Kenya landscape analysis for neglected tropical diseases (NTDs), WASH and behaviour change

2019

Sightsavers

Foreward

The Kenya landscape analysis for Neglected Tropical disease (NTDs), WASH and behavior change is aligned to SDG 3 and 6 which states that by 2030, countries should end epidemics of AIDS, Tuberculosis, Malaria, and Neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases and ensure access to water and sanitation for all.

It is also aligned to the 2nd Kenya National Strategic Plan for control of NTDs 2016-2020, and the Kenya Breaking Transmission Strategic Plan 2019-2023 which recommends control and elimination of the 4-PC NTDs namely, Schistosomiasis, Soil transmitted helminthiasis, Trachoma and lymphatic filariasis within 5 years.

The six strategic objectives of the National Breaking Transmission strategy 2019-2023 are, to increase MDA coverage in all endemic sub-counties, expand NTDs related WASH interventions, mainstream BCC interventions, intensify advocacy, coordination and partnerships in NTDs control and elimination, strengthen systems for monitoring, evaluation, surveillance and research, resource mobilization, and financial sustainability of the program.

This document outlines key findings on endemicity of the 4 PC-NTDs and key opportunities to utilize government planning and coordination mechanisms to develop joint integrated WASH and NTD plans and accountability systems. It seeks to present the broad national perspective on the current WASH and behavior change programming taking place in Kenya related to NTD care and control.

The landscape analysis addresses 4 issues that underpins disease prevalence and programming in Kenya as prioritized by Universal Health Care; one of the big four agenda over the 5-year period of 2017-2020 which are treatment, care, and social inclusion.

Acknowledgements

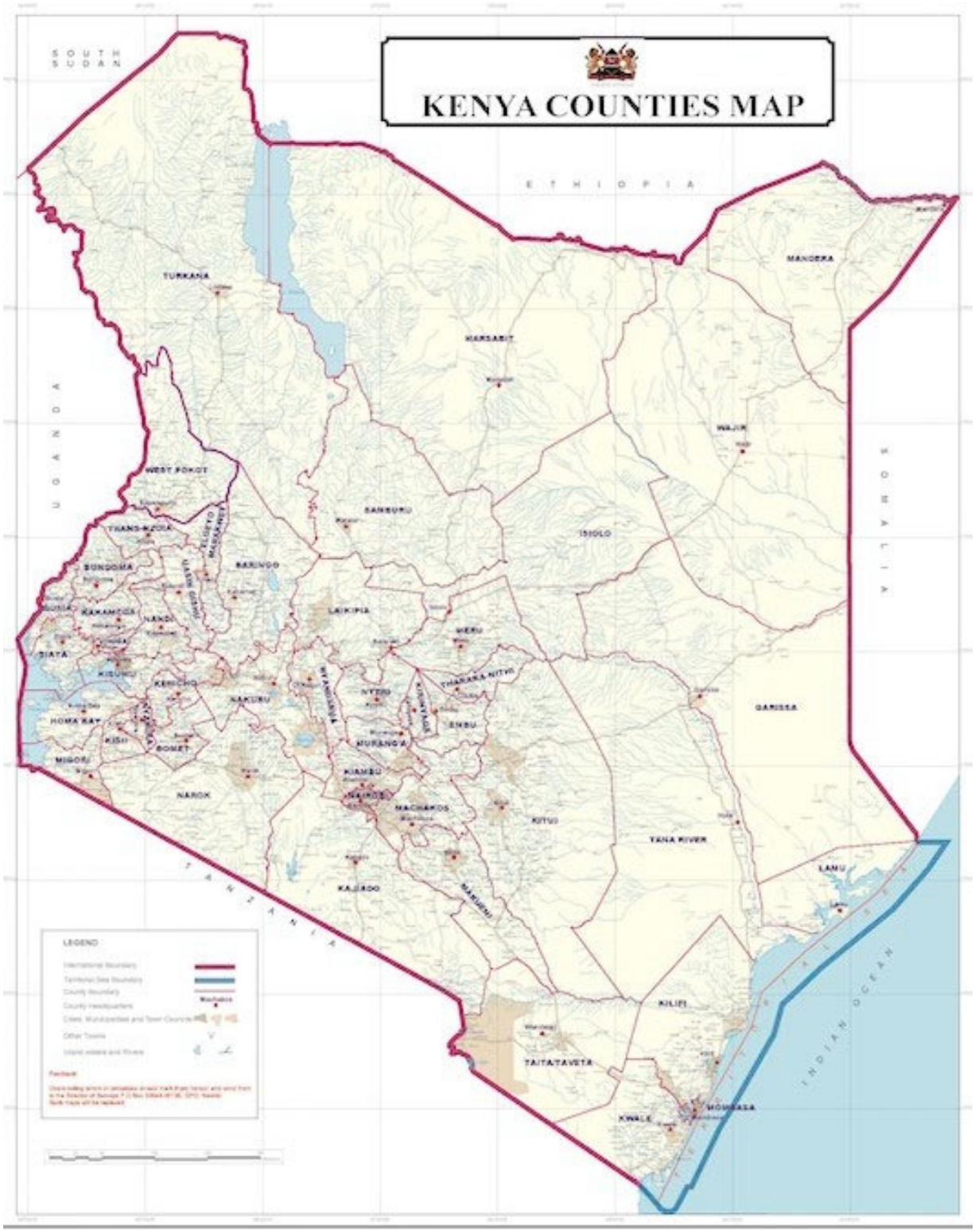
The Kenya Landscape Analysis for Neglected Tropical Diseases (NTDs), Wash and behavior change has been developed through an elaborate and consultative process involving stakeholders, development and implementing partners, government ministries, and County health teams. MOH would like to appreciate the Director General for Health, Dr. Patrick Amoth, Dr. Francis Kuria, the Director of Public Health Directorate and Dr. Sultani Matendechero, head Division of Vector borne and Neglected Tropical Diseases for providing stewardship.

Special thanks go to Dr Sultani Matendechero, Wycliff Omondi, Agnes Kithinji from DVB and NTDs, Earnest Barasa of Opthalmic Services Unit, Samuel Cheburet of health information systems and Elias Nyaga of Kenya National Bureau of Statistics, County NTD coordinators Mr Letoiya, Kintalel, Halake, Kibiego, Otiende, Sironka, Rutto, Sinoti and Kimanthi who provided the much needed information for the development of the Landscape Analysis.

The landscape analysis received technical support from Sightsavers through the consultant Mr. Benjamin Murkomen who was assisted by research assistants Mr. Francis Wandegu, Neville Okwaro and Betty Kinya, of MOH- Wash-hub who worked tirelessly to research, compile and develop this document. Much appreciation goes to this team for their efforts and contributions,

Lastly the Ministry of Health is greatly indebted to all our stakeholders and development partners who are hereby recognized for their contributions towards the development of the landscape analysis and of special mention are Sightsavers, UNICEF Kenya, World bank, AMREF Health Africa, Ministry of Water and Sanitation, Ministry of Education, Ministry of Health-Wash Hub and DVB and NTD, the County governments of Kajiado, Turkana, West Pokot, Narok, Baringo, Samburu, Meru, and Marsabit .

Figure 1: Geographical map of Kenya and counties



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Definitions

Water, sanitation and hygiene

WASH is defined in this landscape analysis (and in the context of WASH NTD Toolkit) as: Improvement in access to water and sanitation hardware through direct programme investment, promotion of household/community investment (particularly in latrine construction or maintenance of water points), advocacy to ensure planned infrastructure is targeted at endemic area, actions focused on behavioural change and the promotion of healthy behaviours and practices around personal and household hygiene relevant to diseases endemic in the location of interest (for example facial cleanliness for trachoma, and shoe-wearing, hand washing and food safety for STH).

Co-endemicity

Where several NTDs occur together, for example in the humid coastal region, lymphatic filariasis (LF), schistosomiasis and STH are co-endemic in many places; elsewhere, schistosomiasis and STH occur together in parts of the lower eastern and Lake Victoria region, while trachoma and leishmaniasis co-exist with STH in many areas within the arid and semi-arid, nomadic sub-counties.

Improved sanitation

The Kenyan definition of improved sanitation is: private improved facility where faecal waste is safely disposed on-site or transported and treated off-site.[6] These include: flush/pour flush to piped sewer system, septic tank or pit latrine; and ventilated improved pit latrine, composting toilet or pit latrine with slab. This aligns well with the Joint Monitoring Programme (JMP) definitions of basic sanitations service.

Household improved sanitation

This is the number of households with private improved sanitation facilities.

Shared sanitation facilities should not be used by more than four households, should be accessible at all times and their use should not prevented by existing cultural and social barriers.[7]

School sanitation

School sanitation is the effective use of latrines or toilets in schools to safely manage faeces. In Kenya it is based on the ratios as indicated: one toilet to 25 pupils (girls) and one toilet to 30 pupils (boys). These ratios support the reporting rates in these institutions according to Kenyan law. For any school to claim that they have adequate access of sanitary facilities in schools, they must fulfil the legal requirement.

Sustainable Development Goals (SDG) sanitation ladder

This is a tool used for global monitoring of sanitation which also incorporates a higher level of service that takes into account the disposal and treatment of human waste. Kenya is

one of the countries that voluntarily reports to UN-Water and the WHO/UNICEF Joint Monitoring Programme (JMP) and therefore, Kenya has adopted JMP definitions.[8]

Safely managed sanitation

Use of an improved sanitation facility which is not shared with other households and where excreta are safely disposed in situ or transported and treated off-site.

Basic sanitation

The basic use of improved facilities that are not shared with other households.

Limited sanitation

The use of improved facilities shared between two or more households.

Unimproved sanitation

The use of pit latrines without a slab or platform, hanging latrines and bucket latrines.

Open defecation

Disposal of human faeces in fields, forest, bushes, open bodies of water, beaches or other open spaces or with other solid waste.

Kenya ideal access of water

It should be less than 1 km to the nearest public water taps and not be more than 30 minutes' round trip. Yard taps should not serve more than 10 households.[9]

Improved water

These include: piped water, boreholes or tube wells, protected dug wells, protected springs and packaged or delivered water. The standard that monitors improved water in Kenya, which is a specification for drinking water, is KS 05-459-1.[10]

SDG drinking water ladder

The global monitoring of water access. The components include: safely managed water, basic water, limited water, unimproved water and surface water.

Safely managed water

Safely managed drinking water from an improved water source, which is located on-premises, available when needed, and free of faecal and priority contamination.

Basic water: Drinking water from an improved source provided collection time is not more than 30 minutes for a round trip including queuing.
Limited water: Drinking water from an improved source where collection time exceeds 30 minutes for a round trip including queuing.
Unimproved water: 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 channel.[1]

SDG hand washing ladder

Global monitoring ladder for hand washing behaviour.
Basic hand washing: Hand washing facility with soap and water in the household.
Limited hand washing: Hand washing facility without soap or water.
No facility: No hand washing facility.

Triggering

This is the process of igniting rural and urban informal citizens to take collective responsibility for their sanitation situation and work together to improve it alongside other stakeholders to permanently maintain cleanliness and usability. It is a component of community-led total sanitation and hygiene.

Faecal sludge (also called sludge)

Any excreta from a non-sewered sanitation technology (also called on-site sanitation technology, like a pit latrine or septic tank) that may also contain used water, anal cleansing materials and solid waste. Faecal sludge should not be confused with wastewater that has been transported through a sewered system.

Excreta

Urine and faeces that is not mixed with any flush water. An on-site sanitation technology is made up of the parts included in the first two components of a sanitation system: user interface and excreta storage. Excreta is collected and stored where it is produced (for example, a pit latrine, septic tank, aqua privy, and non-sewered public toilets). Often, the faecal sludge has to be transported off-site for treatment, use or disposal.

Adult literacy rate

Adult (15+) literacy rate is the percentage of the population age 15 and above who can, with understanding, read and write a short, simple statement on their everyday life.

Impact indicator

Impact is the long-term effect of the programme on the people and their surroundings. Impact may be economic, social (impact on health, education and so on), institutional, environmental, technological or due to other intended or unintended effects/results of the programme. Impact indicators provide a measure of whether the outcomes affected the goal. Impact indicators usually fall within the realm of evaluation, although sometimes are collected as part of other programmes. Impact indicators might include sustainability indicators, measuring the continuation of effects after the programme has finished.

Jiggers

Tunga penetrans is also known as the jigger, chigoe, bicho do pé or sand flea. It has an angular head and narrow thoracic segments. This small pinhead-sized insect is found in the sandy terrain of warm, dry climates. It prefers deserts, beaches, stables, stack farms, and in soils and dust in and around farms. It hides in the crevices and hairy cracks found

on the floors and walls of dwellings and items like furniture. It feeds on warm-blooded hosts including humans, cats, dogs, rats, pigs, cattle and sheep.

Acronyms

AMREF	African Medical and Research Foundation
BCC	Behaviour change communication
CBM	Christian Blind Mission
CBO	Community-based organisation
CHV	Community health volunteer
CHW	Community health worker
CLTS	Community-led total sanitation
FBO	Faith-based organisation
FHFK	Fred Hollows Foundation, Kenya
GLAAS	Global analysis and assessment of sanitation and drinking water
IDSR	Integrated disease surveillance and response
IEC	Information, education communication material
IRS	Insecticide residual spraying
KESH	Kenya environmental sanitation and hygiene policy
KEWI	Kenya Water Institute
KTEP	Kenya trachoma elimination programme
M&E	Monitoring and evaluation
MDA	Mass drug administration
MOH	Ministry of Health, Kenya
MOWS	Ministry of Water and Sanitation
NGO	Non-governmental organisation
NSBDP	National school-based deworming programme
NTD	Neglected tropical disease
OEU	Operation Eyesight Universal
PCNTDs	Preventive chemotherapy on neglected tropical diseases
PHO	Public health officer
PHT	Public health technician
SAFE	Surgery, antibiotics, facial cleanliness and environmental sanitation
SAGAS	Semi-autonomous government agencies

SCH	Schistosomiasis
SSI	Sightsavers International (Sightsavers)
STH	Soil-transmitted helminths
TF	Trachomatous inflammation: follicular
TT	Trachomatous trichiasis
TWG	Technical working group
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WARIS	Water regulation information system
WASH	Water, sanitation and hygiene
WASREB	Water Services Regulatory Board
WESCOORD	Water and environmental sanitation coordination mechanisms
WHO	World Health Organization

Executive summary

Purpose

Sightsavers commissioned this landscape analysis of Kenyan water sanitation and hygiene (WASH), behaviour change communication (BCC) and neglected tropical diseases (NTDs) in endemic counties with special focus on West Pokot, Baringo, Meru, Narok 4 & 5, Turkana, Samburu, Kajiado West and Marsabit. The purpose of this study is to present a broad national perspective on current WASH and behaviour change programming taking place in Kenya related to NTD care and control. The landscape analysis was undertaken by Benjamin Murkomen, a WASH/epidemiologist expert on behalf of Sightsavers, and aimed at gathering information that would be used to inform WASH, NTD, and BCC programming.

Methods

The situation analysis was mainly a desk review exercise that focused on review of available data provided by individuals in positions of authority, such as the head NTD Unit; head WASH units; national trachoma coordinator and/or field staff in charge of the Kenya Trachoma Programme (KTEP) interventions, lymphatic filariasis (LF) interventions or data in the NTD-endemic counties and partners. The data was obtained through email, phone calls to the respective offices, visits to offices and information from organisations' websites.

The consultant utilised national forums such as the Trachoma Dossier Review Meeting and Kenya Trachoma Programme/WASH/NTD stakeholders forum, visited the offices/ departments and had discussions with individuals implementing WASH and NTD programmes. As the custodian of Joint Monitoring Programme (JMP) data, regional African Ministers' Council on Water (AMCOW) data, Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) data and other national voluntary reports for the country, the consultant did not experience trouble obtaining WASH data.

Among the stakeholders who contributed in this landscape analysis are United Nations Children's Fund (UNICEF) Kenya; African Medical and Research Foundation (AMREF) Health Africa, who are the co-conveners of the Kenya Water and Sanitation Civil Society Network (KEWASNET), the umbrella body for all NGOs and community-based organisations (CBOs) in Kenya; the Ministry of Water and Sanitation; the national government; the Ministry of Education; and the WASHhub at Ministry of Health, who support coordination of all technical working groups and interagency coordination. The consultant benefited from a meeting that was organised by the World Bank, which was attended by the Turkana County director for health. The head of NTD, coordinator of the Kenya Trachoma Elimination Programme, the coordinator for lymphatic filariasis, the WASH coordinator for NTDs, the health information system unit at the Ministry of Health, community-led total sanitation (CLTS) national monitoring and evaluation office, Kenya

National Bureau of Statistics, Sightsavers and all county public health officers from the focused counties contributed to this landscape analysis.

Specific topics covered in this landscape analysis are: demographic information; NTD information; water sanitation and hygiene; NTDs, WASH coordination, behaviour change initiatives and advocacy.

The findings of this landscape analysis will be used for the effective implementation of WASH interventions for NTD care, prevention, control and elimination.

Key findings

Kenya has two levels of governance (at national and county level) under the Constitution. The 47 counties have a projected population of 52,024,958 as of 11 May 2019, with yearly change of 2.48% (1,263,912). It has a projected urban population of 14,149,974 (27.1%) and a projected rural population of 37,874,984. The population is affected differently by NTDs based on climatic and socio-economic conditions.

More than 25 million Kenyans are infected by at least one NTD, according to the World Health Organization (WHO) report 2017.[1] Those affected by NTDs tend to be populations living in poverty, without adequate sanitation and in close contact with vectors, domestic animals and livestock.[2] Most of the NTDs are not the direct cause of mortality, but they cause immense suffering and often lifelong disabilities. NTDs are also known to impair growth and development in children. Their distribution is often clearly defined; notable from the distribution is a definition of co-endemicity, where several NTDs occur together.

Neglected tropical diseases

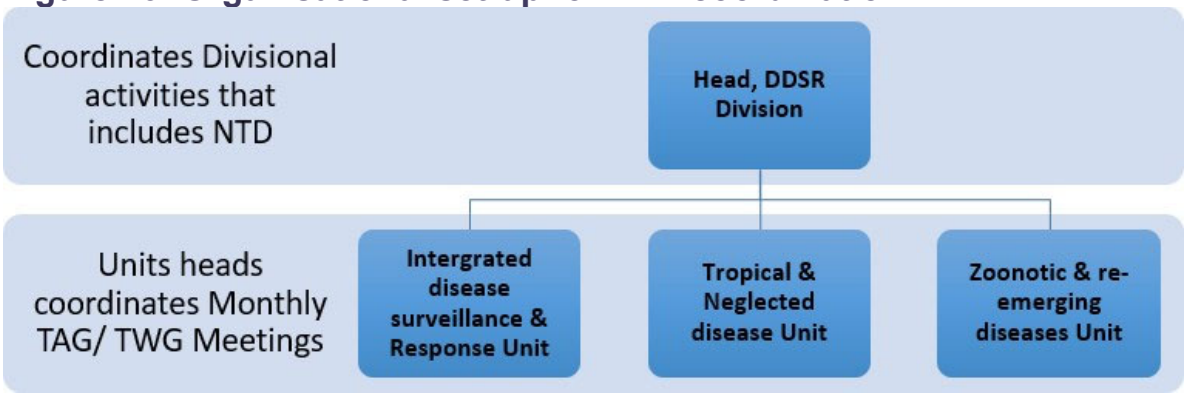
From the landscape analysis, most counties (44) that have been surveyed in Kenya are endemic with STH except the very dry (arid and semi-arid) areas.[3] There are 12 trachoma-endemic counties, out of which 8 are still active with trachomatous follicular (TF). Lymphatic filariasis is endemic in 6 counties, with 15 sub-counties, while schistosomiasis is distributed in the coastal, lower eastern and Lake Victoria regions and is endemic in 32 counties and 158 mapped sub-counties.[4]

The NTD programme comes under the Division of Disease Surveillance and Epidemic Response of the Ministry of Health (MOH). Its mandate, among others, is to advocate to the higher-level government officials and other partners for resources for NTD control as well as to guide the implementation of the various control activities. An interagency coordinating committee (ICC) was launched in June 2014, which is chaired by the director of medical services (now director-general). In addition, there is an existing technical working group with clear terms of reference. The NTD programme ICC meets monthly for planning and review of progress.

The NTD Unit workforce comprises of the following positions and personnel: The head of the NTD programme, one pharmacist, four scientists, one monitoring and evaluation (M&E) officer, one laboratory technologist, one health promotion officer, an accountant, an administrator, a WASH coordinator and support staff.

The head of the NTD Unit oversees the running and management of the day-to-day activities of the programme and provides guidance to the office of the Division of Disease Surveillance and Epidemic Response concerning NTD planning and management. The head doubles up in providing a link between the MOH, donors, partners and NGOs.

Figure 16: Organisational set-up for NTD coordination



Kenya has developed a second National Strategic Plan for Control of Neglected Tropical Diseases 2016-2020, and a new strategy, called 'Breaking Transmission for Soil-Transmitted Helminths, Schistosomiasis, Lymphatic Filariasis and Trachoma 2018-2023', was also launched. The policy and strategic documents are anchored in the Health Policy 2014-2030, 5-year Health Sector Strategic Frameworks and Vision 2030.

Endemicity rates of the four NTDs vary across the counties. In the focus counties of this document, the endemicity rates are represented in tables 1 and 2.

