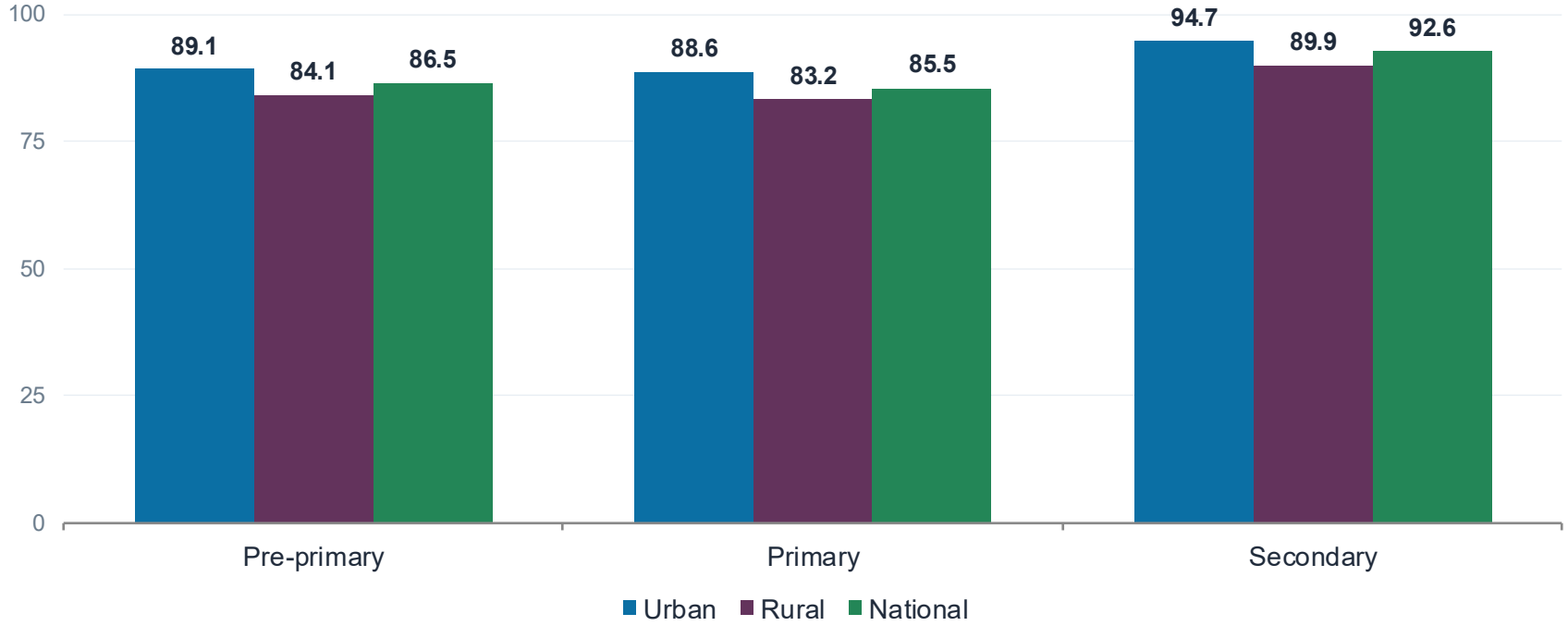
Nationally, 62.4% of respondents use disposable pads, 21.2% cloth, 10.3% reusable pads and 4.5% underwear only

Percentage of women by the main material used to collect or absorb your menstrual blood during your last menstrual period by subregion



Source: UDHS 2022

Schools: access to improved drinking-water sources



A source is categorised by technology. This does not establish potability at point of use in schools.