Trachoma

Table 1: Endemicity rates for trachoma across counties

County	Sub-county	Prevalence %	MDA coverage %	WASH/NTD implementers	Date of data	Source
Pokot	Kacheliba	13.80	81	FHF	2017	Impact surveys
	Sigor	10.32	81	FHF, WV	2017	Impact surveys
	Kapenguria	5.17	81	FHF, U	2017	Impact surveys
Turkana	Turkana West	17.5	86	SSI, FC, U, WV	2017	Impact surveys
	Loima	11.54	86	SSI, CL, U	2017	Impact surveys
	North	9.31	86	FHF, CL, U	2017	Impact surveys
	Kakuma	5.20	86	SSI, CL, U	2017	Impact surveys

County	Sub-county	Prevalence %	MDA coverage %	WASH/NTD implementers	Date of data	Source
	South	6.9	86	FHF, F, U	2017	Impact surveys
	East	8.59	86	FHF, SSI, U	2017	Impact surveys
Narok	South 4/SE	12.21	87	A, FHF	2019	Impact surveys
	East 3/ Central	12.60	-	OE, OE	2018	Impact surveys
	Narok West	19.88	-	WV	2018	Impact surveys
Baringo	Tiaty	12.80	61	FHF, U	2018	Impact surveys
Samburu	East, North-west	8.03	80	A	2017	Impact surveys
Meru	Igembe North	7.19	0	CBM	2018	Impact surveys
Marsabit	Laisamis	5.59	96	CDOM	2017	Impact surveys
	Saku	5.59	96	CDOM	2017	Impact surveys
Kajiado	West	9.73	90	A	2017	Impact surveys

Partners

AMREF	African Medical and Research Foundation
CBM	Christian Blind Mission
CDOM	Catholic Diocese of Marsabit
CL	Catholic Diocese of Lodwar
FC	Feed the Children
FHF	Fred Hollows Foundation
OE	Operations Eye Sight
SSI	Sightsavers
U	UNICEF
WV	World Vision

Lymphatic filariasis

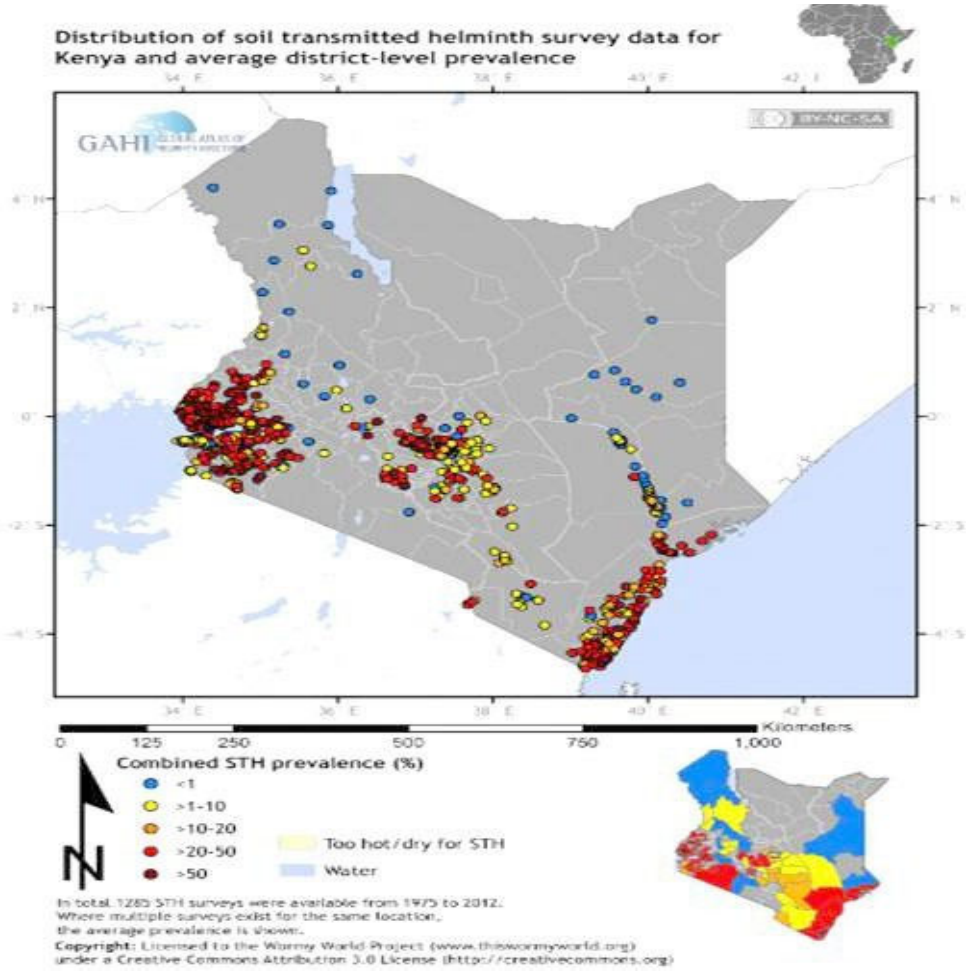
Table 2: Endemicity rates for lymphatic filariasis across counties

Endemic County	Endemic sub-counties	Prevalence %	Implementers	Date of Data	MDA date 2018 %	Source
Kilifi	Kilifi	3.0	MOH/partners	2008	88	NPELF
	Malindi	3.0	MOH/partners	2008	82	NPELF
	Kaloleni	2.0	MOH/partners	2008	93	NPELF
Kwale	Kwale	1	MOH/partners	2008	73	NPELF
	Mswambeni	1	MOH/partners	2008	96	NPELF
	Kinango	1	MOH/partners	2008	73	NPELF
Tana River	Wanje	0	MOH/partners	2011	80	NPELF
	Kipini	1.8	MOH/partners	2011	107	NPELF
Mombasa	Bamburi	2.9	MOH/partners	2011	90	KEMRI
	Kisauni	4.2	MOH/partners	2011	90	KEMRI
	Likoni	4.1	MOH/partners	2011	99	KEMRI
	Majengo	3.0	MOH/partners	2011	99	KEMRI
	Miritini	2.0	MOH/partners	2011	94	KEMRI
Taita Taveta	Taita	2.0	MOH/partners	2005	90	NPELF
	Taveta	2.0	MOH/partners	2005	90	NPELF

Soil-transmitted helminths

STH infestation in analysed surveys in Kenya between 1980 and 2008 showed varied infestations rates over time.[31] In 2014, there were an estimated 6,444,287[32] school-age children in Kenya needing treatment. With funding from the Children Investment Fund Foundation and the END Fund through 'Deworm the World' Initiative at Evidence Action, large-scale deworming of school-age children in line with the national School Health Policy and guidelines has been conducted in 111 sub-counties, within 44 endemic counties. The deworming programme is ongoing according to the NTD strategies in all endemic counties in Kenya. The endemicity is represented in the map below, and a data table of the endemicity rates can be found in Annex 18 of this report.

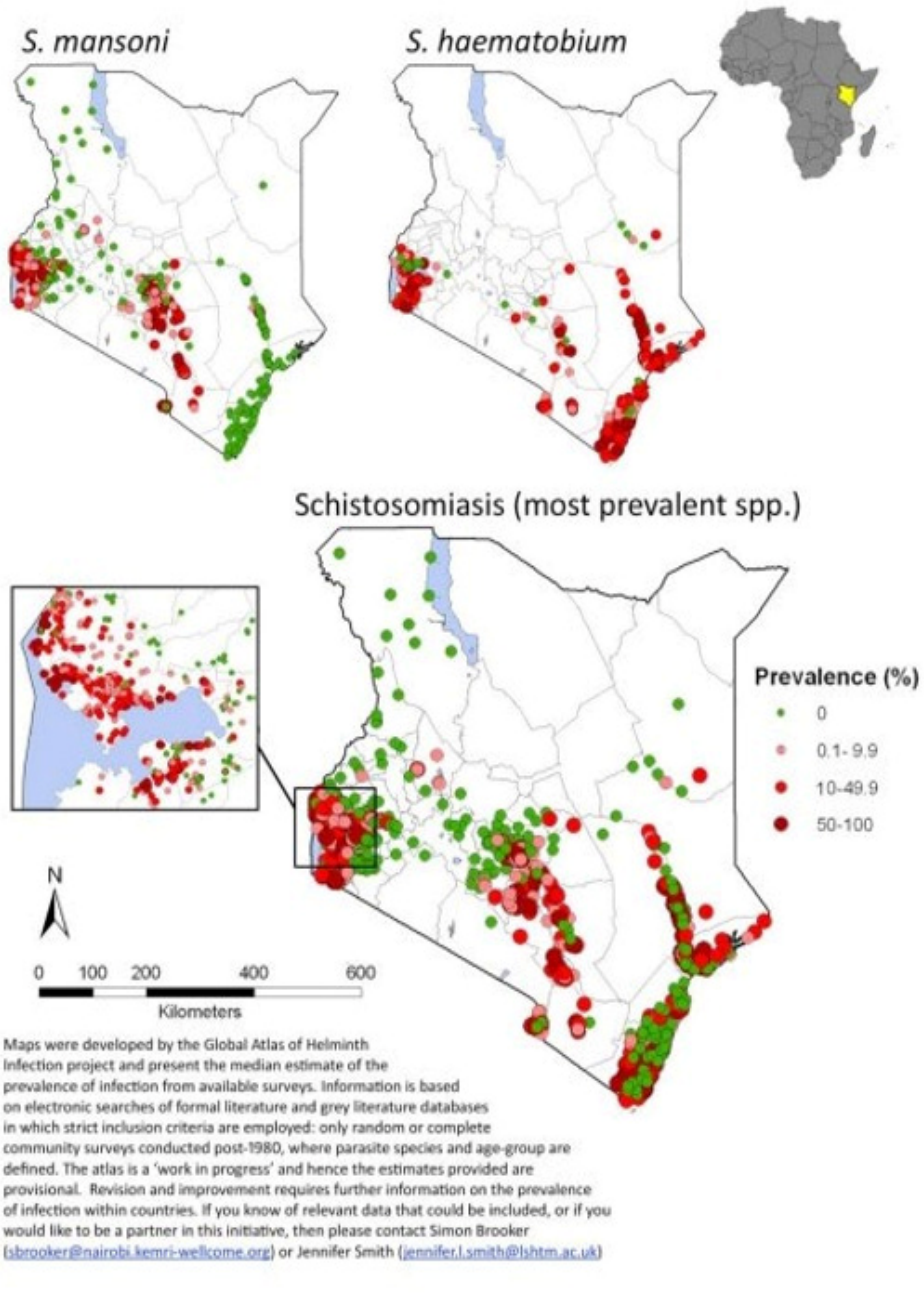
Figure 17: Kenya's STH prevalence map



Schistosomiasis

According to the National NTD Strategic Plan 2016-2020, 32 counties are endemic with schistosomiasis, made up of 158 endemic sub-counties. (Annex 19: Schistosomiasis prevalence).

Figure 18: Prevalence of schistosomiasis in Kenya



Implementers

The primary key implementers for NTDs vary from one NTD to another. Trachoma interventions are implemented by national and county governments funded/supported by: Sightsavers, Fred Hollows Foundation, Operation Eyesight Universal and Christian Blind Mission. STHs are funded by: Children Investment Fund Foundation, Deworm the World Initiative, and Evidence Action. Schistosomiasis interventions are funded and supported by: Children Investment Fund Foundation, the END Fund, Deworm the World, and Medical Assistance International. Lymphatic Filariasis support and funded by: World Health Organization (WHO), Evidence Action, Kenya Medical Research Institute (KEMRI), and African Institute for Health.

In Kenya, since 2012, the Ministry of Health and its partners through the NTD Unit have implemented the following control activities:

Mapping

- In 2013, through the support of WHO, a major mapping exercise was conducted across 19 counties for STH and schistosomiasis; in partnership with the Neonatal Child and Adolescent Health Unit and through the National School-Based Deworming Programme (NSBDP), more than 6.4 million school-age children were dewormed during 2012-2013.
- Mapping for trachoma has been completed in 13 counties. SAFE interventions have been ongoing in 12 counties for the last five years with support of partners.
- Mapping for LF has been completed in 31 units of which 14 are in Western Kenya and 17 in the Coast region.

Mass treatment

In the second half of 2015, mass treatment of LF was restarted in 17 out of the 23 endemic sub-counties of the Kenyan coast. More than 2.3 million people were treated with diethylcarbamazine (DEC) and albendazole during this landmark exercise.

Following successful mapping of trachoma, mass drug administration (MDA) of azithromycin and 1% tetracycline eye ointment took place in 8 of the 12 counties. By 2014, a total of 11,083,382 out of the targeted 13,952,274 people had been treated in the MDA exercise. This represents a national coverage of 79.4%. Training of eye care workers and non-eye care trachomatous trichiasis (TT) surgeons has been carried out and will continue.

- Since 2009, Kenya focused on STH MDA on school-age children in prioritised counties. The other deworming interventions were carried out through Ministry of Health programme such as ‘Malezi Bora’ (proper nurturing), provided at antenatal clinic.
- Kenya government launched the NSBDP in 2011 with the aim to treat all children at risk for STH and schistosomiasis; they are still continuing with the campaign.
- Preventive chemotherapy is considered the key component in the control of schistosomiasis and STH in Kenya.

WASH

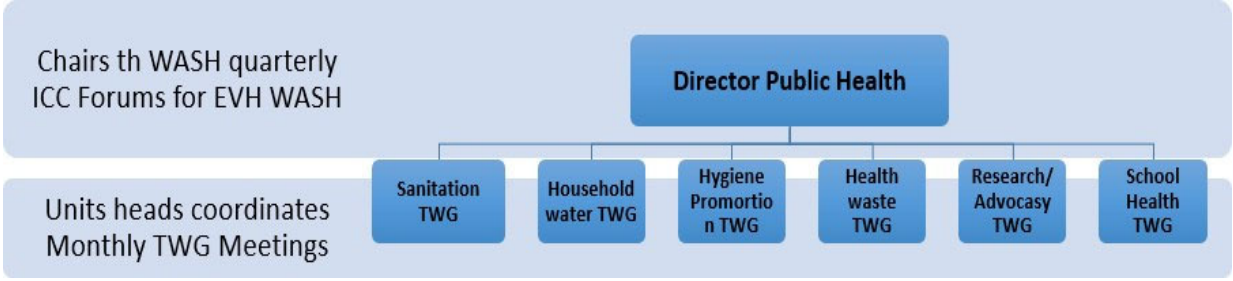
There are a number of policy documents that have been revised and developed in Kenya after devolution – a transfer of power that increased autonomy of county governments. In the water sector, there is the Water Act 2016 and the Kenya National Water Strategy 2015-2017, which will be replaced by the draft Ministerial Water Strategy 2018-2022. The Ministry of Health has revised and developed the Kenya Environmental Health and Sanitation Policy 2016-2030, the Kenya Environmental Sanitation and Hygiene Strategy 2016-2020, and the National Open Defecation Free Roadmap 2016-2020. The Ministry of Education and Ministry of Health revised the 2009 School Health Policies in 2018.

At the national level, The Ministry of Water and Sanitation is responsible for water access and sewerage systems policies and their coordination and implementation, while the

Ministry of Health has a constitutional function of sanitation and hygiene policy development.

At the national level, the division of environmental health convenes quarterly at a WASH stakeholders' forum. The division has six technical working heads that meet every month to discuss technical policy issues. The WASHhub coordinates all the WASH activities and offers technical assistance to counties and partners. The NTD-specific coordinators are sometimes involved in the WASH forums.

Figure 19: Organogram for WASH coordination at national level



Water, sanitation and hygiene progress is monitored in Kenya by varied frameworks based on the reporting requirement and commitments made by the country locally or internationally.

The National Steering Committee approves the use of administrative data from authorised public reports. The step-by-step methodologies and reporting templates developed by UN agencies formed the basis for data collection tools. The tools are then shared with stakeholders (targeting specific stakeholders based on goals, targets and their relevance to each stakeholder) with a deadline on submission. The review adopts the use of administrative data from the existing national reports.

There are eight performance-monitoring frameworks that the government reports to as indicated in table 3.

Table 3: WASH sector performance framework

Frameworks	Indicators	Components
SDG 6 Monitoring framework – (Ministry of Water and Sanitation–MOWS)/MOH	SDG 6.1.1: Proportion of population using safely managed drinking water services, Basic Service, Limited service, Unimproved service, Surface water (5 service levels)	SDG 6 Monitoring framework – (MOWS)/MOH

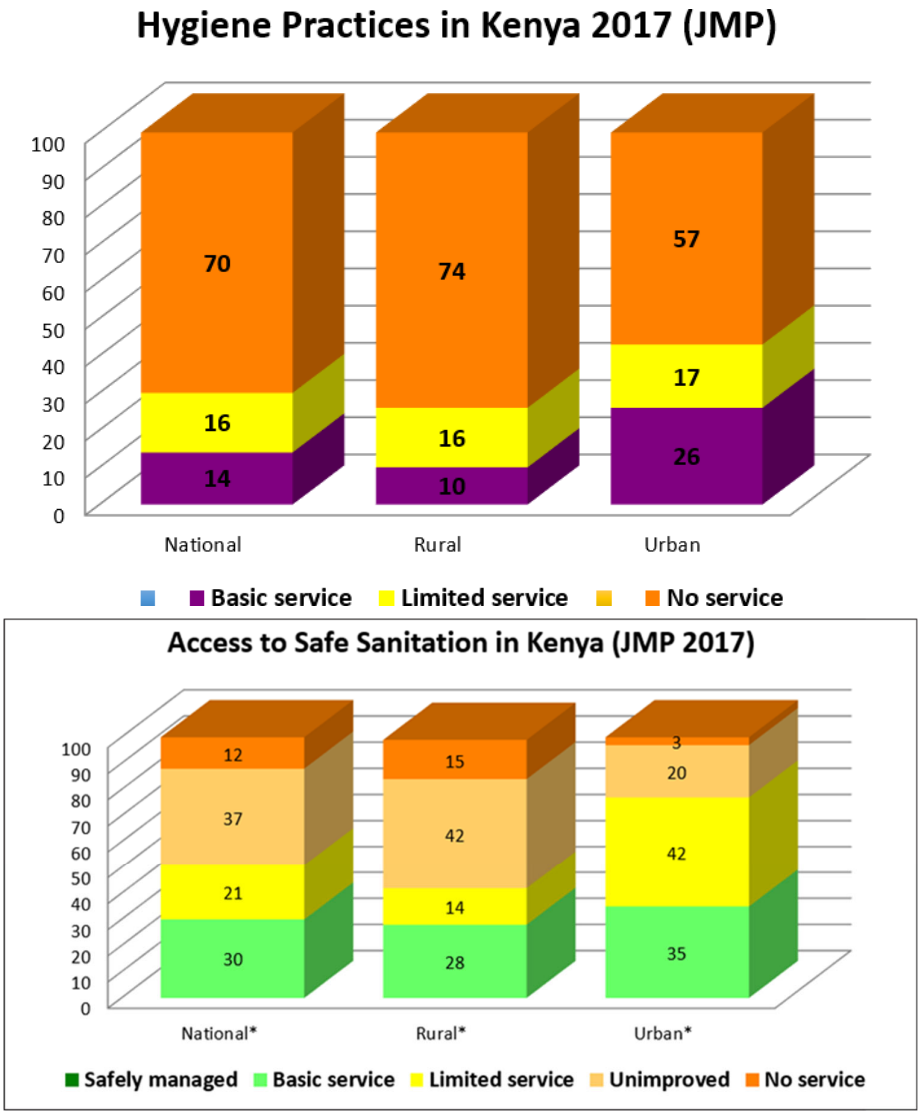
Frameworks	Indicators	Components
	SDG 6.2.1: Proportion of population using safely managed sanitation services, including a hand washing facility with soap and water (service levels: safely managed, basic, limited, unimproved and open defecation)	Voluntary reports to UN-Water on annual basis and African Union Secretariat (AMCOW). Sector stakeholders compile the report
	SDG 6.3.1: Proportion of wastewater safely treated	Voluntary reports to UN-Water on annual basis. The report is compiled by sector stakeholders
	SDG 6.3.2: Proportion of water bodies with good, ambient water quality (SDG 6.4.1-6.6.1)	Voluntary reports to UN-Water on annual basis and African Union Secretariat (AMCOW). The report is compiled by sector stakeholders
Framework for monitoring realisation of the rights to water and sanitation in Kenya (2017) – Human Rights Commission	SDG 6: Monitoring WASH using the following parameters; availability, accessibility, quality, affordability, acceptability, sustainability and enabling environment, governance / Institutions, Information management and capacity	Annual reports to commission of human rights. The commission of human rights performs this assessment on an annual basis
DHIS2 & IDSR Monitoring framework – MOH	NTD indicators, and other WASH-related indicators are captured	Weekly, monthly analysis, quarterly and annual reports
CLTS online monitoring – MOH	Rural sanitation: ending open defecation	Monthly, quarterly and annually. Village data is analysed by public health officers (PHOs) and captured through online systems

Frameworks	Indicators	Components
GLAAS monitoring framework (WHO)	Solicits information on the delivery of drinking water supply, sanitation services, and the status of hygiene promotion activities. Focusing on four sections: Section A on governance; Section B on monitoring; Section C on human resources; Section D on finance	Every two years (country voluntary report). The process starts with inception meeting. Then desk review is carried out by looking at WASH data from all sectors. Validation meeting is held before forwarding to WHO
National Integrated Monitoring and Evaluation Systems (NIMES); County Integrated Monitoring and Evaluation Systems (CIMES)	Created to track the implementation of policies, programmes and projects during the economic recovery strategy period, which ended in 2007. The system has been used to track the medium-term plans of Kenya Vision 2030, the country's economic blueprint and SDGs	Annual reports. The ministry of devolution receives data from all ministries responsible for SDG. Counties report progress to the national level. The national level compiles and forwards Kenya's position on SDG and indicators to the UN
WARIS Reporting Framework in the Ministry of Water and Sanitation	Information used for performance analysis is collected through the Water Regulation Information System (WARIS)	Water regulator (WASREB) request for data submission from water utilities and water services board. WASREB reviews the data and makes reports annually

WASH access and practices are generally associated with reduced odds of STH, trachoma and schistosomiasis infection. Although most WASH interventions are not deliberately associated with NTD programming in Kenya – except for STH – sanitation, access to water and hygiene appear to significantly reduce odds of infection. The analysis found that WASH components are not strongly embedded in NTD programming. Strong coordination exists separately for WASH, school health and NTD programmes but none that is collaborative in terms of communication plan or strategy. Partners and governments implement these interventions vertically based on sector specific proposals and plans. A number of partners exist in Kenya that only are implementing WASH activities. The primary ones in four counties (Turkana, West Pokot, Baringo and Narok) with TF above 10% are UNICEF, World Vision, Catholic Relief Services (CRS) and AMREF Health Africa.

The status of sanitation and hygiene at the national level is represented in the following graphs. Rural dwellers in Kenya have less access to sanitation and hygiene services than urban dwellers. Kenya's CLTS strategy is designed to move communities along the sanitation ladder, ultimately aiming for an open defecation free Kenya, where Kenyans have access to basic sanitation infrastructure.

Figure 20: Hygiene practices and safe sanitation in Kenya 2017



Water, sanitation and hygiene services in preventive chemotherapy on NTD (PCNTD) endemic counties are still a challenge as, shown in table 4. Improved water sources in most counties are below 50% except for some like Meru and Kajiado. Kajiado is exceptional because it affects Nairobi city in terms of development and water access. The same applies to sanitation and hygiene.[62] Table 4 highlights WASH status in the six focus counties of the report.

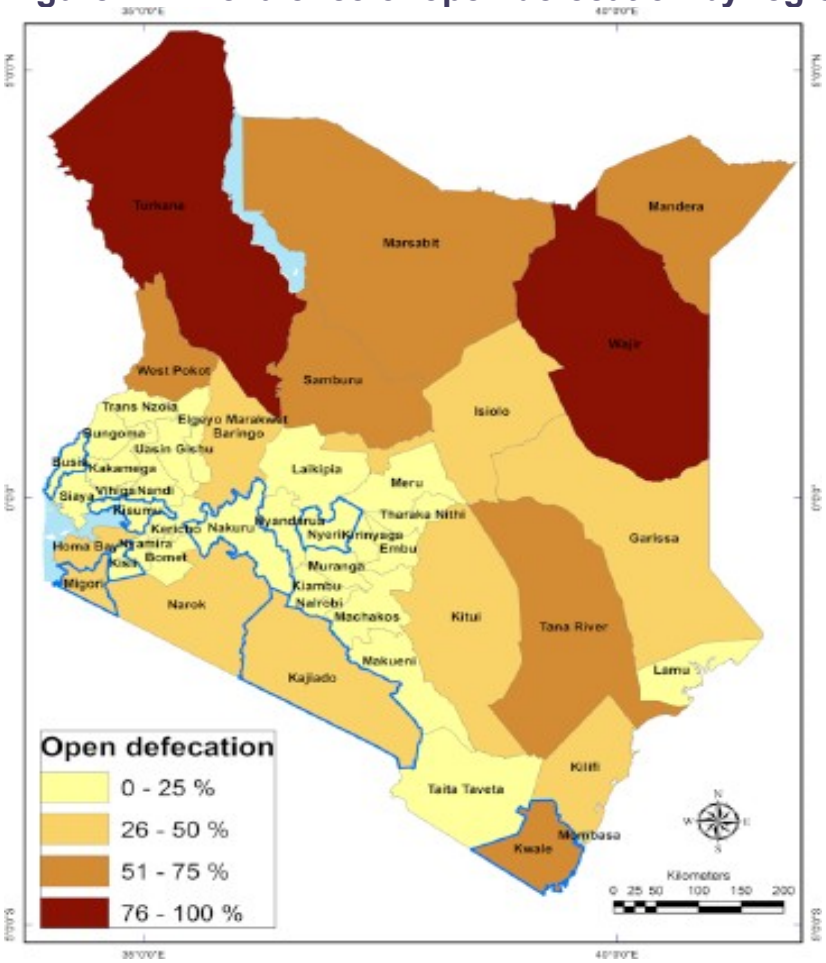
Table 4: WASH status by focus county

County	Date of data	Proportion of access to improved water %	Proportion access to improved sanitation %	Proportion of population practising open defecation %	Proportion of households with hand washing facilities (of which % with soap and water)
Turkana	2017	39	6.7	81.6	18

Marsabit	2017	38	12.9	50.9	14
Samburu	2017	34	3.0	62.8	7
Meru	2017	59	24.6	51.5	35
Kajiado	2017	66	21.7	14.9	30
Narok	2017	20	25.3	27.9	7

Similarly, there remain relatively high rates of open defecation in PCNTD-endemic counties. At at 2017, the national open defecation rate is about 12%,[56] which masks massive regional disparities. In some counties, open defecation remains the norm for more than 70% of the population, such as in the northern counties of Turkana (81.6%), Pokot (50.3%) and Samburu (62.8%). These are sparsely populated areas inhabited mainly by pastoralist communities. Even in counties with lower rates of open defecation, children's faeces are often not contained, due to parental perception that children may fall in latrines, and also the perception that children's faeces are harmless. Some adults also continue to routinely defecate in the open at night and during the rainy season.[57] The true rates of open defecation may therefore be higher.

Figure 21: Prevalence of open defecation by region



NTD and WASH

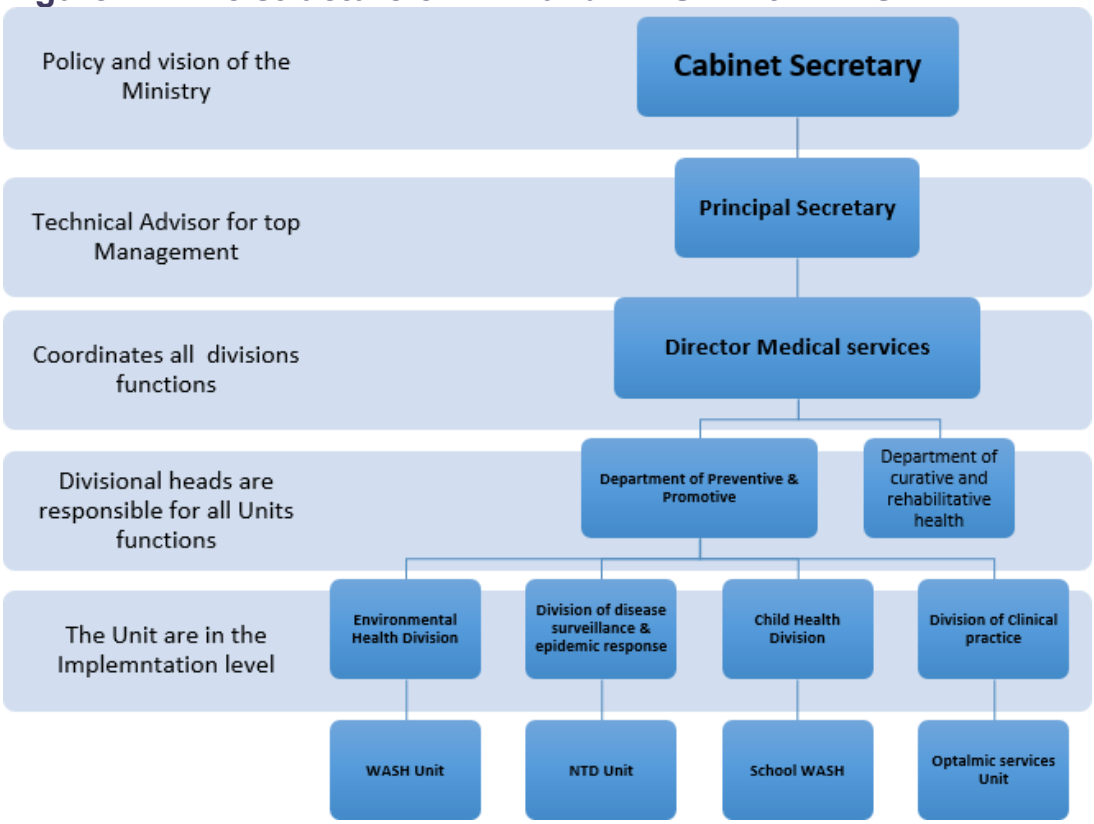
NTDs and WASH have received the attention in a national agenda separately with Kenya developing the Second Kenya NTD Strategy 2016-2020, aligned to the Ministerial Health Policy. Programme-wise, WASH, nutrition, maternal health, HIV/Aids have their own programmes and funding. Even though each has a contribution towards NTD interventions or are affected by the prevalence of NTDs among their targeted individuals, there has been no direct linkage in the interventions with joint implementation, integration and reporting of the achievements. Table 5 outlines the relationship between sanitation and neglected tropical disease.

Table 5: Sanitation intervention and NTD control

Sanitation intervention	NTDs controlled
Reducing open defecation	STH, schistosomiasis, trachoma
Disposing of child faeces properly	STH, schistosomiasis, trachoma
Increasing improved sanitation coverage	STH, schistosomiasis, trachoma
Promoting maintenance and cleaning of latrines	STH, schistosomiasis, trachoma
Increasing access to clean water	STH, schistosomiasis, trachoma, LF

NTDs and components of WASH are domiciled within the Ministry of Health. There exists a WASH and NTD working group; this group meets quarterly with members from the WASH and NTD sectors. There are a number of coordination mechanisms in the Ministry of Water and Sanitation, Ministry of Health, and Ministry of Education. In the Ministry of Health, NTD and WASH has a coordination mechanism that is linked to other health sector coordination mechanisms. These coordination mechanisms are referred to as interagency coordinating committees (ICCs). The counties are progressively domesticating the structure and coordination of the national government. Examples of these coordination mechanisms are: trachoma task forces in the counties, Water and Environmental Sanitation Coordination mechanisms (WESCOORD) technical working groups at the Ministry of Water and Sanitation, the government planning circles for every financial year referred to as medium-term frameworks, and County Integrated Development Plan forums.

Figure 22: The structure of NTD and WASH within MOH



Advocacy is key to sustainability of any programme and its impacts. NTD elimination and eradication interventions can be boosted majorly through advocacy to scale up WASH, NTD and BCC activities with active support from county governments, partners and the national government. The key intervention areas for WASH and NTDs based on this landscape analysis are: CLTS at the village level, CLTS with integration of trachoma and nutrition activities, household water treatment and safe storage at household level, anti-mosquito screening of houses, advocating for shoe-wearing, use of toilets and hand washing, implementation of surgery and antibiotics. Activities are being implemented to address trachoma infection, facial cleanliness and environmental management (SAFE strategy). For STH in endemic areas, interventions include MDA, sanitation and hygiene and provision of safe water, while schistosomiasis and LF interventions includes snail control, MDA, surgery and environmental management.

BCC and media

Kenya is endowed with a wide coverage of print media, mass media and internet connectivity. National media stations (Kenya Broadcasting Corporation (KBC), Citizen, KTN, K24, Inooro, and KASS) and local community radios serve the NTD-endemic counties. These technologies can be utilised effectively to deliver integrated WASH and NTD messages.

There are a number of organisations that are supporting development of behaviour change materials and sanitation marketing in Kenya. Some of the materials are developed during hygiene promotion days, for example, during global hand washing days, world toilet days

and for community-led total sanitation and community-led total sanitation with trachoma interventions (CLTS+) campaigns. The major partners are UNICEF, United States Agency for International Development (USAID), WHO, AMREF Health Africa, Sightsavers, World Vision, the Netherlands Development Organisation, SNV, CBM, Fred Hollows Foundation (FHF), Catholic programmes and Unilever.

Further research

Following a policy brief that was discussed by WaterAid,[5] it is recommend that further research should be undertaken to develop water supply, sanitation and hygiene solutions that are in harmony with nomadic lifestyle of communities such as Turkana, Pokots and Maasai in Kenya.

In this landscape analysis, it was noted that there are a number of issues underpinning disease prevalence and programming in Kenya:

Behaviour: Men defecating in the open in the name of not sharing toilets with children and women, in some counties (such as Narok and Pokot); lack of shoe-wearing in some communities; lack of hand washing facilities and their usage in schools and communities; nomadic community accepting flies as normal (it is associated with having more animals); children and community members bathing in streams and rivers; using the same clothing/bed sheets in the *manyattas*; not using the toilets appropriately (defecating outside the squat hole); children playing and swimming in rivers and earth pools or streams; and ignoring instructions on drugs and prescriptions.

Environment: Insufficient basic/safe latrines in schools and households; poor maintenance of latrines; lack of insecticides and screening materials to reduce the number of flies; lack of nets to manage flies and mosquitoes; poor waste management in the environment, discarding waste in the household indiscriminately; lack of drainage and maintenance for storm water around the villages and urban areas; and insufficient improved water for drinking and domestic use.

Social inclusion: Inappropriate management of disgust when implementing CLTS so that community members are not alienated by the process – elders may not appreciate a discussion on faeces in the community and this reduces male involvement in decision-making at the village level; reduced work and education opportunities; impediments in sexuality and relationships; discrimination and social exclusion of those who are affected with LF (people fear associating themselves with those with swollen legs), the blind, those who have enlarged stomachs beyond normal may be infested with STHs and may be associated as people who eat a lot, and among boys and girls, those who urinate blood and those who urinate normal urine.

Treatment and care: Medicines being too expensive; a lack of reliable safe water for use during treatment; insufficient knowledge and capacity from staff to diagnose and treat NTDs; insufficient surgeons in these targeted counties to perform surgeries for trachoma and LF. Additionally, there is occasional stigma associated with treatment seeking behaviour and fear of surgery.

Key opportunities

There are opportunities to utilise government planning circles and coordination mechanisms to develop joint integrated WASH and NTD plans and accountability systems for reporting on progress based on existing policies and strategies. The NTD Unit, WASH Unit and Ophthalmic Services Unit needs to realign activities and utilise the interagency forums that are in the Ministry of Health and Ministry of Water and Sanitation. This coordination mechanism can only be strengthened if the resources are pulled together into one forum with expanded agenda.

There are WASH partners and government agencies like Water Trust Fund that can be approached by counties to invest in water access infrastructure. The counties are supported with resources by the national government. NTD evidence exists that should be used to lobby the government for more funding for WASH and NTD integration. Turkana and Meru are some of the counties that are progressively allocating resources for water, sanitation and hygiene.

Partner funds should be utilised as a seed funding for the programmes. Counties should be encouraged to allocate matching funds equivalent to partners funding progressively. This will enable county governments to sustain the programmes when the partners exit. Counties have human resources that are paid by the government to serve the people. The human resources at county and national levels should have capacity built to improve financial management and skills of lobbying for more resources at county assemblies based on evidence relating to NTD and WASH.

Recommendations

According to the findings of this landscape analysis, the prevalence of NTDs vary from county to county, and sub-county to sub-county. There is a need to plan for interventions based on the endemicity and prevalence rates. For instance, the TF prevalence rate is still high in Turkana, West Pokot, Baringo and Narok County. This planning should be carried out by the national and county governments and partners during the normal government planning circle. The government's financial year begins in July; therefore, this should be done before June every year.

It is important to involve more men aged 15 and older during the awareness dialogue days, as they have traditionally been difficult to reach. Kenya Trachoma Elimination Programme (KTEP) counties and partners should consider taking time training the women using the local language to bring the desired behavioural change because women are caretakers of children (aged one to nine) in these counties. Previous surveys in Kenya have shown that women are slightly less literate than men in the trachoma-endemic counties.

Currently, there are a number of partners that are actively involved in WASH interventions in the four focus counties and sub-counties (Turkana – 13, West Pokot – 2, Baringo – 3, Narok – 6). The next programming should consider utilising these partners and plan together at the county level when implementing NTD and WASH interventions.

There are similar WASH and NTD coordination structures at the national and county levels (i.e. ICC, WESCOORD, trachoma task forces), which meet at different times based on their work plans.

The next programming should endeavour to utilise these coordination structures, be part of the medium-term framework planning circle, annual work planning process, and county development planning circles in order to attract funding from governments. The county and national government should drive this process in partnership with WASH and NTD partners.

Partners and government have developed WASH and NTD information education materials. There needs to be a repository of all the information, education and communication (IEC) materials available in one portal for easy access. This will reduce duplications and maximise on the limited resources. National government departments should lead this process in partnership with WASH and NTD partners.

There are a number of policy documents that have been developed for WASH and NTDs in Kenya. It is high time that the next programming of NTD, WASH integration should implement the laid strategies and have a joint review every year to evaluate progress. The leadership rests on the governments and partners supporting the programmes.

The access of mobile phones, radios, internet and television has grown tremendously over the last years in Kenya. These technologies should be used to address WASH and NTD challenges and scaling up interventions. The NTD-focused counties are to drive the process with support from the national government.

Public health officers, community health workers, community health volunteers, nurses and clinical officers, are working at the local level in the sub-counties. These cohorts are resources that can be used to implement WASH and NTD integration in the next programming.

There are several monitoring systems for WASH and NTDs in Kenya. These include Kenya health information systems (formerly known as DHIS2) in the Ministry of Health; Water Regulatory Information System (WARIS), Community-Led Total Sanitation System (CLTS) among others. The WASH sector ministries and partners should convene a meeting to align all these reporting systems for an integrated WASH and NTD programme.

Targeting inclusive WASH services towards the most affected and at-risk individuals and groups should therefore be fundamental to NTD control efforts, and programmes and policies should go beyond the practical needs of affected individuals to transformative WASH interventions that can positively impact on power relations within communities and societies.

Kenya has an enabling environment to start the next phase of programming in integrating WASH and NTDs. The strategic focus for the next programme is driven by the policy documents that have been developed by the national government and counties in all the WASH and NTD sector ministries. These policies are aligned to SDGs and Kenya's Vision 2030. It is important that Sightsavers, WASH partners and NTD partners come together to develop one plan for implementation with leadership of government.

1 Background information

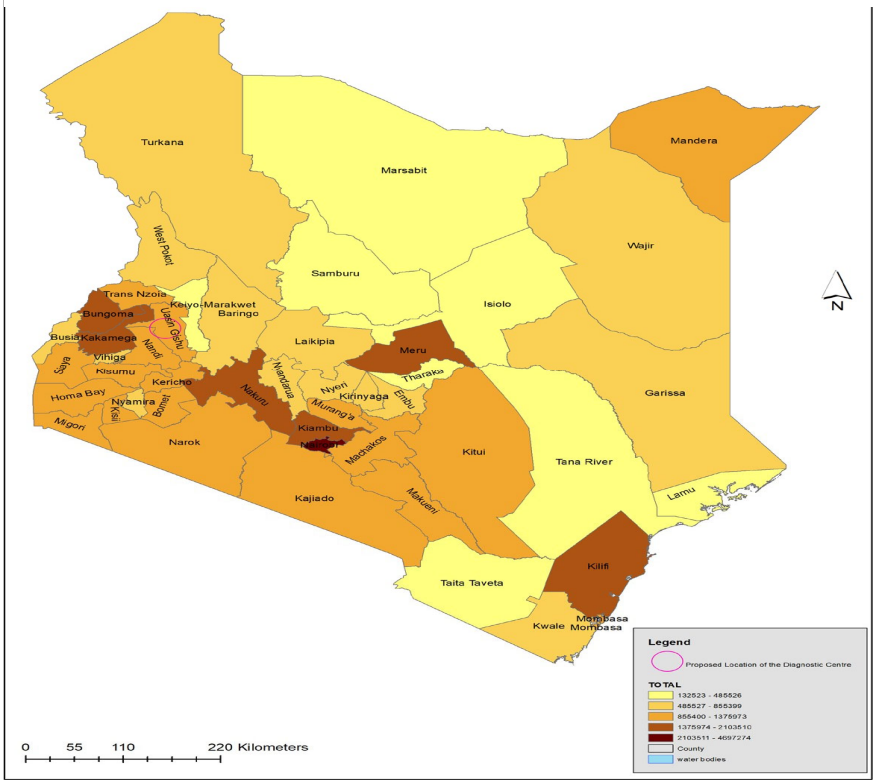
Based on the current Constitution, Kenya is divided into 47 counties. These counties are sub-divided into sub-counties defined as decentralised units through which county governments provide functions and services. Politically, the 47 counties are divided into 290 constituencies created under the Constitution.

There are two levels of governance at county and sub-county all the way to the village level. Politically, the county governor heads the counties, while commissioners represent the interest of the national government at the county level. At sub-county and ward levels, public service board at county appoints administrators to represent the counties. The deputy county commissioners at sub-county and ward levels represent the national government. The chief and assistant chief represent the interest of the national government at village level.

Geographically, the country comprises the coastal regions, arid and semi-arid areas, the highland areas of Central Kenya and central Rift Valley areas, and the Western Lake Region around Lake Victoria. These regions experience different socio-economic, hydro-geological and climatic features, which affect disease prevalence including for the NTDs.

Demographically, based on the worldometers website,[11] Kenya had a projected population of 52,024,958 as at 11 May 2019 – with yearly change of 2.48% (1,263,912) – and a projected urban population of 14,149,974 (27.1%), and a 37,874,984 rural population.

Figure 23: Map of Kenya's population distribution



1.1 The analysis team

The analysis team consisted of the lead consultant and three research assistants with different backgrounds that included an environmental consultant, statistician and monitoring and evaluation officer.

Research assistants were divided into different thematic sections. Once information was gathered, the team shared it online. Face-to-face meetings were organised every weekend to review the information.

1.2 Key stakeholders involved

Among the stakeholders who contributed in this landscape analysis are UNICEF Kenya, AMREF Health Africa – who are the co-conveners of KEWASNET, the umbrella body for all non-governmental organisations (NGOs) and community-based organisations (CBOs) in Kenya – the Ministry of Water and Sanitation, national government, Ministry of Education, the WASHhub at Ministry of Health (who support coordination of all technical working groups and interagency coordination, which all contributed immensely). The World Bank facilitated a meeting that was attended by the Turkana County director for health and other partners. During the meeting, the consultant gathered information for this landscape analysis.

The head of NTD, the coordinator of Kenya Trachoma Elimination Programme, the coordinator for lymphatic filariasis, the WASH coordinator for NTDs, the health information system unit at the Ministry of Health, the CLTS national monitoring and evaluation office, Kenya National Bureau of Statistics, and all county public health officers from the focus counties contributed to this landscape analysis.

1.3 Information collection

The landscape analysis was mainly a desk review exercise that focused on reviewing available data provided by individuals in positions of authority such as the heads of NTD and WASH units, national trachoma coordinator and/or field staff in charge of Kenya Trachoma Elimination Programme (KTEP) interventions, LF interventions or data in the NTD-endemic counties and partners.

The data was obtained through email, phone calls to the respective offices and search engines for the respective organisations. The consultant utilised national forums like the Trachoma Dossier Review Meeting and Kenya Trachoma Programme/WASH/NTD stakeholders' forum to which stakeholders from counties were invited, and visits to the offices and discuss with individuals. The consultant had an advantage of WASH data since he was the custodian of datasets from JMP, regional African Ministers' Council on Water (AMCOW), Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS), and other national voluntary reports for the country.

2 Demographic information

2.1 NTD-endemic counties with demographic distribution[12]

The counties are considered endemic if the infection is constantly maintained at a baseline level in a geographic area without external input. The consultant obtained NTD information from 44 counties. At this point, based on this data, the consultant could not conclude that these are the only NTD-endemic counties in Kenya.

Endemicity: trachoma, 12 counties; STH, 44 counties; schistosomiasis, 32 counties; and LF, six counties.

See Annex 1 for detailed information: Annex 1: NTD-endemic counties in Kenya.

2.2 NTD-endemic counties and sub-counties in Kenya[13, 14]

From the analysis, most counties in Kenya are endemic with STH except the very dry (arid and semi-arid) areas,[15] There are 12 trachoma-endemic counties, 8 with TF prevalence above 5% with a population of about 1,301,637 who are at risk in 18 sub-counties. Six LF endemic counties, with 15 sub-counties and a population of approximately 3.7 million people who are at risk. Schistosomiasis is distributed in coastal, lower eastern and Lake Victoria regions and is endemic in 158 mapped sub-counties,[16] with over six million people at risk. The STH-endemic counties are 44, which 133 sub-counties listed as affected.

Table 6: Projected under five populations in the trachoma-endemic counties[17]

County	Male	Female	Total
Turkana	76,607	73,578	150,185
West Pokot	66,357	65,934	132,291
Baringo	62,782	60,777	123,559
Narok	113,977	112,435	226,412
Samburu	28,533	28,970	57,503
Marsabit	26,394	24,237	50,631
Meru	109,232	103,668	212,899
Kajiado	73,950	73,070	147,020

*See full list of all counties in Annex 2: Projected population of under-fives by sex and county (2019).

2.3 Number of school-age children

Among the Kenyan population, the number of 3–5 year-old children was projected at 56,000, of which 99.23% are attending school. For the population aged 6–13 years, 99.05% are attending school out of the population of 200,979, while those aged 14–17 years, 90.11% are attending school out of a projected population of 88,618 individuals.[18] However, since NTD endemicity has high correlation with poverty and low access to water, sanitation and hygiene, most endemic counties have lower school attendance, as demonstrated in Figure 10. There could be other reasons as to why school-age children are not attending school in these focus counties.

Find more detailed data for school-going children in all 47 counties in Annex 3: Population of school-going children aged 3–17 years by county.

2.4 Adult literacy rate

In terms of literacy, Kenya has progressed well to reduce the level of illiteracy since the initiation of free primary education in 2003. According to United Nations Education Scientific and Cultural Organization (UNESCO) 2015 survey,[19] the adult literacy rate for Kenya was 78%. Though Kenya's adult literacy rate fluctuated substantially in recent years, it tended to decrease through the 2000-2015 period ending at 78% in 2015.

Literacy levels for people above 15 years in the PCNTD counties indicates that females in West Pokot (35%) are the most literate followed by Samburu (35%) and Turkana (27.2%). In the Coast region, females in Kilifi (73.6%), Tana River (61.3%), followed by Kwale (56.5%) are the most literate. The literacy levels, again in the PCNTD-endemic counties are lower than the national average, as shown in Figure 11.