Source: BEC 2025 Report, water-source chapters; percent of schools

Primary-school enrolment and water-source coverage

4,586,970
Girls enrolled in primary school (50.3%)

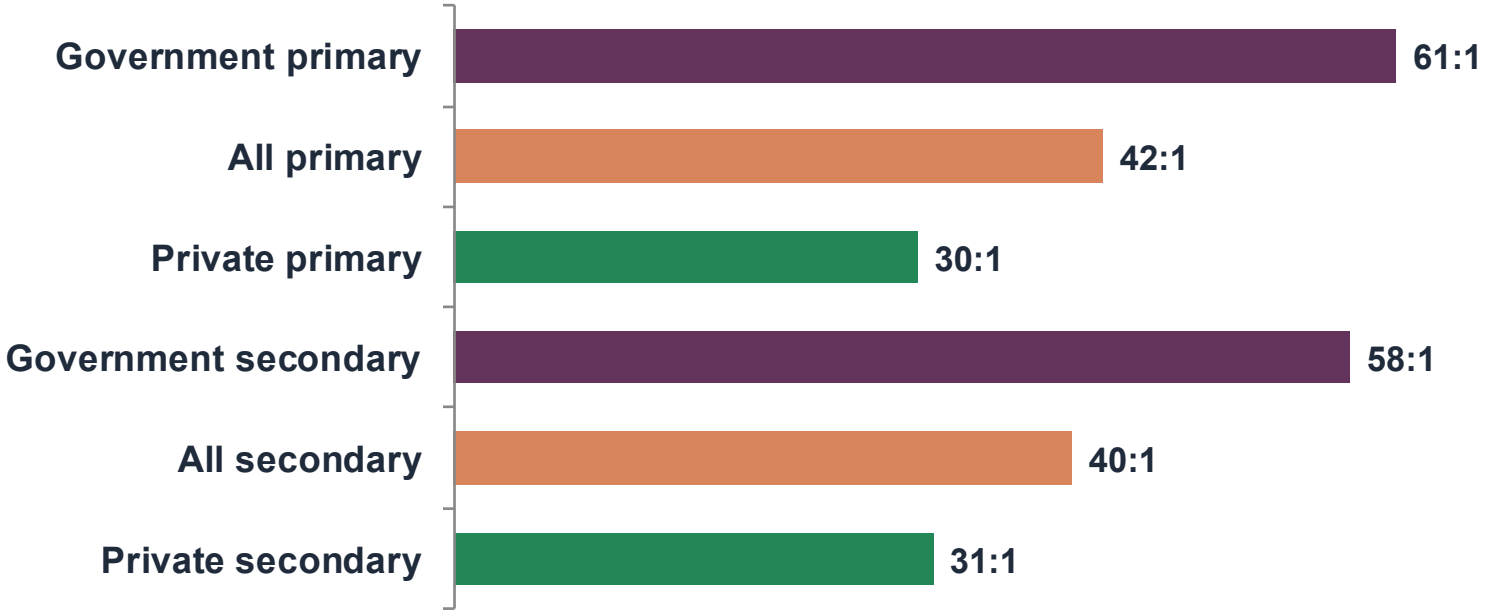
4,531,344
Boys enrolled in primary school (49.7%)

85.5% **of primary schools reported an improved main drinking-water source**

School percentages and learner counts have different denominators; this is not a pupil-level exposure estimate.

Source: BEC 2025 Report; primary enrolment counts and primary schools by source type