Figure 24: Children 3–13 years attending school in trachoma-endemic counties

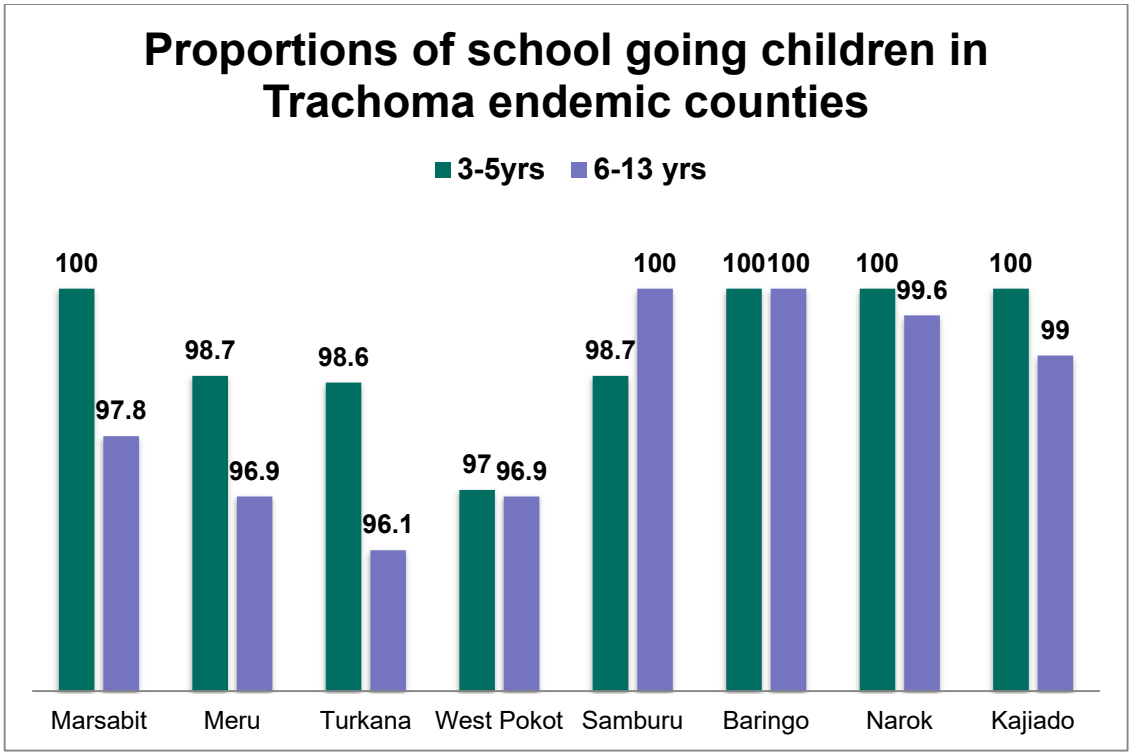
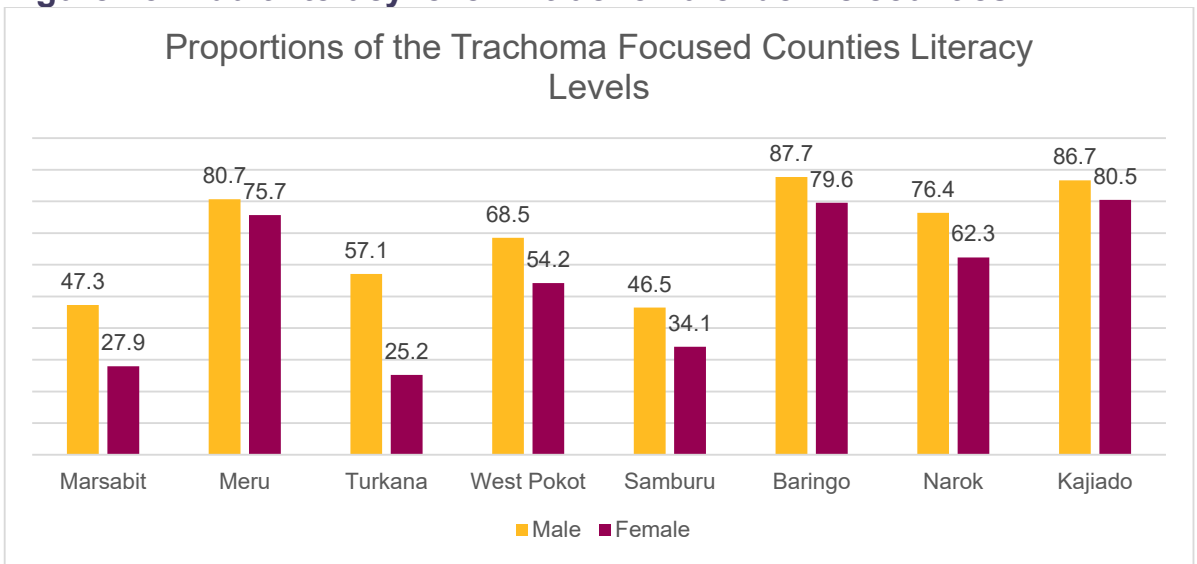


Figure 25: Adult literacy level in trachoma-endemic counties



Detailed information on literacy in Annex 4: Proportion of literacy rate for male and female in NTDs co-endemic counties.

2.5 Population mobility

Mobility by pastoralists has increased in the recent past in the East African region because of the cyclic drought that has been severe in Turkana, West Pokot (Pokot North sub-county), Narok and Kajiado counties. The Kacheliba sub-county public health officer reported that more than 87,300 pastoralists have, as a result, been forced to move into the Karamoja region of Uganda in search of pasture and water.[2]. At the time of this landscape analysis, the Narok County public health officer reported that more than 500 Maasai crossed the border during the dry season to Tanzania in search of pasture and water. This same trend is seen in Kajiado and Turkana counties.

This migration has usually contributed to conflicts[21] over dwindling resources, increased livestock theft, spread of diseases and increased difficulty in following cases of trachoma and other NTDs. Human population movement that leads to the movement of infections, over varying spatial and temporal scales, plays an important role in NTD dynamics across the full range of transmission intensities (severity) and epidemiological phase. Special integrated programmes that involve governments affected by the human population movement and livestock movement should be developed or enhanced.

Migration of humans and animal populations and trade are highly relevant to NTDs such as trachoma, STH, dracunculiasis, human African trypanosomiasis, schistosomiasis and leishmaniasis and can lead to pathogens being introduced into new areas or exposures of vulnerable population to new risk zones. Populations are marginalised politically in terms of putting up infrastructure for medical services, water access for example, where health facilities are far apart for the migrating populations.

2.6 Areas experiencing waterborne disease outbreaks in recent years

In 2019, a number of counties experienced cholera outbreaks. Since January 2019, cholera outbreaks have been reported in Narok, Kajiado and Nairobi counties. Cumulative cases reported are 872 with 40 confirmed and three deaths (CFR 0.3%). Nairobi and Narok counties have since successfully controlled the outbreak. The other counties that experienced such waterborne diseases between January and March 2019 are Wajir, Tana River and Kwale.[22]

2.7 Specific farming practices that raise transmission risk

The four trachoma-focused counties – Turkana, West Pokot, Baringo and Narok – mainly keep animals and practise nomadic farming for their livelihood. Since March 2019, counties where livestock body condition show signs of worsening include: Wajir, Kajiado, Marsabit, Baringo, Garissa, Laikipia, Mandera, Samburu, Turkana and West Pokot.[23] The families in these communities keep their animals near the premises. The animals' waste is close and encourages flies within the households, therefore becoming a risk for transmission of NTDs. Baby animals are kept in the same *manyatta* where small children sleep at night.

3 Disease information

3.1 NTD history

Globally, according to WHO 2017 reports, “Neglected tropical diseases (NTDs) are a diverse group of communicable diseases that prevail in the tropical and sub-tropical conditions. Resources allocated towards their treatment, control and elimination have been inadequate. Despite major advances in science, technology, and medicine, these diseases are still causing a high disease burden. The concentration of NTDs in (sub-) tropical resource-constrained regions is caused by climatic factors in combination with poverty-associated factors that favour the spread of the diseases and prevent adequate access to prevention and care. This explains why NTDs are also viewed as diseases of poverty”.[24] More than 25 million Kenyans are infected by at least one NTD.[25] Most of the NTDs are not a direct cause of mortality, but they cause immense suffering and often lifelong disabilities. NTDs are also known to impair growth and development in children.[26]

In Kenya, since 2012, the Ministry of Health and its partners through the NTD Unit have implemented the following control activities:

Mapping

- In 2013, through the support of WHO, a major mapping exercise was conducted across 19 counties for STH and schistosomiasis; in partnership with the Neonatal Child and Adolescent Health Unit and through the National School-Based Deworming Programme (NSBDP), more than 6.4 million school-age children were dewormed during 2012-2013.
- Mapping for trachoma has been completed in 13 counties. SAFE (surgery, antibiotics, facial cleanliness and environmental sanitation) interventions have been ongoing in 12 counties for the last five years with support of partners.
- Mapping for LF has been completed in 31 units of which 14 are in Western Kenya and 17 in the coastal region.

Mass treatment

In the second half of 2015, mass treatment of LF was restarted in 17 out of the 23 endemic sub-counties of the Kenyan coast. More than 2.3 million people were treated with diethylcarbamazine (DEC) and albendazole during this landmark exercise.

Following successful mapping of trachoma, mass drug administration (MDA) of azithromycin and 1% tetracycline eye ointment took place in 8 of the 12 counties. By 2014, a total of 11,083,382 out of the targeted 13,952,274 people had been treated in the MDA exercise. This represents a national coverage of 79.4%. Training of eye care workers and non-eye care trachomatous trichiasis (TT) surgeons has been carried out and will continue.

- Since 2009, Kenya focused on STH MDA on school-age children in prioritised counties. The other deworming interventions were carried out through Ministry of Health programme such as 'Malezi Bora' (proper nurturing), provided at antenatal clinic.
- Kenya government launched the National School-based Deworming Programme in 2011 with the aim of treating all children at risk for STH and schistosomiasis; they are still continuing with the campaign.
- Preventive chemotherapy is considered the key component in the control of schistosomiasis and STH in Kenya.

Policy formulation and reviews

Kenya National Strategic Plan for Control of Neglected Tropical Diseases 2016-2020 was launched in 2016. The new strategy for 'Breaking transmission for STH, schistosomiasis, lymphatic filariasis and trachoma' was launched in 2018.

Review of guidelines for diagnosis and management of leishmaniasis has been concluded. The guidelines introduced the new, safer and more efficacious combination therapy for visceral leishmaniasis with paromomycin and sodium stibogluconate (PSSG), to replace monotherapy with sodium stibogluconate (SSG) alone. To help implement the guidelines, more than 85 health workers from leishmaniasis-endemic areas have been trained.

Following successful implementation of the first strategy 2011-2015, the Second Kenya National Strategic Plan for Control of Neglected Tropical Diseases 2016-2020 was launched in 2016. It is aligned to the Kenya Health Sector Strategic and Investment Plan, July 2014–June 2018 (KHSSP III), Vision 2030, Kenya Constitution 2010, Sustainable Development Goals and World Health Organization Guidelines.

This strategy maintains the vision, mission and goal of the National Multi-Year Strategic Plan for Control of Neglected Tropical Diseases 2011-2015. It continues with the spirit of attaining universal access and coverage of NTD interventions. Key changes involve inclusion and magnification of the personal hygiene and sanitation education (PHASE) approach which, in addition to preventive chemotherapy, involves provision of health education, access to safe water, sanitation and hygiene, and environmental improvements. This revised strategy includes new stakeholders that will be included in the coordination forums, (for example, council of governors, BCC partners, WASH partners and NTD partners) which articulates their roles and responsibilities while introducing a strong coordination mechanism for integrated NTD control activities.

The four strategic objectives of the National Strategic Plan for Control of Neglected Tropical Diseases 2016-2020 are: (a) to strengthen government ownership, advocacy, coordination and partnership; (b) to enhance planning for results, resource mobilisation and financial sustainability of NTD programmes; (c) to scale up access to interventions, treatment and system capacity building; and finally (d) to enhance monitoring and evaluation (M&E) of NTD control activities, surveillance and operational research. This will be linked to Breaking Transmission for NTDs strategy 2019-2023.

Kenya envisions that within five years the interventions will have broken the transmission of trachoma, STH, schistosomiasis and LF through the combined strategies of expanded

MDA, WASH and BCC, and elimination or eradication of targeted NTDs by 2022. The new phase of programming should align their activities to the new policy guidelines in Kenya.

3.2 Prevalence of disease for which mass drug administration programmes are being delivered

Preventive chemotherapy is considered the key component in the control of schistosomiasis and intestinal worms, trachoma, LF and onchocerciasis. STH MDAs are administered mostly through schools by the Ministry of Health and partners. National school-based deworming targeted 6 million school-age children annually in 27 counties (168 sub-counties). In 2009 the programme launched as a pilot whereby 3.6 million children were treated. The Western region got some partners support in the year 2012-2015 to carry out deworming exercise (see Annex 5: Prevalence of disease for which MDA programmes are being delivered.

Table 7: Prevalence of disease for which MDA programmes are being delivered

County	Disease	Sub-county	Prevalence (%)	MDA coverage %	Implementers	Date of data	Source
Pokot	Trachoma	Kachelib a	13.80	81	Fred Hollows Foundation	2017	Impact surveys
Turkana	Trachoma	Turkana West	17.50	86	Sightsavers	2017	Impact surveys
Narok	Trachoma	South 4/SE	12.21	87	Fred Hollows Foundation	2019	Impact surveys
Baringo	Trachoma	Tiaty	12.80	61	Fred Hollows Foundation	2018	Impact surveys

3.3 Relevant NTD interventions

These interventions include MDA, behaviour change, environmental change, disease management, and vector control interventions as clearly indicated in Annex 6: NTD interventions.

3.4 Neglected tropical diseases in Kenya

The distribution of NTDs varies across the country, examples being: STH, schistosomiasis, LF, trachoma, leishmaniasis, leprosy, cysticercosis, dengue and chikungunya, dracunculiasis, cystic echinococcosis, scabies, rabies, and snake bites (Annex 12: Prevalence and programme information on endemic NTDs.

Trachoma

Trachoma is mainly found in the arid areas in the Rift Valley and north-eastern regions; by 2013 all the 12 endemic counties had been surveyed and interventions commenced. Since the 2014, ICTC (International Coalition for Trachoma Control) in partnership with member organisations Sightsavers, Fred Hollows Foundation (FHF), Operation Eyesight Universal (OEU) and Christian Blind Mission (CBM) initiated a trachoma project to eliminate blinding trachoma in 12 endemic counties in Kenya (Baringo, Isiolo, Marsabit, Turkana, West Pokot, Narok, Kajiado, Embu, Kitui, Laikipia, Samburu and Meru). The 12 counties had infectious trachoma prevalence in excess of 10%, making the disease an issue of public health concern and thus required intervention in line with WHO recommendations on disease control and management/elimination.[27]

Much has been achieved following the five years of SAFE strategy implementations in these endemic counties. Active trachoma reduced from 12 to 4 counties (16 sub-counties), requiring full SAFE strategy. The results for 2017/2018 revealed further that a high prevalence of active TF remains in the following sub-counties: Loima in Turkana (11.5%), Turkana West (17.5%), Tiaty in Baringo (12.8%), Kacheliba in West Pokot (13.8%), Sigor in West Pokot (10.32%), Narok East 3/Central (12.6%), Narok South 4/SE (12.21%), and Narok West (19.88%).[28]

In counties with TF prevalence >5–10%, trachoma is considered an issue of public health concern and in need of full SAFE intervention. Kenya defines the elimination of trachoma as a public health problem in the community as when there is less than 5% clinical activity in children, since at this prevalence, it is no longer possible for the chlamydia to spread within the community. Integration is encouraged where possible to maximise on the scarce resources available to achieve maximum impact.[29]

For the last five years, trachoma prevalence has dropped significantly, due to the intervention of the Kenya National Plan for the Elimination of Trachoma (KNPET) 2008-2015, and the development of the Trachoma Action Plan 2011-2020 which is reviewed annually. There is a Trachoma Task Force, which is a sub-committee of the National Prevention of Blindness Working Group and interventions based on the International Coalition for Trachoma Control in Kenya. Table 8 indicates 5% and above prevalence of trachoma per county and sub-county

Table 8: Trachoma impact survey results

County	Sub-county	Prevalence %	MDA coverage %	WASH/NTD implementers	Date of data	Source
Pokot	Kacheliba	13.80	81	FHF	2017	Impact surveys
	Sigor	10.32	81	FHF, WV	2017	Impact surveys
	Kapenguria	5.17	81	FHF, U	2017	Impact surveys
Turkana	Turkana West	17.5	86	SSI, FC, U, WV	2017	Impact Surveys
	Loima	11.54	86	SSI, CL, U	2017	Impact surveys
	North	9.31	86	FHF, CL, U	2017	Impact surveys
	Kakuma	5.20	86	SSI, CL, U	2017	Impact surveys
	South	6.9	86	FHF, F, U	2017	Impact surveys
	East	8.59	86	FHF, SSI, U	2017	Impact surveys
Narok	South 4/SE	12.21	87	A, FHF	2019	Impact surveys
	East 3/ Central	12.60	-	OE, OE	2018	Impact surveys
	Narok West	19.88	-	WV	2018	Impact surveys
Baringo	Tiaty	12.80	61	FHF, U	2018	Impact surveys
Samburu	East, North-west	8.03	80	A	2017	Impact Surveys
Meru	Igembe North	7.19	0	CBM	2018	Impact Surveys
Marsabit	Laisamis	5.59	96	CDOM	2017	Impact Surveys
	Saku	5.59	96	CDOM	2017	Impact Surveys
Kajiado	West	9.73	90	A	2017	Impact Surveys

Partners

A	AMREF
CBM	Christian Blind Mission
CDOM	Catholic Diocese of Marsabit
CL	Catholic Diocese of Lodwar
FC	Feed the Children
FHF	Fred Hollows Foundation
OE	Operations Eye Sight
SSI	Sightsavers
U	UNICEF
WV	World Vision

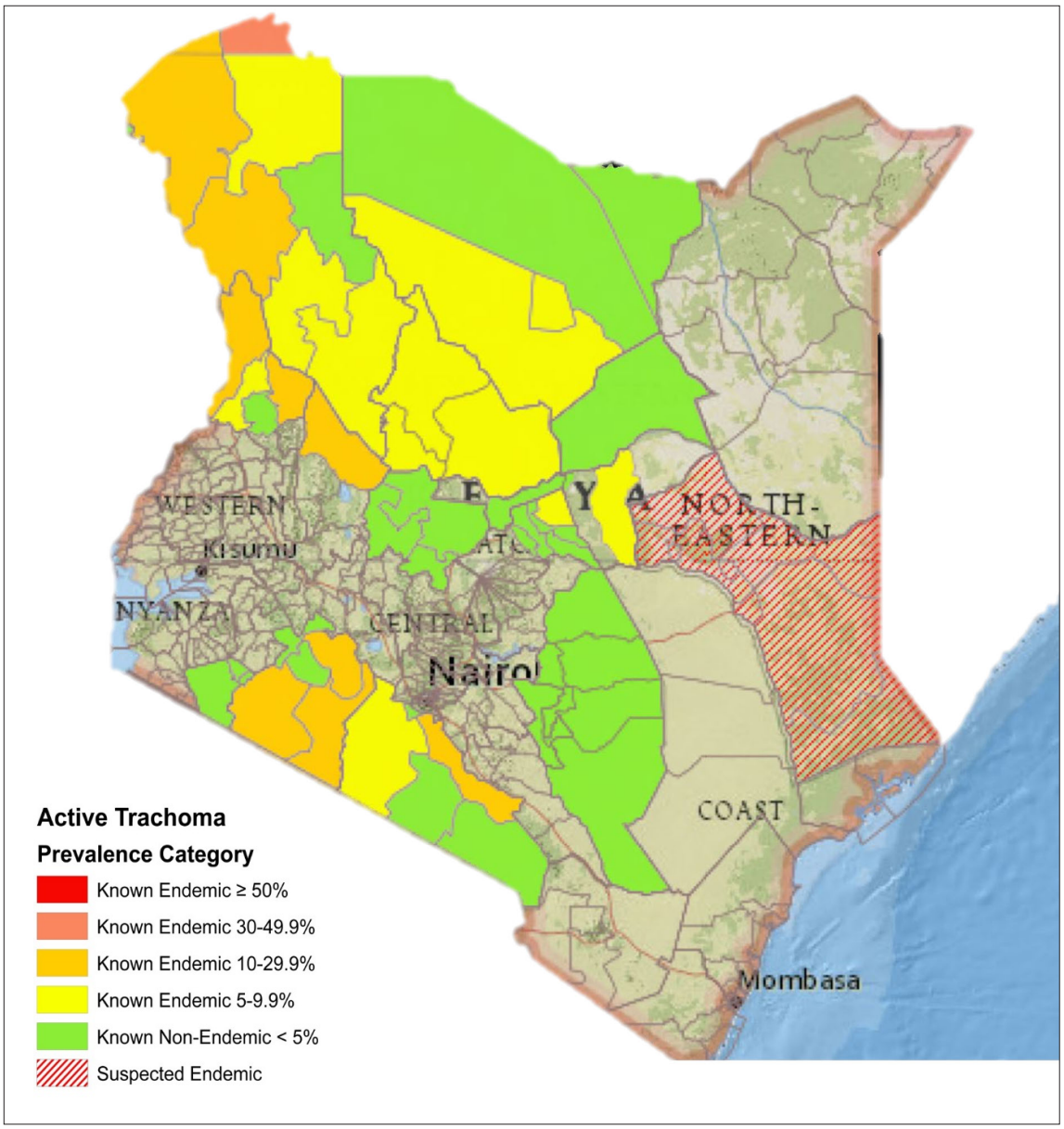
Table 9 shows the mass drug administration (MDA) and population covered in the endemic counties that has enabled reduction of prevalence in the recent past five years:

Table 9: Current trachoma MDA coverages

County/sub-county	Year	Target	Treated	Coverage
Baringo East	2017	173,182	104,911	61%
Turkana County	2016	1,182,504	1,015,931	86%
West Pokot	2014	545,450	440,724	81%
Transmara sub-county	2015	209,306	184,020	88%
Narok North, South	2017	335,432	291,051	87%
Kajiado	2013	297,751	268,080	90%
Marsabit – Loyangalani, Laisamis	2014	123,955	118,538	96%
Samburu	2013	223,619	179,594	80%

Ongoing interventions in the sub-counties include SAFE strategy interventions and impact surveys.

Figure 26: Map of trachoma prevalence in Kenya as at 2018

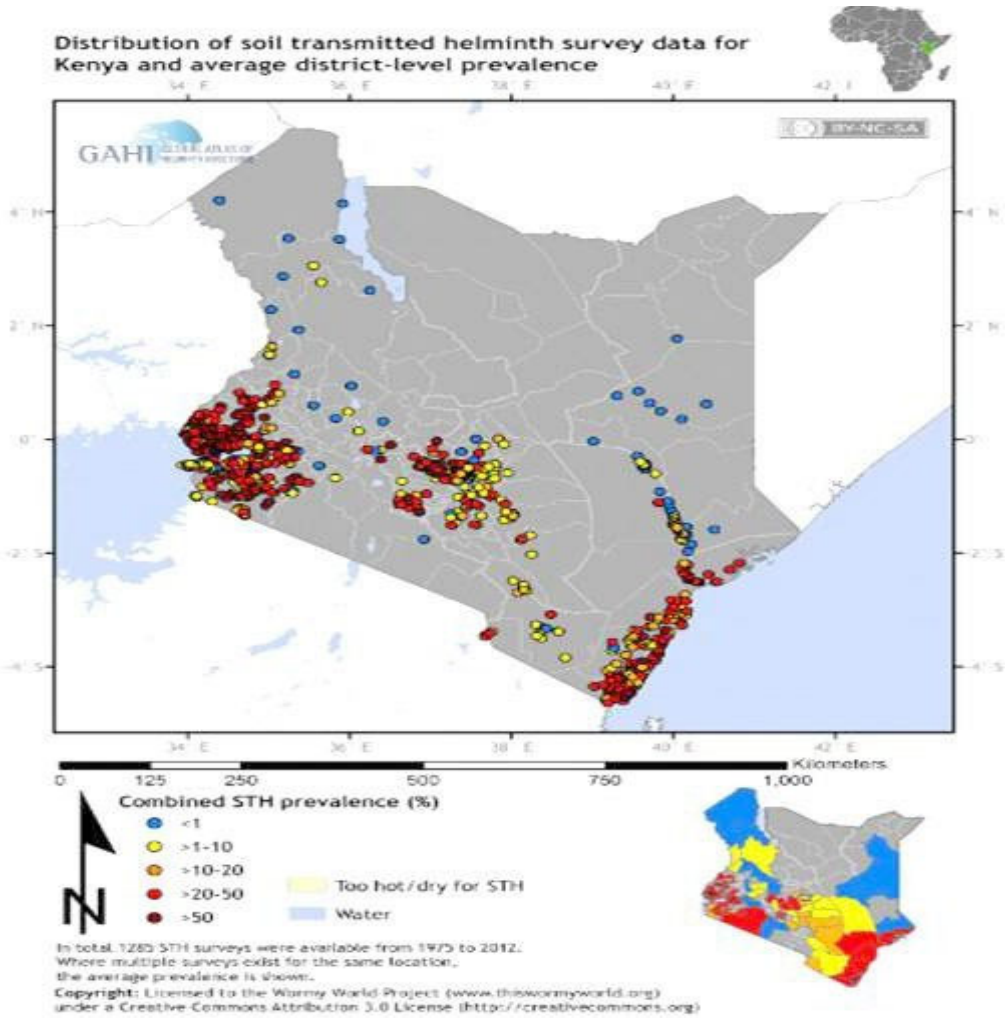


STH prevalence

School-age children typically have the highest burden of worm infection. Globally, more than 267 million preschool-age children and more than 568 million school-age children[30] live in areas where these parasites are intensively transmitted and are in need of treatment and preventive interventions. Worm infections are characterised by limited access to safe water, open defecation, faeces used on the land and eating with unwashed hands.

STH infestation in analysed surveys in Kenya between 1980 and 2008 showed varied infestations rates over time.[31] There were an estimated 6,444,287[32] school-age children in Kenya needing treatment in 2014. With funding from the Children Investment Fund Foundation and the END Fund through 'Deworm the World' Initiative at Evidence Action, large-scale deworming of school-age children in line with the national School Health Policy and guidelines has been conducted in 111 sub-counties, within 44 endemic counties. The deworming programme is ongoing, according to the NTD strategies in all endemic counties in Kenya.

Figure 27: Kenya's STH prevalence map



According to Ministry of Health Strategic Plan for NTDs, all three types (roundworms, whipworms and hookworms) are widely distributed across Kenya[33] with more than 16.6 million people believed to be at risk of infection with one or more of the types of worms. Infected children are nutritionally and physically impaired. Control is based on periodical deworming to eliminate infecting worms, health education to prevent reinfection, and improved sanitation to reduce soil contamination with infective eggs. Safe and effective medicines are available to control infection. Kenya embarked on mapping of STH during the implementation of the first NTD Strategy 2011-2015. A total of 158 sub-counties (former districts before devolution) were mapped in 44 endemic counties (Annex 18: Soil-transmitted helminths (STH) prevalence). The current strategy targets to reduce STH morbidity by 2020 through preventive chemotherapy, health education, access to clean water, sanitation and environmental improvement. STH is endemic in most parts of the country except the very dry (arid and semi-arid) areas. It is evident from the data that counties in the arid zones have low STH prevalence, where it is less than 20%, as per the WHO guidelines;[34] it does not require mass drug administration but does require WASH interventions. Temperatures and high humidity favours transmission of soil helminths.

Schistosomiasis prevalence

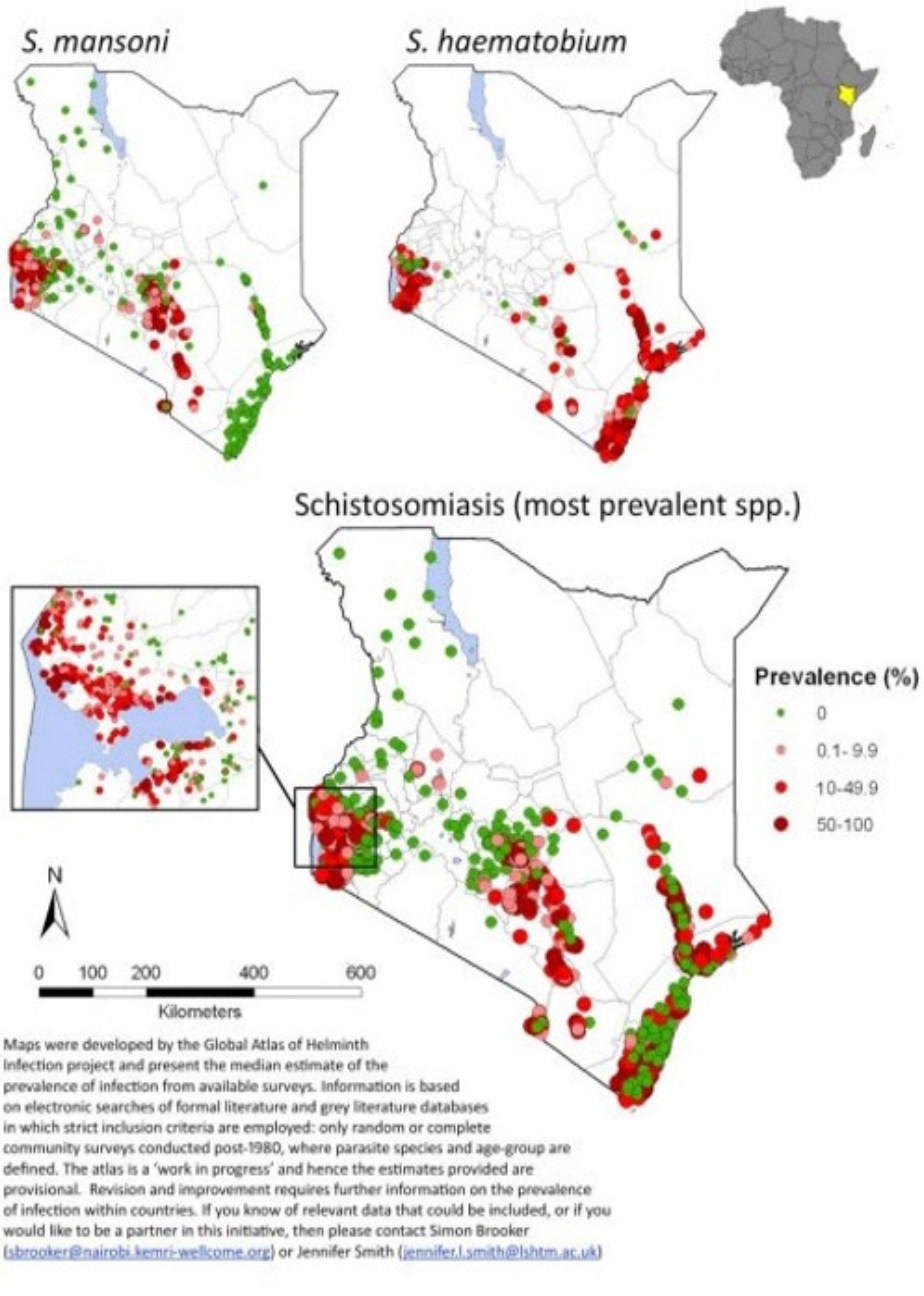
Schistosomiasis is a tropical disease caused by worms of the genus *Schistosoma*. It causes morbidity (disease) in rural communities and its transmission is closely related to human utilisation of freshwater resources. Eggs produced by the adult female worms in the human host are released in either stool or urine. Half of the eggs laid by the female schistosome get trapped in tissues causing schistosome-related bladder (*S. haematobium*) and the liver (*S. Mansoni*) infection. Schistosomiasis is confirmed as endemic to Kenya in 32 counties. The pattern of occurrence involves within the Lake Victoria region, parts of Central Kenya, Lower Eastern and the Coast regions. Approximately 6 million people are estimated to be at risk of infection. The known geographical distribution of schistosomiasis in Kenya is shown in Figure 14.

Schistosomiasis-endemic counties

According to the National NTD Strategic Plan 2016-2020, 32 counties are endemic with schistosomiasis, made up of 158 endemic sub-counties (Annex 19: Schistosomiasis prevalence).

Rice farming in irrigation schemes and fishing are a risk factor for schistosomiasis infections and access to potable water is limited, exacerbating the impact of waterborne diseases on the mostly rural populations. Poor sanitation and hygiene are associated with high prevalence of schistosomiasis.

Figure 28: Kenya's schistosomiasis prevalence map



Research activities in Western Kenya have been contributing to intervention albeit at a much smaller scale. The Schistosomiasis Consortium for Operational Research and Evaluation (SCORE)[35] project in the Lake Victoria region has tried to engage research projects with the goal of ensuring coordinated implementation of schistosomiasis interventions, with special focus on evaluating optimal methods for MDA delivery. The control measures include snail control, improved sanitation and health education and reduced contact with surface water and enhanced health seeking behaviour. In line with the Kenya's School Health Programme, mass drug administration for school-age children in the schistosomiasis-endemic counties were offered treatment with praziquantel (PZQ 40mg/kg).

Lymphatic filariasis (LF)

Lymphatic filariasis in Kenya, like the rest of Africa, is caused by infection with *Wuchereria bancrofti*. The parasite is transmitted to humans *by Anopheles gambiae*, *Anopheles funestus* and *Culex quinquefasciatus* mosquitoes. The former two species are the main vectors in the rural environment while the latter is the predominant mosquito vector in the urban environment. Distribution of LF in Kenya is restricted to the Coast region, along the Indian Ocean and islands.

Kenya is considered an endemic country of LF following mapping of 100 sub-counties. It is believed to occur exclusively within six counties and specifically 15 sub-counties of the Coast Region. Approximately 3.7 million people are estimated to be at risk of infection with LF. Figure 15 shows the known geographical distribution of LF in Kenya. The reported mapping information available to the NTD programme is tabulated as shown in table 10.

Funding from the END Fund and other partners is expected to support sustainability of the Kenya National Programme to Eliminate Lymphatic Filariasis (NPELF) activities in the 15 sub-counties as well as enable scale up to the remaining six sub-counties where LF has also been found to be endemic. Control activities on NTDs implemented vertically result in little, if any control impact.

Table 10: LF prevalence in Kenya sub-counties as from 2005

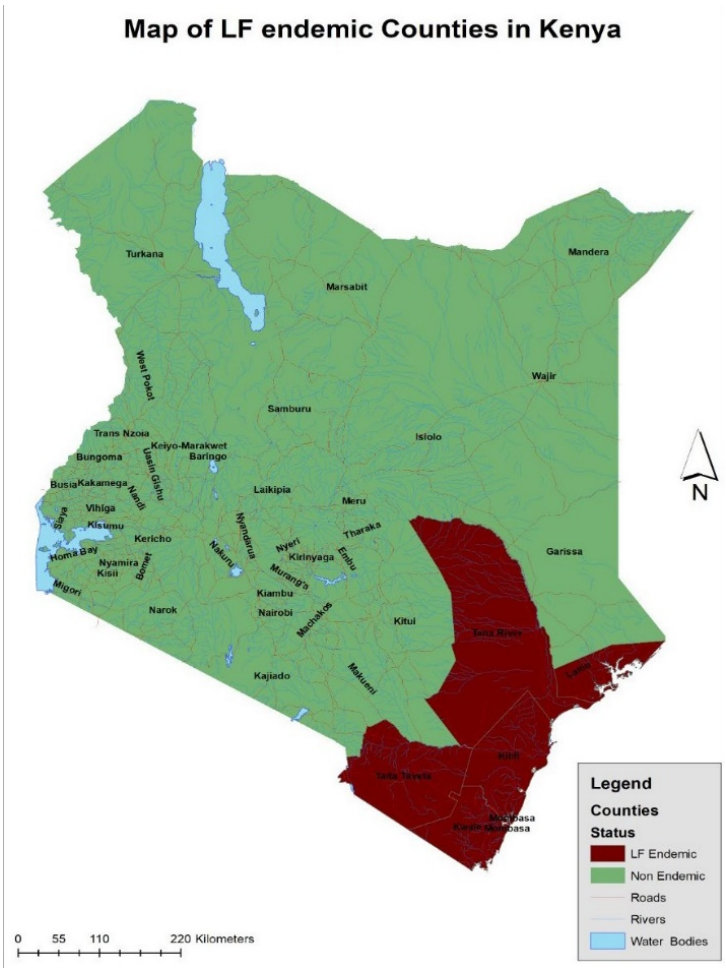
Endemic county	Endemic sub-counties	Prevalence	Implementers	Date of data	MDA date 2018	Source
Kilifi	Kilifi	3.0%	MOH/partners	2008	88%	NPELF
	Malindi	3.0%	MOH/partners	2008	82%	NPELF
	Kaloleni	2.0%	MOH/partners	2008	93%	NPELF
Kwale	Kwale	1.0%	MOH/partners	2008	73%	NPELF
	Mswambeni	1.0%	MOH/partners	2008	96%	NPELF
	Kinango	1.0%	MOH/partners	2008	73%	NPELF
Tana River	Wanje	0%	MOH/partners	2011	80%	NPELF
	Kipini	1.8%	MOH/partners	2011	107%	NPELF
Mombasa	Bamburi	2.9%	MOH/partners	2011	90%	KEMRI
	Kisauni	4.2%	MOH/partners	2011	90%	KEMRI
	Likoni	4.1%	MOH/partners	2011	99%	KEMRI

	Majengo	3.0%	MOH/partners	2011	99%	KEMRI
	Miritini	2.0%	MOH/partners	2011	94%	KEMRI
Taita Taveta	Taita	2.0%	MOH/partners	2005	90%	NPELF
	Taveta	2.0%	MOH/partners	2005	90%	NPELF

The following shows LF endemic counties. A number of partners are carrying out MDA in these sub-counties with leadership of the national government, coordinated by the NTD Unit. The partners are: World Health Organization, END Fund, Evidence Action, KEMRI, Pharmacy and Poisons Board, African Institute for Health and Development, Interconnected Health Solutions, Kenya Medical Supplies Agency (KEMSA) and county governments.

The interventions that are ongoing currently for LF are: mass drug administration, distribution of insecticide-treated nets, educating the households to screen their houses, and behaviour change communication through information education communication materials.

Figure 29: Kenya's LF prevalence map



Onchocerciasis

Onchocerciasis is caused by *Onchocerca volvulus*, which is a nematode, and transmitted to humans by Simulium black flies. The microfilarial larvae of this helminth are the source of the pathology in humans. Accordingly, in endemic areas, infection transmission is associated with residential or occupational distance to flowing rivers and streams in mountainous terrain. As such, communities close to moving water are at high risk in topographically varied areas of endemicity. However, transmission is not exclusive to these sites because some *Simulium* species have broad flight ranges that extend well beyond (up to 40 miles for some species) their reproductive sites. Therefore, while risk of infection is certainly concentrated at the reproductive sites of fast-moving water, the overall endemicity is typically more diffuse, and geographic risk more extensive, than the narrow corridor delineated by the waterway.[36]

There are no identified active activities for onchocerciasis in Kenya. In 2018, KEMRI and the NTD Unit carried rapid diagnosis test to establish endemicity. The results are being analysed and disseminated.

3.5 Programme information on endemic NTDs

In Kenya, there are number of interventions being carried out by NTD partners in line with the strategic focus of the Ministry of Health. The current ongoing interventions are: mass drug administrations, distribution of insecticide-treated nets, educating households to screen their houses, and behaviour change communication through information education communication materials. The partners implement these interventions in the NTD-endemic counties (Annex 10: WASH and NTD-related social and behaviour change interventions).

The following are activities currently going on in the NTD-endemic counties:

- Development and production of foldable murals for schools to address trachoma messages
- Reaching the communities through national and local radio programmes
- Talk shows with clear message on NTDs
- Water supply in the community and schools: borehole drilling, supply of water tanks
- Installation of hand washing facilities at households and schools, next to sanitary facilities
- Provision of shoes in areas infested with jiggers and STHs
- Preventive and protective equipment in areas infested with schistosomiasis
- Supply of insecticides and molacides to address mosquitoes and snails
- Provisions of insecticide-treated nets to reduce the density of mosquitoes
- Provision and treating households with indoor residual sprays to reduce mosquito density
- Supply of indoor residual spraying equipment
- Capacity building the community health volunteers and community health workers
- Mass drug administration for LF, STH, trachoma and schistosomiasis
- Deworming in schools and households

- Equipping rehabilitation centres for people affected with LF
- Screening of houses to reduce NTD vectors
- Encouraging communities to wear protective gear and clothing
- Water sanitation and hygiene advocacy
- Encouraging households to treat domestic water before use
- Promotion of hand washing with soap at critical times at schools and communities such as the Super Schools of Five project
- Training artisans on how to construct pit latrines and simple hand wash facilities (Tippy tap)
- Painting murals about trachoma in school walls
- Implementation of school health guidelines WASH (2018): provision of safe and clean water to schools; provision of adequate and quality sanitation facilities in schools; promotion of hygiene in schools among learners and teachers; operation and maintenance of WASH facilities; promotion of menstrual hygiene management among girls in schools; reduction of vector and vermin density in schools and provision of quality and safe food in schools
- School-led total sanitation in some counties
- Child to child initiative; to encourage children to talk to each other about hygiene
- Community-led total sanitation – face washing (CLTS+).

3.6 Community and facility-based morbidity management

Deworming: There are a number of interventions based in the household, at school, community villages or health facilities within the communities. Annual school-based deworming for children aged 2–14 years and annual community-based deworming targeting all ages have been the most widespread interventions. The Kenya National School-based Deworming Programme that started in 2009 is a big success story, with an estimated 80% of all eligible school-age children receiving preventive chemotherapy every year. This was carried out by the government of Kenya (Ministry of Health) through the division of child health with support from partners (Evidence Action, Innovations for Action, among others). This has been shown to reduce absenteeism by almost 25%.[37] However, with the resultant reduced levels of STH prevalence among school-age children, the challenge has been reaching out to the adult population.

Awareness creation: Awareness levels vary in Kenya on the specific NTDs. Through hygiene promotion and WASH interventions, major awareness has been created on STH, raising knowledge on causes and effects as confirmed by a study in the coastal region[38] in 2017. Results of the study show that to a large extent, the parents of preschool-aged children have information on worm infection, transmission and treatment. While in the trachoma-endemic counties, there has been more mass communication and awareness on trachoma, making awareness in those counties higher than in other parts of the country. This was demonstrated by a study on knowledge, attitudes and eye care seeking practices regarding trachoma in Central Division of Kajiado County in 2017.[39] The study revealed that the level of awareness of trachoma in the study area was high (95%).

About three quarters (71%) of the respondents were knowledgeable of the available trachoma eye care services. A majority had a positive attitude towards the available services and expressed need for the services. For LF, the Ministry of Health launched a campaign that included the identification of people who already have complications of elephantiasis, provision of free surgery where possible, awareness, advocacy and sensitisation campaigns, mass deworming and drug administration exercises, training of community health assistants and teams in the six coastal endemic counties in 2016-2017.[40] Awareness levels, therefore, must be higher in these areas than the other parts of the country.

For schistosomiasis, the general awareness is low among Kenyans including the areas of high prevalence. A study in Kisumu 2014[41] found that most respondents stated as having 'heard about schistosomiasis' but very few had the correct knowledge of signs and symptoms, causes, transmission and control of the disease. However, there was moderate knowledge of risk factors and at high risk groups. Their attitudes towards schistosomiasis and its control were generally indifferent with a general belief that they had no control over their environmental circumstances to reduce transmission.

Awareness is mostly created in schools and health facilities by NGOs and through community dialogue. The community health volunteers (CHVs) create awareness in households through the MOH's Community Health Strategy 2007 where each CHV covers a minimum of 25 households.

Treatment at the community level, including schools and health facilities, is done through MDA (including mass deworming). Other treatments include TT surgery for trachoma, with procurement and distribution of surgery equipment, sterilisation kits and consumables, training and certifying TT surgeons who conduct TT surgery during organised camps being done by the government. For schistosomiasis, upon a positive urine or stool sample test, patients with severe complications, such as gastro-intestinal (GI) bleeding, GI obstruction, renal failure, cardiac failure, bacteraemia due to salmonella, and central nervous system complications, need inpatient care and treatment with praziquantel. Through school health programmes, mass drug administration is offered to school-age children in the endemic counties.

On the other hand, surgical care includes removal of tumour masses, ligation of oesophageal varices, and porta-caval shunt surgeries. Lymphoedema management is done in support groups at the community level, with follow-up clinics to recruit cases, and follow-up clinics to confirm hydroceles. The Kenyan government has an optimised NTD solution for real-time surveillance and prevalence mapping of LF at community and household level in Kenya. The solution is to integrate the real-time surveillance through mobile application, and the available DHIS2 reporting for all neglected tropical diseases.

Data collection and documentation: This is not structured but happens on case-by-case basis. For trachoma activities, data is collected on MDA coverage, number of people that have undergone eye surgery, number of TT camps and their attendance, environment management in terms of open defecation free communities, impact surveys, and programme costing. For STH, data is collected from schools during deworming exercises,

at health facility registry for those going for treatment. The data on household individual deworming is not easily collected. The data for LF is collected through support groups at the community level, at facility level for those confirmed referrals. Finally, schistosomiasis data is facility based from the treatment records and MDA records in schools.

A number of surveys (i.e. trachoma survey, LF survey, schistosomiasis survey) are conducted for the NTDs and they form a very important source of information during and after the programme. The surveys are conducted by the Ministry of Health with support from partners, for example trachoma impact surveys. Continuous surveillance informs the programmes on any emerging NTD and progress of interventions. Finally, end of term studies of the NTD programmes provide important data for decision-making.

Social inclusion and stigma prevention: Stigma may be defined as "a social process, experienced or anticipated, characterised by exclusion, rejection, blame or devaluation that results from experience, perception or reasonable anticipation of an adverse social judgement about a person or group". People affected by NTDs are frequently the target of social stigmatisation. To date, not much attention has been given to stigma in relation to NTDs. In addition to causing physical and emotional suffering, these devastating diseases hamper a person's ability to work, they keep children out of school, and prevent families and communities from thriving. Several factors are reported that either positively or negatively affect the level of stigma related to LF.[42]

Figure 30: Human legs affected by LF

For instance, the more advanced the stage of the disease, the higher the stigma related to it, whereas localisation[43] of the disease influences the level of stigma, with affected genitals causing higher levels of stigma than affected extremities. Also, patients with a low level of income, women and girls, and younger people are reported to be more susceptible to stigmatisation.

A systematic review by Hotstraat et al. on social stigma towards neglected tropical diseases[42] found: "The enacted stigma related to trichiasis is characterised by social exclusion, labelling, cursing and an unwillingness of community members to have dinner with or marry patients with trichiasis. The anticipated stigma is manifested by social withdrawal of women with trichiasis, while embarrassment of others seeing their purulent eyes constitutes the internalised stigma component. Reduced working opportunities, social isolation, decreased social status, the inability to fulfil religious and social obligations, and problems in relationships comprise the social consequences reported." In the same review he further found: "Expressions of enacted STH stigma include teasing and bullying of

patients due to their skin impairments, as well as social exclusion." Schistosomiasis stigma included "fear of contagion, witchcraft, being a financial burden on the family and promiscuity, because of the wrong assumption that schistosomiasis is sexually transferrable". Finally, in terms of LF stigma, affected people experience "reduced work and education opportunities, impediments in sexuality and relationships, and social isolation".

Vector-borne control programmes: Most of the targeted NTDs are vector-borne such as LF, dengue fever, schistosomiasis and trachoma. Therefore, control strategies against one vector may also have impact on others. In Kenya, disease control, specifically communicable and vector-borne diseases, is allocated up to 3% of MOH total funding.[44] The funds allocated are mainly spent on surveillance and response/control of communicable and vector-borne disease and improving capacity to diagnose and treatment of communicable and vector-borne diseases. In the 2016-2020 strategy, the NTD programme aims to coordinate and foster integration of the implementation of NTD control activities across projects, programmes, units, divisions, departments, institutions and ministries participating in NTD control including the vector-borne disease control.