School sanitation compared with the 40:1 standard

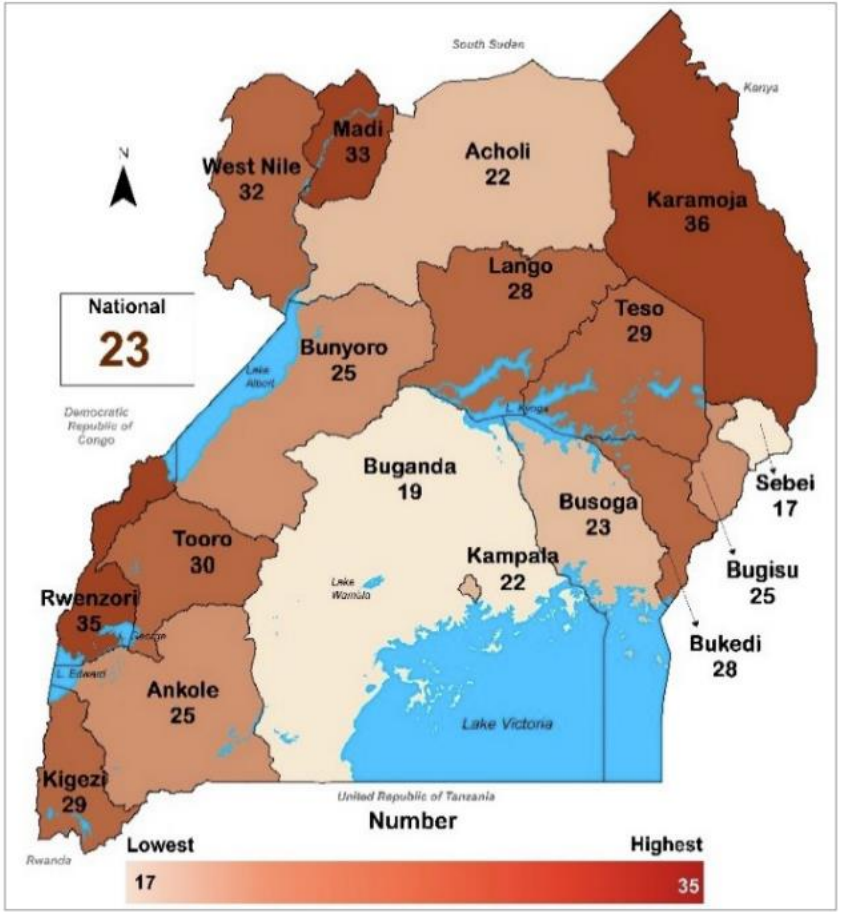


MoES norm: at most 40 pupils/students per usable toilet stance; private/public averages conceal school-level gaps.

Source: BEC 2025 Report, Figures 3.18 and 4.14A; MoES education service standards

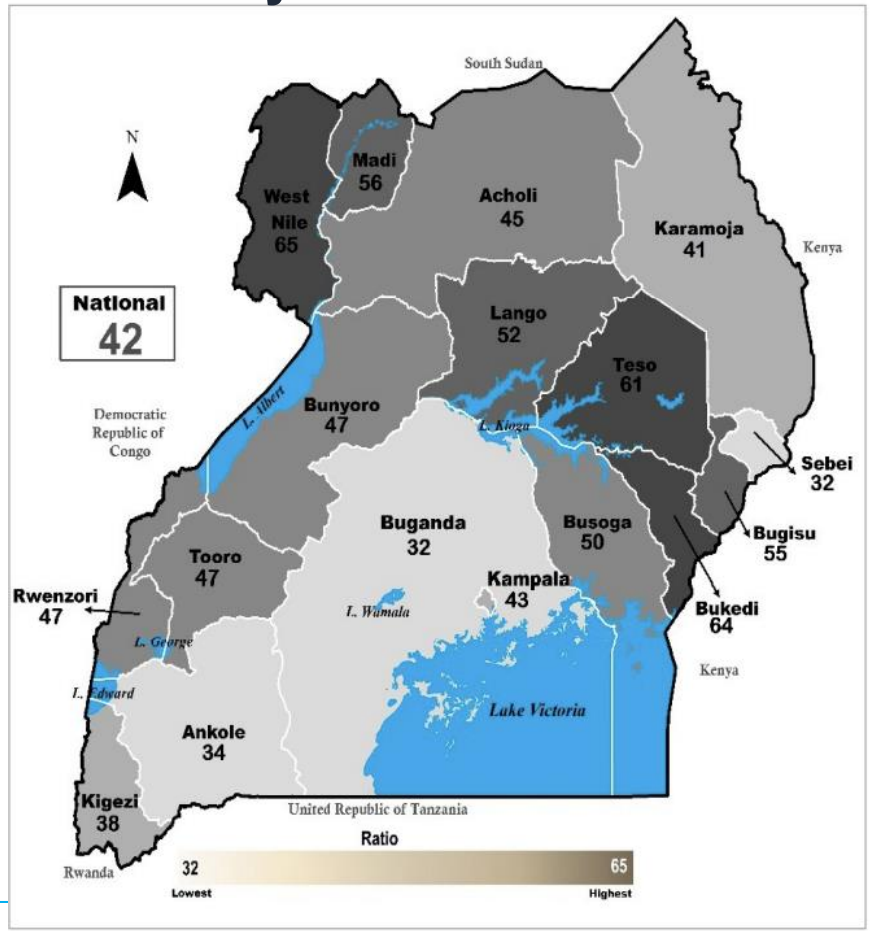
Pupil Stance ratio - PrePrimary

Karamoja had the highest Pupil-to-Stance ratio at 36 while Sebei sub-region recorded the lowest ratio at 17 pupils per stance