The vector-borne control programme includes spraying insecticides and environmental improvement, which leads to the reduction of diseases transmission through disruption of breeding sites for disease vectors. Ministry of Health advocates that the national and county governments, line ministries and environmental agencies ensure that all construction companies and their agencies are requested and enforced to fill up quarries, manholes and trenches they create as they do their work in order to minimise vector breeding sites and hence contribute to the reduction of disease vectors.

Veterinary public health interventions for zoonoses control: STHs are closely linked with food habits and hygiene in endemic areas. Therefore, food safety risk communications play a key role for prevention of reinfection. Public health initiatives such as meat inspections help avoid contamination or consumption of meat with nematodes. Since some NTDs are also zoonotic, veterinary public health and environmental measures, including treating domestic or livestock animals, enforcing separation between husbandry and humans and draining grazing lands, might also be adopted. With non-compliance to recommended treatment regimens and persisting risk behaviours, such as bathing and washing in infested river water, open defecation and unhygienic handling of food and livestock, some populations, especially nomadic or pastoralists, are often exposed to reinfection.

3.7 Non-MDA interventions for NTDs

S – Surgery

The World Health Organization recommends that surgery should be offered to patients who are diagnosed with trachomatous entropion trichiasis. This recommendation was adopted in Kenya's policies and strategies. Skilled trained personnel carry out the surgery.

A number of surgeries have been conducted before for people affected with LF, lymphoedema. This intervention is still going on in the endemic counties within the coastal region.

F – Facial cleanliness and personal hygiene

Facial cleanliness, hygiene promotion and access to water and sanitation are thought of as the cornerstones of trachoma prevention. The importance of the face (F) component is two-fold: first, washing children's faces ensures that infectious eye and nose discharge that can be spread to others is washed away. Secondly, removing mucus, traces of food, and other material from children's faces decreases their attractiveness to eye-seeking flies that can carry the trachoma-causing bacteria from one child's face to another.

E – Environment

In Kenya, personal and environmental hygiene has been identified as critical factors in the preventing the spread of trachoma. In the 12 endemic counties that implemented the F and E components in the last two years, significant improvements in personal hygiene, proper disposal of human and animal excreta, and water supply have occurred. Recent surveys in these counties have shown that trachoma prevalence has reduced significantly.

Moving forward, in order to address the high prevalence of counties with trachoma, prevention needs to address personal hygiene and environmental sanitation. It is important that there is intersectoral cooperation between the Ministry of Water and Sanitation in the county, Ministry of Education and Ministry of Health together with sector partners. Such collaboration is essential for the Kenya's elimination of trachoma by 2020 as documented in our strategy.

Kenya environmental sanitation and hygiene strategic framework (2016-2020) clearly provides the interventions to be put in place to reduce associated risk factors for NTD and other WASH-related conditions. To reduce the prevalence of NTD (STH, schistosomiasis, LF and trachoma), the country is focusing on sustainable sanitation solutions, improving water safety and hygiene promotion.

Behaviour change

Hygiene practices among school children have dramatically improved through hygiene promotion activities, latrine construction and access to water. Training of teachers enabled them to spread knowledge among their pupils on the importance of clean faces and good hygiene. The pupils replicated the good practice at their homes, thereby expanding learning to the larger community. Information, education and communication (IEC) materials such as murals, leaflets, posters and manuals distributed in the 12 trachoma-endemic counties and the counties that are endemic with STH, LF and schistosomiasis helped to raise awareness.

The other NTDs have specific messages that encourage members of the community and institutions to complete their drugs for LF, STH and schistosomiasis, for instance, sleeping under the nets, spraying houses with insecticides and screening of houses (Annex 10: WASH and NTD-related social and behaviour change interventions).

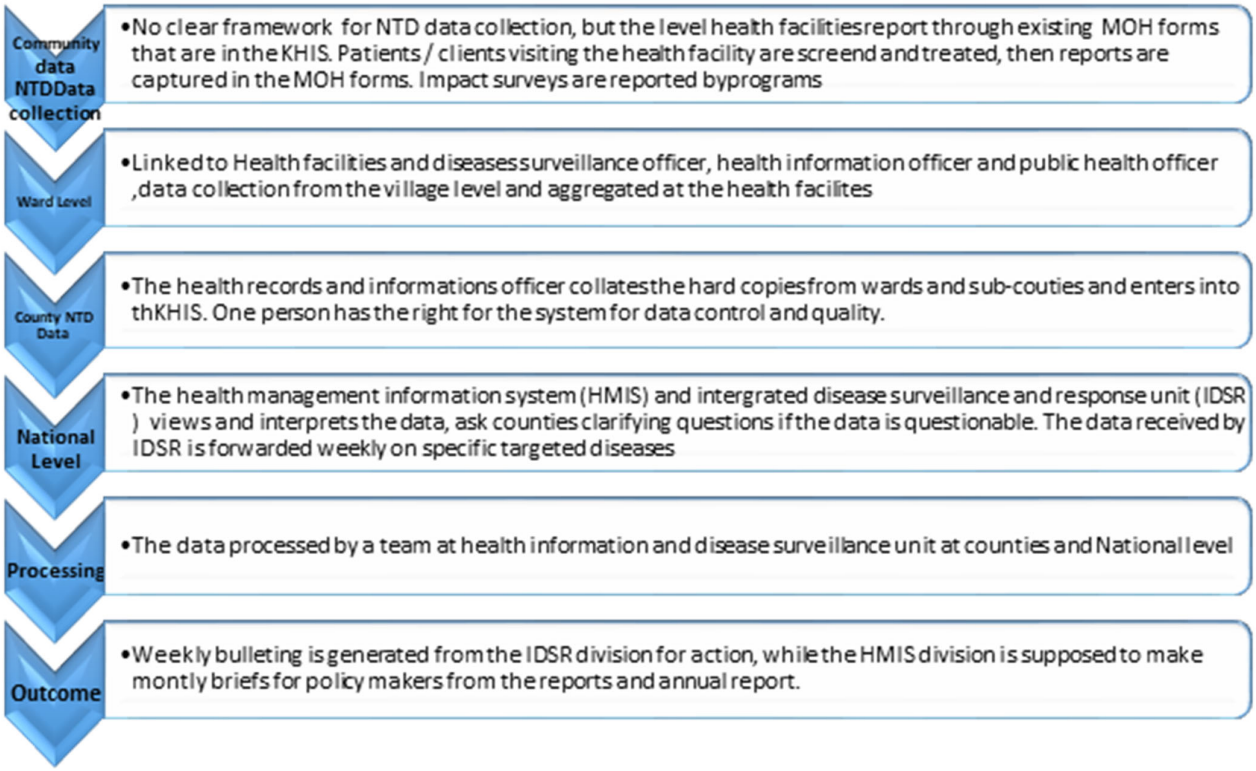
3.8 MDA interventions for NTDs

In Kenya, mass drug administration is carried out to control soil-transmitted helminths and schistosomiasis among school-going children, LF and trachoma in the endemic counties. The Ministry of Health and Ministry of Education with support of partners carry out this exercise in the devolved counties.

3.9 NTD data collection within health system of Kenya

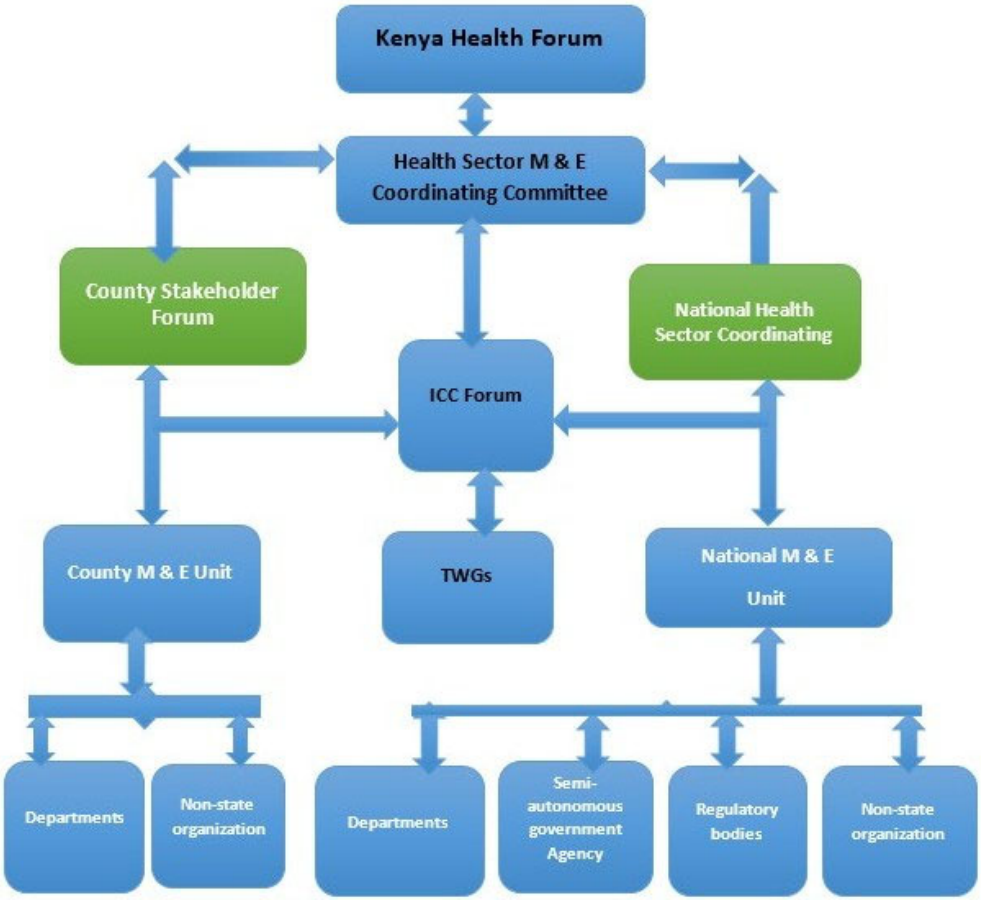
The national NTD programme is still developing an M&E framework that is expected to be formalised in the financial year 2018/2019. Currently they are working with health management information system (HMIS) and integrated disease surveillance and response unit (IDSR) to ensure that NTD data is reported through their systems. Below is the illustration of how the data flows in the formal Ministry of Health structure.

Figure 31: NTD data flow in the country



The mapping data, baseline survey and impact data for NTDs is domiciled in the respective units and divisions coordinating the programmes. The information is shared with other partners to inform of a report for the specific programme. This data may not be in the online Kenya Health Information System. This is a gap that needs to be addressed. For example, the NTD Unit is in a department of prevention and promotion, while the ophthalmic service that coordinates trachoma is in the division of clinical services. The NTD coordination is fragmented in different units within the Ministry of Health. This affects coordinating of reporting and actions required.

Figure 32: NTDs information data flow diagram – national and county data flow organogram[45]



3.10 National-level health information monitoring

Monitoring and reporting in Kenya is anchored in the Constitution. Articles 10 and 201 emphasise transparency, accountability and public participation in all activities within the community.[46] The M&E units of government departments and units including WASH and NTDs, semi-autonomous government agencies (SAGAS) report to the national M & E unit, which reports to the health information and research interagency coordinating committee (ICC) and the national health sector coordination committee (HSCC). The National HSCC comprises Ministry of Health, civil society organisations through the health NGOs network (HeNNET), and development partners for health in Kenya, the Kenya private sector alliance, professional associations and county health department.

Many parallel data collection systems exist in the ministry whereby data for the health sector is held in different databases such as community-led total sanitation (CLTS), Kenya Health Information System (KHIS, i.e. DHIS2), integrated disease surveillance and response information systems (IDSR), community health information systems. This

creates a situation where there are overlapping, redundant resources and time wastage in data collection and management.

There is weak reporting from non-state facilities (NGO/faith-based organisations (FBOs) and private sector). Irregular updating/changing of indicators by programmes, leading to varying capacities for data collection. Many partners supporting generation of routine health management information systems are not well-coordinated, leading to duplication of efforts (e.g. purchases of hardware and training).

Health information sub-systems

A health information system can be considered to consist of several separate sub-systems:

- Disease surveillance and outbreak notification
- Data generated through household surveys (NTDs mapping and impact surveys)
- Registration of vital events and censuses (births, deaths and causes of death)
- Data collection based on patient and service records and reporting from community health workers, health workers and health facilities
- Programme-specific monitoring and evaluation (for example for NTDs, WASH, malaria, TB, HIV/Aids, and EPI)
- Administration and resource management (including finance/budget, personnel, and supplies).

Data flow

- National level acknowledges the receipt of the county health online reports through a written feedback to counties
- Consolidate the national quarterly performance reports
- Critically analyses data bearing in mind different users at national level
- Share the progress report with the heads of the programmes
- Share the improvements with the other stakeholders
- Give the top management at the ministry quarterly performance feedback
- Using the information to complete the performance contract for cabinet secretary, principal secretary, director-general and heads of departments.

Routine data from the health facilities captures some of the NTDs as: eye infections, intestinal worms and bilharzia. The programmatic data (environmental health, trachoma, TB/leprosy, NTDs) are reported directly to the programme officers at sub-county, county and national levels. The national coordinator compiles the reports and forwards to the top management at the ministry, after sharing the information during the ICCs and health sector forums.

The principal secretary forwards validated data to the regional and global bodies depending on the existing memorandum of understanding. An example is the NTD mapping and WASH survey data, forwarded to WHO (ESPEN, GLAAS-global analysis and assessment of water and sanitation). The water sector regional commitments data are

submitted to regional AMCOW secretariat, while sanitation and water for all (SWA) commitments are forwarded to SWA secretariat.

3.11 County-level reporting structure

At the county level, there is a similar reporting structure like the national level. All departments and directorates responsible for WASH and NTDs and non-state actors report to the county M&E unit. The unit reports to the health information county ICC and the county stakeholders' forum.

Indicators: The indicators monitored for NTDs are broadly divided into drug coverage and impact indicators. Impact indicators are carried out through surveys, while drug coverage is obtained through mass drug distribution campaign reports. The following represent trachoma indicators: (1) number of endemic counties implementing mass drugs administration, (2) number of treated cases in all endemic counties, (3) WASH interventions in the endemic counties, (4) number of trichiasis surgeries in endemic counties (5) reduction of transmission cases in the endemic counties (i.e. rates of TF). For detailed NTDs indicators in Kenya, see Annex 20: NTD indicators in the Breaking Transmission Strategy.

Frequency of data collection: Daily from the referral facilities in the county and monthly data collation from sub-counties.

Data collectors: Doctors, nurses, public health officers, laboratory technicians, and other health workers in the county collect the data at the health facilities and field reports for a particular programme are implemented at the county level.

Data storage: Hard-copy summary sheets from sub-counties are kept by the county health information officer (records officer) after validating the sub-counties data online.

Data transfer: Data is transferred online to national level except program specific indicators that are forwarded through program coordinators.

Data flow: Counties collect and collate sub-county summary reports and compare with the data fed online.

- Using the checklist record, the reports are received and their receipt acknowledged. The county health information officer acknowledges the reports in writing
- Consolidate the sub-county summaries into a county report (second data repository).

Examples of the MOH NTD indicators captured in the DHIS2:

- Percentage of school children correctly dewormed at least once in the year

WASH Indicators in health sector – water sanitation indicators available in the Ministry of Health monitoring system are:

- Percentage of households with access to safe water and sanitation
- Open defecation and open defecation free Communities.

Vector management indicators:

- Percentage of households sprayed with insecticide residual spray (IRS)

Utilisation of data

- The analysed county summaries are shared with county health management teams and health stakeholders' forums at county levels
- The county health management utilises the report to make decisions at the county level and enhance supportive supervision
- The counties then extend support to the poor performing sub-counties.

3.12 Sub-county level

Sub-counties implement all programmes and planned activities in the health sector.

Frequency of data collection: daily from the health facilities in the sub-county. Reports from scheduled surveys and specific programme data is sent to the coordinators according to the protocol of the programmes.

Data collectors: Doctors, clinical officers, programme officers, nurses, public health officers, laboratory technicians and other health workers in the sub-county collect the data at the health facilities. The programme-specific reports and surveys are compiled by health records and information officers and forwarded to the county and national level through the DHIS2 online system.

Data storage: Hard-copy summary sheets are kept by the sub-county health information officer. The DHIS2 stores the online data for all levels.

Data transfer: Data is transferred online in all the levels except indicators for programme-specific that are not captured in the available systems.

Data flow: Sub-county is the focus (first data repository) of the sub-county health data.

- Collect, collate the entire summary reporting forms from all the available health service institutions in the sub-county
- Check all reports for errors, omissions, completeness, consistency (validate) and enter them in the health facility checklist
- The person receiving the report gives expressed (written) feedback summary note to all the reporting facility and remind those who have not reported
- Health records information officer compiles, processes and makes sub-county summary data sheets. The data is then uploaded into the DHIS2
- The sub-county medical officer of health or appointee then submits the sub-county summary to the county director for health services by 15th of the preceding month
- This will be reflected at national level on the same date.

Utilisation of data

- Sub-county critically analyses in-depth the facility data

- Sub-county health management discusses the important indicators in the sub-county health management teams meetings
- Discuss the improvements with the sub-county stakeholders in the sub-county Health Stakeholders Forum
- Share the performance summary monthly with all health facilities, and stakeholders in the sub-county
- In the sub-county meetings, program officers report progress and challenges of their programmes. These programmes include trachoma, LF, STH, schistosomiasis, TB/leprosy, HIV/Aids, environmental health, and malaria among others
- Using available reports, plan for integrated targeted supportive supervision to the health facilities/community units
- Reports are used to review and re-plan interventions that are not meeting the expected targets.

3.13 Health facility level

Frequency of data collection: daily from the health facilities at the county and monthly data collation from community units' register.

Data collectors: Doctors, nurses, public health officers, laboratory technicians and other health workers in the ward collect the data at the health facilities. Community health workers collect reports from the household within the catchment areas of the health facilities.

Data storage: Hard copies of tally sheets are kept by the health facilities and the original summary tally sheets are forwarded to the sub-county for analysis and onward transmission to counties. Community registers are kept at the health facilities.

Data transfer: Summarised tally sheets from health facilities are forwarded to sub-county headquarters through the mail or by a runner.

Data flow:

- Health workers records and maintain all the service registers at service delivery point
- Using tally sheets provided for other services, health care workers extract the information from the register every morning or before closing the previous day's business
- The health facility in charge submits all summaries including the community units' reports to the sub-county medical officer of health, by 5th of the preceding month
- The health facility compiles service delivery facility indicators and shares with the members of the facility management committee.

The facility management utilises their information for daily activities, running of the institution, annual facility planning to improve health services, request for supplies and monitoring of health services at the community and health facility level.

This includes programme reports being undertaken within the health facilities catchment area. For example, deworming exercises, trachoma or WASH interventions.

The health facility team (health workers, public health officers, clinical officers, nurses and health information officers) provides regular feedback to the community using organised *barazas*, community health dialogue days and other organised community meetings.

3.14 Community level

Data from the communities is collected through the prescribed registers (MOH 513, community health worker household register; MOH 514, community health workers service delivery log book; MOH 515, community health worker summary; and MOH 708, environmental health).

Frequency: Community health workers (CHWs) and community volunteers (CHVs) collect the data as they visit households on daily basis. Data validation and cleaning by public health technicians and nursing officers at the facilities are carried out weekly/monthly.

Data collector: The CHWs, CHVs and public health technicians are responsible for data collection from households at the community level. This involves completing all household information accurately, as required on the data collection forms, during the household visit in line with community strategy.[47]

Data storage: The data is stored in the health facilities in hard copies and community registers. CHWs update the board displayed in the community.

Data transfer: The data that has been summarised is submitted on a monthly basis to the sub-county.

Kenya Health Information System (DHIS2)

Kenya's health information System is a tool for collection, validation, analysis and presentation of aggregate and patient/client based statistical data. It is a generic tool, with an open metadata model and a flexible user interface that allows the user to design the contents of a specific information system without the need for programming. DHIS2 are developed by the Health Information Systems Programme as an open and globally distributed process. Kenya adopted DHIS2 software in 2010 to ensure that data is captured from level 1 facility through level 6. This system was adopted to analyse the performance of the ministry at national and county level faster and respond to disease outbreaks and events.

The divisions and units within Ministry of Health have other process monitoring systems for their programmes. The mandatory indicators are captured through the DHIS2.

3.15 Organisations/ministries carrying out NTD-related activities in Kenya

There are a number of partners and ministries that are involved in NTD-related activities in Kenya as stated in Annex 9: Organisations and/or ministries carrying out WASH activities in Kenya.

NTD sector programme partners

The following comprise programmes at the national Ministry of Health. National Programme to Eliminate Lymphatic Filariasis (NPELF); Kenya Trachoma Elimination Programme (KTEP); National School-Based Deworming Programme (NSBDP); Kenya Field Epidemiology and Laboratory Training Programme; National Tuberculosis, Leprosy and Lung Disease Programme; the Integrated Disease Surveillance and Response Unit (IDSRU), Zoonotic Diseases Unit (ZDU), Vector-borne Disease Control Unit, Malaria Control Unit (MCU), Neonatal Child and Adolescent Health Unit (NCAHU), Ophthalmic Services Unit (OSU), Health Promotion Unit; Community Health Unit; Division of National Public Health Laboratory Services; Division of Environmental Health, Division of Health Informatics Monitoring and Evaluation; the Kenya Medical Research Institute (KEMRI); Ministry of Education (MOE); Ministry of Agriculture, Livestock and Fisheries; Ministry of Environment and the Ministry of Water and Sanitation (MOWS); Kenya Medical Supplies Agency (KEMSA); and Kenya Pharmacy and Poisons Board.

Donors, CSOs, NGOs NTD partners

The Queen Elizabeth Diamond Jubilee Trust Fund, Sightsavers Kenya, Fred Hollows Foundation, Operation Eyesight, Christian Blind Mission, African Medical and Research Foundation (AMREF), Lions Club International Foundation, Turkana Eye Care Project (TECP)/Spanish Doctors Children's Investment Fund Foundation, The END Fund, Effect Hope, Deworm the World Initiative/Evidence Action, Helen Keller International (HKI), Medical Assistance Programmes (MAP) International, Operation Eye Universal, AMREF Health Africa are the major NTD partners in Kenya. For detailed list, please see Annex 9: Organisations and/or ministries carrying out WASH activities in Kenya.

4 Water supply, sanitation and hygiene

4.1 Water sector overview in Kenya

The Ministry of Water and Sanitation was established by the government's Executive Order No. 1 of 2018 (revised) issued in June 2018. Its mandate is the management and development of water resources, transboundary waters, water harvesting, storage and water services, and sanitation management.[48]

The Ministry of Water and Sanitation mandate is guided by key legal instruments and policies as provided by the Constitution of Kenya, Water Act 2016, Kenya Water Institute (KEWI) Act 2001, Legal Notice No. 252 of 2015, Agenda 2063, SDG 6, the Kenya Vision 2030, the Third Medium-Term Plan (MTP III) 2018-2022, Jubilee Manifesto and 'Big Four' Agenda plan. These legal instruments and policies emphasise the need for efficiency and better management in the utilisation of natural resources to enable the government achieve its strategic goals of economic growth, poverty reduction and social stability.

The ministry is committed to formulation of policies, legal and regulatory frameworks for promoting sustainability in water resources and transboundary water management, improvement of water and sanitation services while at the same time mitigating and adapting to the effects of land use and climate change. However, the ministry faces challenges in ensuring that it continues to increasingly support and contribute to the country's socio-economic development due to limited resources.

In Kenya, the Constitution recognises access to safe and sufficient water and reasonable standards of sanitation as a basic human right.[49] The Constitution has clearly stipulated functions of national and county government in the delivery of water and sanitation services. The constitutional provision firmly distributes the functions between the two levels of government: the national government is tasked with the management and protection of water resources, while the county government is tasked with the provision of water and sanitation services. County governments also manage implementation of the national policies on natural resources including soil and water conservation.

4.2 Water institutions in the Ministry of Water and Sanitation

In addition, the ministry provides policy guidance, capacity building, resource mobilisation, coordination and oversight for the following statutory institutions as defined in Organization of the Government, Executive Order No. 1 of 2018 issued in June 2018 by the presidency. Below are organisations that are focused on WASH.

Water Services Regulatory Board (WASREB) was established under the Water Act 2016 to regulate water and sewerage services provision, including issuing of licences, setting service standards and guidelines for tariff and prices.

Water Resources Authority was established under the Water Act 2016 to regulate the management and use of water resources including water allocation, source protection and conservation, water quality management and pollution control as well as collaboration on international waters. The Water Resources Authority is the successor of the Water Resources Management Authority.

The Water Sector Trust Fund was established under the Water Act 2016 to provide conditional and unconditional grants to counties, in addition to the Equalisation Fund and to assist in financing the development and management of water services in marginalised and underserved areas. This includes community-level initiatives for the sustainable management of water resources, development of water services in underserved rural areas, development of water services in the underserved poor urban areas, and research activities in the area of water resources management, water services, sewerage and sanitation. The Water Sector Trust Fund is the successor of Water Services Trust Fund under the Water Act 2002.

The Water Tribunal was established under the Water Act 2016 to hear and determine any dispute concerning water resources or water services. The Water Tribunal is the successor of the Water Appeals Board that was enacted under Water Act 2002.

The National Water Harvesting and Storage Authority (NWHSA) was established under the Water Act 2016 to undertake the development of national public water works for water resources storage and flood control on behalf of the national government, and maintain and manage national public water works infrastructure for water resources storage. The authority is the successor of National Water Conservation and Pipeline Corporation (NWCPC) under the Water Act 2002. The transition from NWCPC to NWHSA is still in progress.

Eight regional Water Services Boards were established under the Water Act 2002 to manage water and sewerage service provision in their respective areas of jurisdiction. The eight boards are: Tana, Athi, Tanathi, Lake Victoria South, Lake Victoria North, Rift Valley, Coast and Northern Water Services Boards. The boards will be transformed to Water Works Development Agencies in line with Water Act 2016, once the ongoing studies have been finalised and public consultation undertaken as per the Act.

Kenya Water Institute (KEWI): KEWI was transformed into a semi-autonomous institution in July 2002 through the Kenya Water Institute Act, 2001. KEWI provides training, research and consultancy services in the water and irrigation sector.

Regional Centre on Ground Water Resources Education, Training and Research (Legal Notice No.252 of 18 December 2015) works to build knowledge and information on ground water potential. The institution also undertakes training and research on ground water resources.

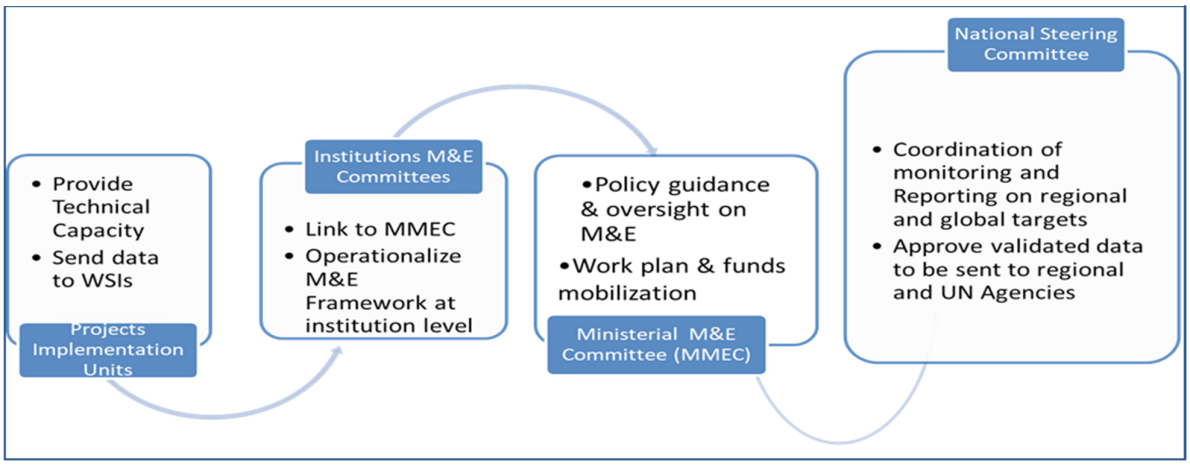
4.3 Key Ministry of Water and Sanitation development partners

The Ministry of Water and Sanitation has a resource mobilisation mechanism for marketing of project proposals on socio-economic development and investment opportunities for donor funding. This is done in collaboration with Kenya Investment Authority and other government agencies. The key development partners are: The World Bank, KfW, KIDDP, AfDB, GIZ, JICA, SIDA, BADEA, IFAD, and UNICEF.

4.4 Monitoring and evaluation

The M&E technical coordination structure includes monitoring committees at the national and institutional levels (i.e. WASREB, KEWI) with roles as outlined below.

Figure 33: Monitoring committees at the national and institutional levels



WSIs – Water services institutions
MMEC – Ministerial M&E committee

4.5 Coordination mechanisms

The Ministry of Water and Sanitation has an enabling environment for coordination that clarifies both the decision-making levels and dialogue platforms.

- Coordination and decision-making – through two organs: the inter-ministerial water coordination committee (IWCC) and National Water Sector Standing Committee (NWSSC)
- Dialogue reporting – through a notional consultative forum, the Annual Water Sector Conference and the water sector working groups.

Inter-Ministerial Water Coordination Committee (IWCC)

The members of the IWCC are the apex coordination structure and are formally appointed by the head of public service. They are the highest decision-making individuals in the water sector, tasked to provide policy guidelines for each water service sector, provide information to the cabinet, oversee development and implementations of strategic plans, provide briefing to the cabinet secretary and parliamentary committee, receive progress reports and proposals for decisions from National Water Sector Standing Committee (NWSSC), ensure budgetary allocation is coordinated and approve recommendations from sector.

National Water Sector Standing Committee (NWSSC)

The principal secretaries have busy schedules, therefore the NWSSC is established as the operational structure for the involved ministries. The members consist of focal persons representing the sector ministries, the chair of the development partners' water sector working group, and one representative each from the private sector and civil society. All five technical directors in the Ministry of Water and Sanitation are members. The NWSSC has a leeway to include additional members and form thematic working groups when required to address all-important water-related issues.

National Water Secretariat

The National Water Secretariat is an inter-ministerial secretariat comprising personnel drawn from water sector with the responsibility to manage the affairs of the sector on a day-to-day basis. Later, it included personnel from all sector ministries. Their mandate was to: coordinate information sharing and learning; prepare agenda, organise and take minutes of meetings; organise forums for dialogue and reporting; prepare papers for IWCC and NWSSC to coherently address issues and improve sector coordination, and help to establish working groups and facilitate their work. The membership of different units varied according to the adjustments in the number of ministries. This is where WESCOORD is housed.

Dialogue and reporting

The Ministry of Water and Sanitation uses the Annual Water Sector Conference as the highest consultative organ for the stakeholders in the water sector. The purpose of the forum is to: secure political will; give prominence to the water sector plans; review progress and challenges of implementation, achievement of objectives and impacts realised; provide a link between the stakeholders and implementing agencies; deliberate and advice on strategic interventions required in the sector. The participants include sector ministries, donors, civil society, water services providers, water industry associations, and chairperson of parliamentary committee, sector partners and private sector.

4.6 Roles of county government in the water sector

- Ensuring access to water and sanitation according to constitutional rights
- Managing catchment and protection by implementing water catchment activities at county level
- Protecting the interest of underserved consumers by enactment of regulations ensuring progressive achievement of the right to water
- Providing financial management through fiscal and investment planning. This is done through development of 5-year plans incorporating an investment and financing plan for the provision of water services
- Safeguarding integrity, good governance and performance in water supply service delivery
- Ring-fencing of income in the water sector and autonomy of management of water service providers. Counties can also participate in increasing mobilisation of efficient use of funds
- Ensuring and coordinating the participation of communities in governance
- Cooperating and coordinating with other counties to ensuring smooth inter-county sharing of water resources
- Contributing to research and development in the water sector.

4.7 Water sector financing

They are many actors involved in financing of water and sanitation services in Kenya. The main ones are the national government through its agencies including water boards, development partners, water service companies, households, NGOs and private sector. The amount of financing by households and private sector has not been established. The World Bank and African Development Bank are the main sources of loans. The sector also receives funding in terms of loans and grants from bilateral sources such as US government and the French government among others. Bilateral sources also provide funding in terms of grants to local and international NGOs supporting WASH services in the country. Funding from the national government comes mainly from taxes. Water service providers generate significant finances from the tariffs on water and sanitation services.

Water investment

The total budget expenditure of the ministry in the last five years is KES157.94 bn. The total recurrent budget expenditure is KES15.79 bn and development expenditure is KES142.15 bn, which represents 10% and 90% respectively of the total budget expenditure. The ministry total approved budget amounted to KES191.934 bn, which implies that the overall absorption capacity was 82%.[50]

Challenges faced in water sector

- Career progression and lack of resources/funding for skill enhancement
- Low investment in sewerage projects with too much focus on water projects

- High cost of land compensation and lengthy legal process for land compensation
- Inadequate funding of the planned programmes and projects
- Weak linkages between strategic planning and medium-term framework process
- Lack of a common pool of information for decision-making
- Sociocultural practices on use of water resources
- Lack of awareness on water resources management and land reclamation practices
- Weak enforcement of laws, policies, strategies and regulatory guidelines
- Delays in release of allocated funds.

WASH funding gap[51]

Table 11: WASH funding gap

	Required investment (KES bn)	Expenditure (KES bn)	Funding gap (KES bn)	Funding gap (% – based on KES)
2014-15	125	48.81	79.19	63
2015-16	133.65	45.28	88.37	66

4.8 Linkages of NTD to WASH

Water can have negative and positive connotations in the sense that, it can act as a source of infections or as a breeding ground for vectors. Adequate safe water supply is vital for hygiene and the avoidance of infection. Inadequate safe sanitation plays a key role in transmission of NTD like trachoma.

For control of trachoma, the SAFE strategy of facial cleanliness demonstrates the importance of access to adequate water supply, not only for drinking but also for washing. Water for personal and domestic hygiene has been found to be important in reducing rates of STHs like ascaris, schistosomiasis, LF morbidity management and trachoma.

Sanitation facilities decrease severity of hookworm infestations. Review of soil-transmitted helminths and schistosomiasis shows that, when sanitation improvements are made alongside deworming, the results obtained last longer.[52]

In some cases, vectors may increase in domestic water sources. This is particular for mosquito vector of dengue fever and LF. Water and sanitation is a key intermediary social determinant for NTDs.

NTDs and poor access to WASH circle of disease and poverty[53]

Figure 34: NTDs and WASH circle of disease poverty

4.9 National data

Kenya's Ministry of Water and Sanitation formulated a National Steering Committee to monitor and report on SDG 6 in 2017. The members are from the WASH sector ministries, development partners and civil society organisations. The main agenda of this committee is to collate national data and provide one report for the country.

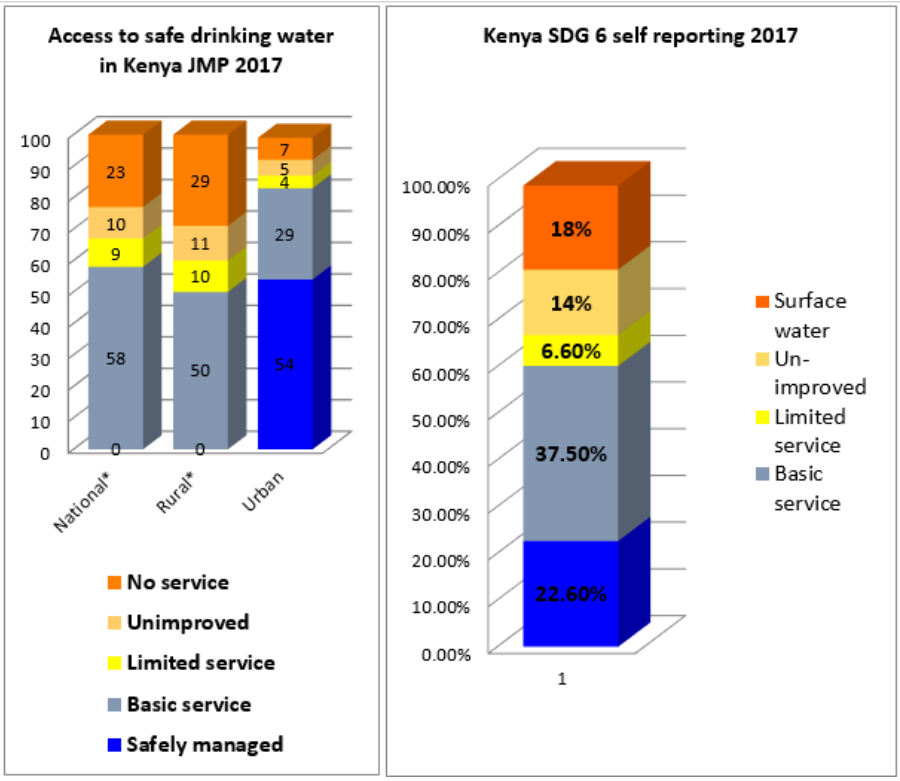
The formulation of the Kenya SDG 6 Pilot Report 2017 undertook an intensive, inclusive, consultative and participatory approach since it needed holistic situational assessment and reliable information and data as well as consensus building. The team utilised:

- Government annual progress reports
- CSOs Annual Water and Sanitation Performance Report by KEWASNET
- Kenya National Bureau of Statistics (KNBS) national accounts reports and survey findings

Based on the SDG 6 JMP data 2017 and national data, 58% of Kenyans can access basic water services. In the urban and rural areas, 50% and 29% can access basic service respectively. It is only in the urban area of Kenya that can report 54% safely managed water services.

The national data for Kenya approved by the National Steering Committee at the Ministry of Water and Sanitation in 2017 and forwarded to UN-Water is: safely managed water 22.6%, basic services 37.5%, limited 6.6%, unimproved 14%, and surface water 18%.[54]

Figure 35: Status of access to safe drinking water in Kenya



4.10 Sanitation services in Kenya

The Ministry of Health and national government develop sanitation and hygiene policies according to the presidential circular No. 1 of June 2018, while the Ministry of Water and Sanitation is tasked with management of water and sanitation in the country. The Ministry of Health, through the division of environmental health, is still responsible for sanitation and hygiene policy. After devolution, there were distinct functions for the national and county governments that are clearly stated in the Constitution. The national government was mandated to develop national policies that were to be domesticated by the county governments. Due to this requirement, the Ministry of Health developed and revised a number of policies, which included the Kenya Environmental Sanitation and Hygiene Policy of 2007.

The Kenya Environmental Sanitation and Hygiene (KESH) Policy 2016-2030, and the Kenya Environmental Sanitation and Hygiene Strategic Framework (KESSF) 2016-2020, provides broad guidelines to state and non-state actors at all levels towards universal access to improved sanitation leading to improved quality of life of the people of Kenya. Primarily, the KESH Policy aims to increase the proportion of the population with access to improved sanitation to 100% by 2030 and to ensure a clean, secure, healthy and sustainable living environment in Kenya as guaranteed under Article 43 of the Constitution.[55]

The strategic framework has been developed by the Ministry of Health through the division of environmental health, in collaboration with all the 47 county governments, several

government ministries and agencies as well as international stakeholders. This strategic framework puts in place key measures for sustained sanitation and hygiene service delivery in Kenya, including elimination of open defecation by 2020. The strategy focuses on the pursuit of sustainable development goal number six on ensuring availability and sustainable management of water and sanitation for all by 2030 while building on the progress and lessons learned from the Millennium Development Goals experience. KESSF provides the medium-term priority sanitation investments needed to achieve the goals of open defecation free Kenya, universal access to improved sanitation and a clean and healthy environment for all by 2030.

The organisational arrangement for KESSF implementation, coordination and management is premised on a public-private partnership model at national and county level. The organisational architecture takes into account the division of functions, powers and responsibilities between the national and county governments; between public and private sectors; and between state and non-state actors, communities, households and individual citizens. The implementation of KESSF will therefore adopt and use a combination of approaches including rights-based, multi-sectoral, public-private partnership, socially inclusive, consultative and participatory approaches to realise the objectives of the strategic framework.

The sanitation and hygiene policy has eight key broad intervention areas as follows:

- Scaling up access to improved rural and urban sanitation and hygiene
- Assuring clean and healthy environment free from public nuisances
- Fostering private sector participation and investment in sanitation
- Building governance and leadership capacity for sanitation
- Sustainable financing and investment for sanitation
- Building enabling legal and regulatory environment
- Establishing an effective research and development framework for sanitation
- Strengthening monitoring and evaluation systems for the sanitation sector.

Vision 2030 on sanitation and hygiene

On sanitation, the Kenya Vision 2030 stipulates that “every Kenyan should have access to clean, safe water and improved sanitation by the year 2030”. The goal is to ensure that water and sanitation is available and accessible to all by 2030. The Vision proposes the following sanitation strategies:

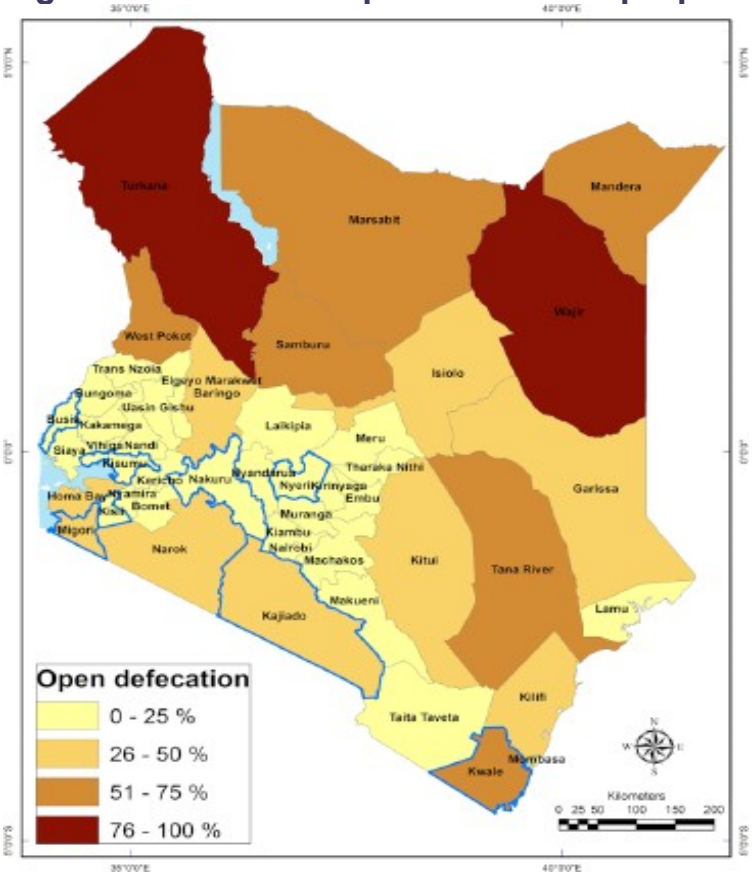
- Improvement and application of improved toilets and community sanitation
- Promotion of the use of hygienic toilets including ventilated and improved pit latrines and septic tanks in rural areas and schools on a ratio of one toilet for every 30 boys and one toilet for every 25 girls
- Constructing sanitation facilities to support a growing urban and industrial population
- Development and expansion of sewerage schemes especially in urban areas
- Promotion of public health education on sanitation
- Encouraging planned rural and informal urban settlements to ensure access to improved and safe sanitation

- Research and development
- Innovations in rural waste disposal combined with relevant incentives
- Encouraging transition from traditional pit latrines to (adoption of) improved sanitation technologies or versions
- Encouraging public-private partnerships in the development and management of sewerage systems, and promotion of solutions that can provide total hygienic sanitation that includes clean toilets, safe sludge removal and effective sludge treatment.

To achieve these strategies, the vision proposed the application of the right economic incentives and commissioning of public-private partnerships for improved efficiency in sanitation delivery.

The national open defecation rate at 2017 was about 12%,[56] which masks massive regional disparities. In some counties, open defecation remains the norm for more than 70% of the population, such as in the northern counties of Turkana (81.6%), Pokot (50.3%) and Samburu (62.8%). These are sparsely populated areas inhabited mainly by pastoralist communities. Even in counties with lower rates of open defecation, children's faeces are often not contained, due to parental perception that children may fall in latrines, and also the perception that children's faeces are harmless. Some adults also continue to routinely defecate in the open at night and during the rainy season.[57] The true rates of open defecation may therefore be higher.

Figure 36: Counties open defecation proportions

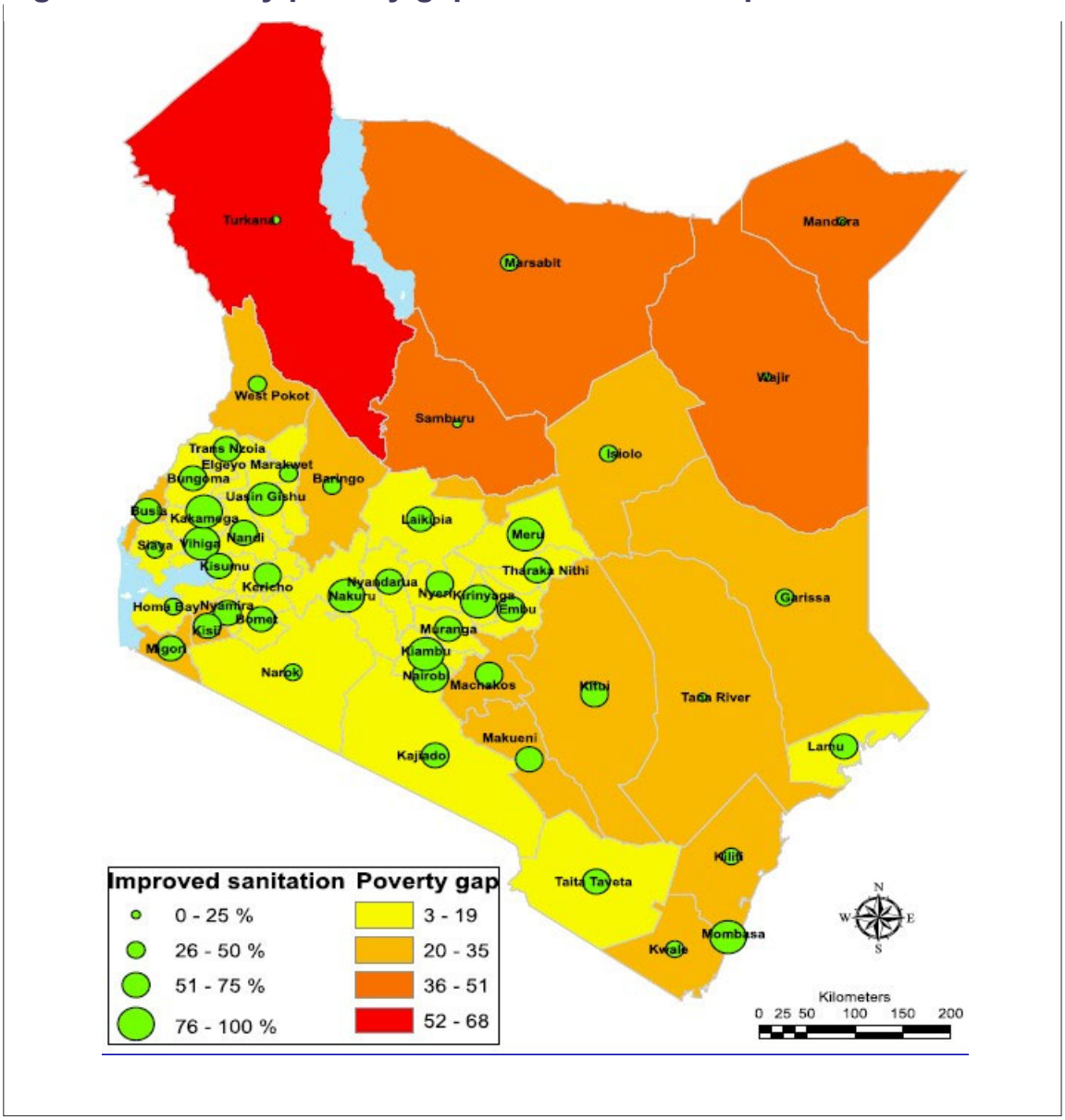


The counties that still have high defecation rates are among those affected with NTDs.