Pupil Stance ratio – Primary Schools

West Nile had the highest Pupil to-Stance Ratio at 65:1, while Sebei and Buganda had the lowest at 32:1



WASH FROM ADMINISTRATIVE SOURCES

Administrative sources complement household survey evidence.

MWE systems monitor infrastructure availability, functionality and coverage

WASMIS / Water Supply Atlas	Waterpoint inventory; functionality; access proxies; equity and local management; WASH committees
SANMIS and sector reporting	Rural and urban sanitation; handwashing; school hygiene; district operational reporting
NWSC and utility reporting	Connections, service delivery, utility performance and regulated urban water supply

Source: MWE Strategic Development Plan 2025, pp. 17–18; MWE WASMIS / WEMIS

Recent sector monitoring adds an operational perspective

From administrative reporting for FY2023/24

80%

Villages with at least one safe water source

84%

Rural water system functionality

74.48%

Urban population with access to safe water supply

Note: Administrative indicators have different units and service assumptions from survey household indicators.

Source: MWE, Strategic Development Plan 2025, §2.1.1

Key data gaps in Uganda's WASH statistical evidence

What is needed for a stronger national picture?

QUALITY	Repeated E. coli and priority-chemical testing, rather than one cross-sectional baseline
TIME USE	Hours, trips, queuing, and seasonal burden of collection, by sex and age
SERVICE	Continuity of piped and other water services (hours per day, days interrupted) alongside access; verified treatment and storage
INCLUSION	Comparable disability, sex, school-type, headship and small-area disaggregation, including menstrual hygiene needs
INTEGRATION	Alignment of survey definitions, district administrative registers and SDG reporting

Source: UBOS Water Quality Thematic Report, Ch. 6; synthesis of official sources

Further data gaps in Uganda's WASH statistical evidence

Beyond households: institutions, financing and health outcomes

HEALTH FACILITIES	Regular WASH and environmental-sanitation data for health facilities. The last SARA was in 2018; its successor, the HHFA, is not yet routine
GENDER & MHM	Sex-separated toilets and menstrual hygiene facilities, tracked consistently in schools (BEC) and health facilities
FINANCING	Routine tracking of public, donor and household spending on water, sanitation and hygiene (WASH accounts)
HEALTH LINKAGE	Integrated research and routine linkage of WASH infrastructure data to diarrhoeal and other bacterial disease surveillance

Source: MoH/MakSPH HHFA 2023; UBOS BEC 2025; WHO/UN-Water GLAAS TrackFin; synthesis of official sources

Opportunities: a practical WASH statistics agenda

What the National Statistical System could strengthen next.

01	**Repeat UDHS-quality testing**	Build a robust and comparable water-quality time series
02	**Standardization**	Develop a standard set of indicators for continuous measurement of the country's water and sanitation (international, regional and national) targets, including the metadata.
03	**Make gender visible**	Add collection time, safety, menstrual health and caregiving demands
04	**Localise the indicators**	Disseminate subregional and district dashboards with consistent metadata

Source: UBOS / MWE / SDG 6 monitoring: proposed analytical priorities

Thank you

Evidence-based planning for equitable water and sanitation services

Statistics Week • 18 November 2026

FROM ACCESS TO VERIFIED SAFETY

Count the source.
Measure the journey.
Test the water.
Make inequalities visible.

The State of Water and Sanitation Statistics in Uganda: Data, Trends, Gaps and Opportunities



www.ubos.org

+256 750747176

ubos@ubos.org

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