4.11 County poverty gap and access to improved sanitation

Poor sanitation is also overwhelming poverty related with more than 60% of the poorest wealth quintile practising open defecation compared to less than 1% in the wealthiest quintiles.[58]

Figure 37: County poverty gap and access to improved sanitation



4.12 Kenya sanitation investment

Despite the poor state of sanitation and its impact on the health status, economic and social wellbeing of the population, the level of investment in sanitation is very low. Kenya is estimated to allocate only 0.2% of GDP to sanitation, compared to the global target of

0.9% and Ngor Declaration commitment of at least 0.5% of GDP to sanitation and hygiene.[5].

The reasons why sanitation remains a low investment priority lies in institutional fragmentation, with different elements of the sanitation supply chain being in the hands of different players. This fragmentation has led to a lack of proper coordination of sanitation services and hindered a holistic approach to sanitation financing. The development of a sanitation and hygiene investment plan has also been a pending priority within Kenya's Country Priority Action Plan on Sanitation. Progress has been constrained by a lack of specific capacity in the sector. Thus, despite financial support and donor interest for sanitation in Kenya, sustainable financing remains a key bottleneck to accelerated progress.

4.13 Sanitation capacity of counties

In Kenya, staff shortages for sanitation undoubtedly exist; inadequate human resource planning and allocation within counties and sub-counties also creates inefficiencies. Rationalising and planning staff based on priorities and needs would maximise sanitation results with the limited capacity available.

Human capacity, in terms of staff numbers and skills, in 47 counties is not adequate to meet the needs on the ground. This situation may result in non-compliance with public health laws leading to poor sanitation services.

A reliance on classroom-based, and often development partner-funded, capacity-building approaches outside sector work plans has not kept pace with the need. When a large number of staff are to be trained, classroom-based trainings have a number of drawbacks; they are also slow to roll out, staff are being removed from their duty stations and it can be comparatively costly.[60]

Following a capacity mapping and planning in Kenya in 2014 conducted by Ministry of Health and Water Sanitation Programme of the World Bank, it was found out that: visualisation of capacity gaps and shortages in sanitation stimulates ideas; redistribution of staff can accelerate results and increase equity; and peer coaching, peer mentoring, and having a needs-based capacity development plan helps to mobilise resources for sanitation and helps in securing resources commitments.

4.14 Monitoring and evaluation of sanitation services

There are critical barriers to effective monitoring and evaluation at every level. Local capacity and incentives to carry out and report monitoring activities is inconsistent across counties; at national level, at the Ministry of Health, the analysis of collected WASH data is limited to CLTS online system of presenting rural sanitation. Urban sanitation is domiciled in the Ministry of Water and Sanitation. There is no linkage of the two systems of monitoring data to complete the feedback loop.

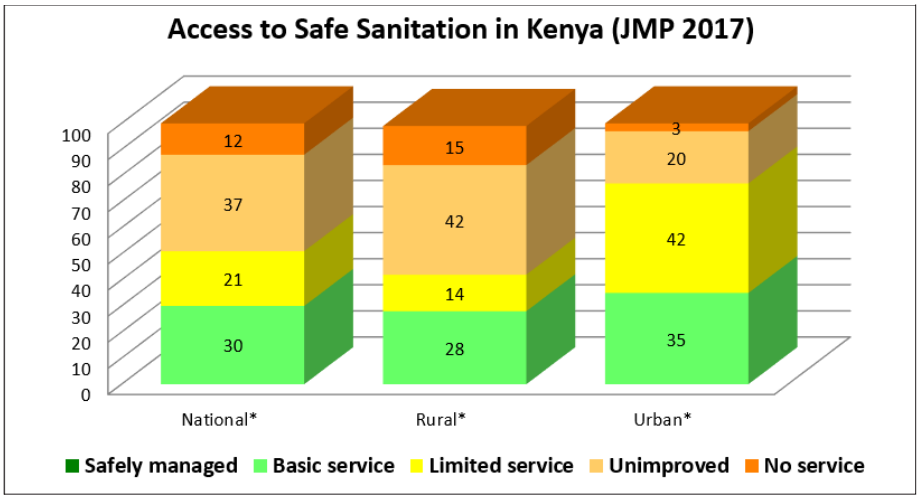
The CLTS online monitoring systems report on ending open defecation at rural level that can be accessed by counties and partners, but the urban sanitation is reported under the

Ministry of Water and Sanitation. The data for WASH in schools is dependent on surveys. These are the existing gaps that require attention from all sector ministries. For efficiency of reporting, there is need to have one system that captures rural and urban sanitation and institutional water sanitation and hygiene investment and access.

4.15 Sanitation investment

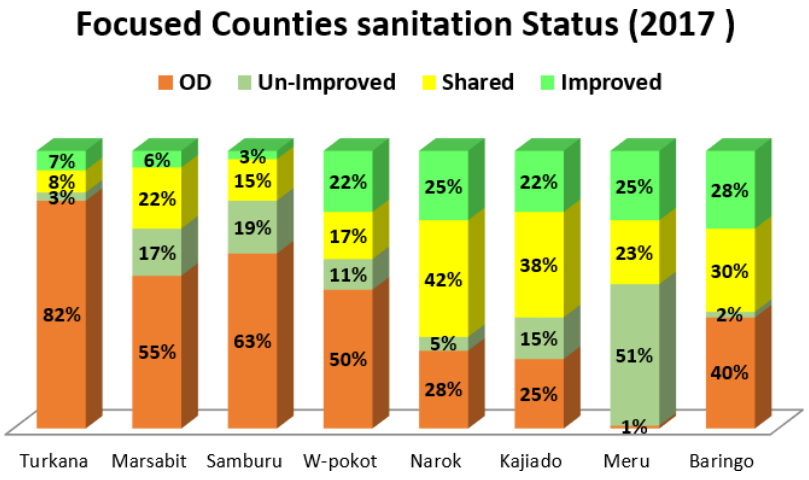
Sanitation is still a challenge in Kenya. It has not received enough attention in terms of investment as water service. The JMP data for 2017 reports that, 30% of Kenyans can access basic sanitation service while 12% still defecate in the open.

Figure 38: Status of sanitation access in Kenya



County sanitation

Figure 39: Sanitation status of NTD-endemic counties



The county sanitation progress is based on national policy documents (for instance Vision 2030) that recognises the Millennium Development Goal definitions of unimproved, shared and improved. The data represents estimates following a benchmarking exercise that was carried out by Ministry of Health WASHhub, UNICEF and The World Bank Water and Sanitation Programme. The above chart (Figure 25) clearly demonstrates the counties with high open defecation being Turkana County (82%) and the lowest being Meru (1%). This data will be crucial during the next phase of NTD programming. WASH interventions should target those sub-counties with high open defecations areas to reduce the prevalence of NTDs.

4.16 Sanitation and NTDs

In Kenya, sanitation access, just like water, is lagging. The government adopted the Community-Led Total Sanitation Policy in 2010. A road map to end open defecation that entailed working through partnerships and devolved government structures throughout rural Kenya to reach all the communities was launched. Therefore, it documented that sanitation has a close relationship with high prevalence of NTDs. On the other hand, interventions and increasing access to sanitation have effects on NTDs' endemicity and control as described in table 12:

Table 12:

Interventions and NTDs

Sanitation intervention	NTDs controlled
Reducing open defecation	STH, schistosomiasis, trachoma
Disposing of child faeces properly	STH, schistosomiasis, trachoma
Increasing improved sanitation coverage	STH, schistosomiasis, trachoma
Promoting maintenance and cleaning of latrines	STH, schistosomiasis, trachoma
Increasing access to clean water	STH, schistosomiasis, trachoma, LF

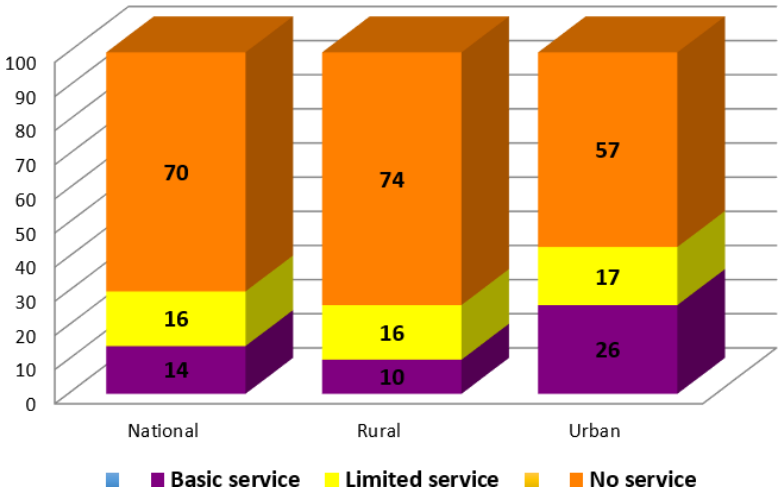
4.17 Hygiene practices

Kenya still has a challenge when it comes to hygiene practices. The JMP report of 2017 states that 70% of Kenyans have no hand washing facilities and therefore cannot practice hand washing at critical times. The figures are worse when it is disaggregated as rural (74%) and urban (70%).

The SMART survey of 2018[61] in West Pokot revealed that only 2.2% washed their hand in all the four critical times (after visiting the toilet, before eating, after changing babies' nappies and before cooking). Less than half of the caregivers (42.7%) used soap and water to wash their hands, while 38.2% used only water. The same study in Baringo, North Tiaty, revealed that hand washing at four critical times was 3.1%.

This is an area to focus in future programming. There is need to consider drivers that will change behaviours to ensure that the communities washes hands at critical times in the focused counties.

Figure 40: Status of hygiene practices in Kenya



4.18 PCNTD counties WASH data

Water, sanitation and hygiene services in PCNTD-endemic counties are still a challenge as stated in table 13 below. Improved water sources in most counties are below 50% except for some counties like Meru and Kajiado. Kajiado is exceptional because it affects Nairobi city in terms of development and water access. The same applies with sanitation and hygiene.[62]

Table 13: WASH status in trachoma-endemic counties

County	Date of data collection	Proportion with access to improved water	Proportion with access to improved sanitation	Proportion practising open defecation	Proportion of households with hand washing facilities (with soap and water)
Turkana	2017	39%	6.7%	81.6%	18%
Marsabit	2017	38%	12.9%	50.9%	14%
Samburu	2017	34%	3.0%	62.8%	7.0%
Meru	2017	59%	24.6%	51.5%	35%
Kajiado	2017	66%	21.7%	14.9%	30%
Narok	2017	20%	25.3%	27.9%	7.0%

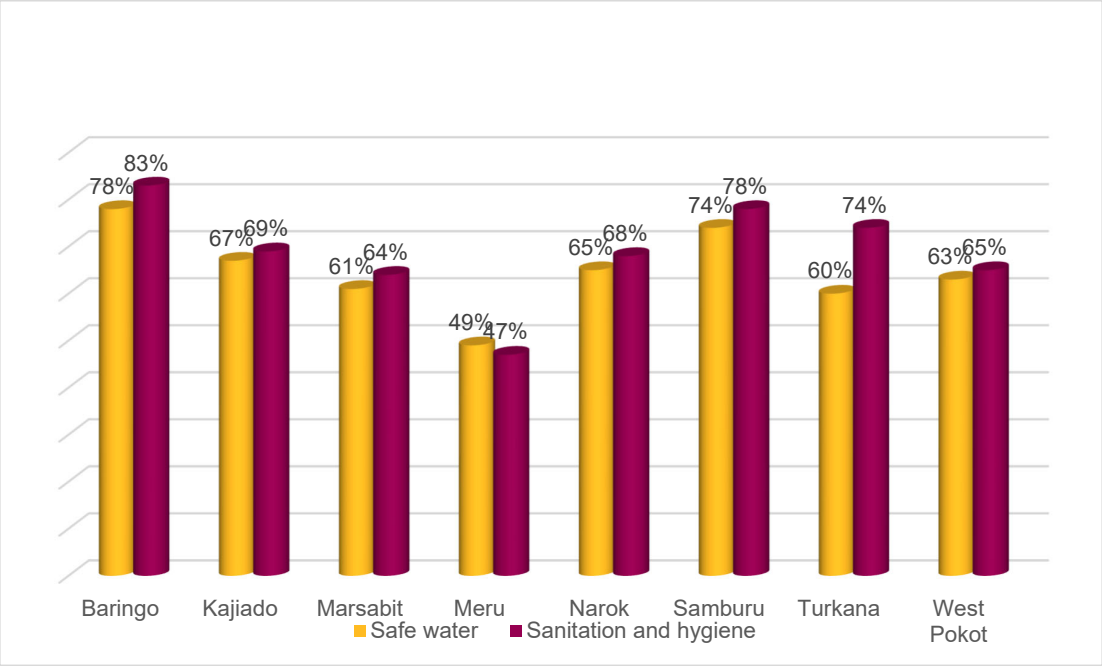
County	Date of data collection	Proportion with access to improved water	Proportion with access to improved sanitation	Proportion practising open defecation	Proportion of households with hand washing facilities (with soap and water)
West Pokot	2017	25%	22%	50.3%	3.0%
Baringo	2017	56%	28%	40%	7.0%

More data for endemic counties in Annex 13: WASH information for households in NTD-endemic counties.

Institutional health care facilities WASH data

Figure 20 demonstrates counties' institutional WASH data primary health care facilities in focused counties.[63] The majority (over 60%) of healthcare facilities in the endemic counties have access to water. However, about 40% of the health facilities do not have access to improved water.

Figure 41: Health facilities WASH access status in trachoma-endemic counties in Kenya



More data in Annex 14: Health facilities access to water and sanitation.

4.19 Kenya level of schools (primary, secondary) and WASH services within those schools

Table 14: WASH service levels in Kenyan schools

	No of toilets		Pupil/toilet ratio*		Proportion of target met		Comments
	Male	Female	Male	Female	Male	Female	
Primary schools							
Public	123,996	142,663	34:1	29:1	88%	86%	Not met target
Private	30,673	33,597	20:1	17:1	150%	147%	Meets the target and beyond
Secondary schools							
Public	51,041	57,256	22:1	18:1	136%	139%	Meets legal requirements
Private	4,883	7,256	15:1	11:1	199%	228%	Meets legal requirements

- As per the national standard of one cubicle for every 30 boys and one cubicle for every 25 girls (MOE, School Infrastructure Standards Manual 2010).

More data for school in endemic counties in Annex 15: Pupil to toilet ratio in NTD-endemic counties

4.20 Primary schools' latrine access in trachoma-endemic counties

Seven of the eight focus counties do not meet the legal requirements for provision of improved sanitary facilities in schools.

Table 15: Ratio of male and female access to improved sanitary facilities

Counties	Male ratios*	female ratios**
Turkana	109:1	74:1
Marsabit	41:1	31:1
Samburu	45:1	35:1
Meru	25:1	22:1

Counties	Male ratios*	female ratios**
Kajiado	37:1	32:1
Narok	43:1	35:1
West Pokot	54:1	33:1
Baringo	32:1	25:1

*As per the national standard of 1 cubicle for every 30 boys (MOE, School Infrastructure Standards Manual 2010).

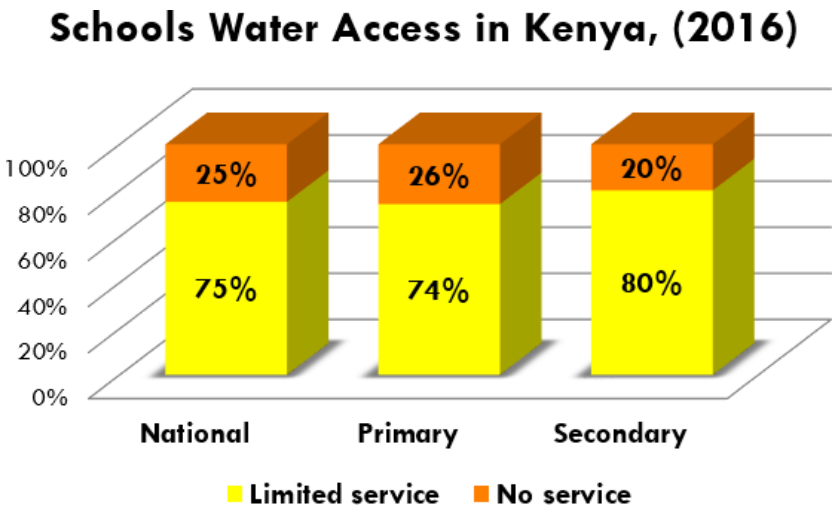
**As per the national standard of 1 cubicle for every 25 girls (MOE, School Infrastructure Standards Manual 2010).

More data on NTD-endemic counties in Annex 15: Pupils toilet ratio in NTD-endemic counties.

4.21 Water access in Kenyan schools

In Kenya, about 20% of students do not access safe water within their schools.

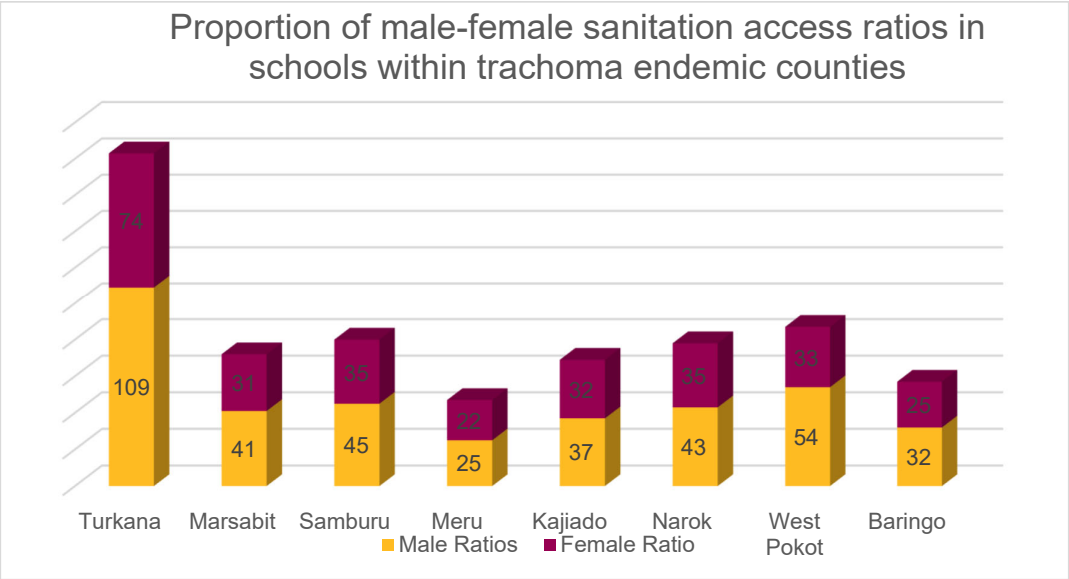
Figure 42: Schools' access to water in Kenya



4.22 Sanitation in focused county schools

The law requires that, one latrine should be used by 30 boys, and one latrine for 25 girls. The majority of the schools in the NTD-endemic counties have not met this requirement.

Figure 43: Schools' sanitation access in focused trachoma counties

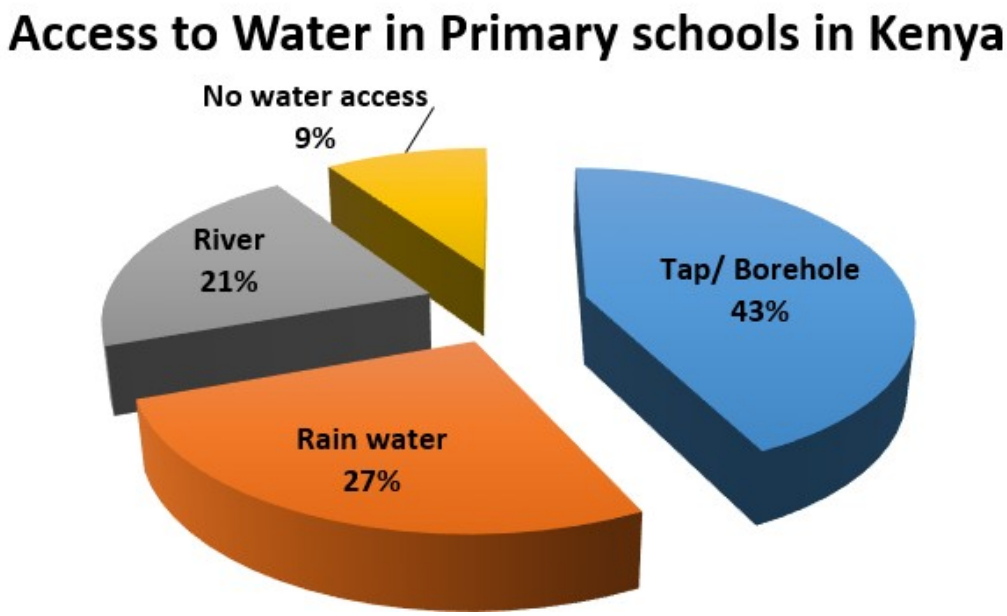


The numbers indicate how many pupils access one toilet.

4.23 Access to water in primary schools

Tap and borehole (improved access) recorded the largest share (42.8%), (79%) for public and private schools respectively.

Figure 44: Access to water in primary schools in Kenya



Note: The consultant was unable to obtain credible data for water access in schools in trachoma-endemic counties. The data used was national.

4.24 Current frameworks used to assess the performance of the WASH

Water, sanitation and hygiene progress is monitored in Kenya by varied frameworks based on the reporting requirement and commitments made by the country locally or internationally.

The National Steering Committee approves the use of administrative data from authorised public reports. The step-by-step methodologies and reporting templates developed by UN agencies formed the basis for data collection tools. The tools are then shared with stakeholders (targeting specific stakeholders based on goals, targets and their relevance to each stakeholder) with a deadline on submission. The review adopts the use of administrative data from the existing national reports.

There are eight performance-monitoring frameworks that the government reports to as indicated in table 16.

Table 16: WASH sector performance framework

Frameworks	Indicators	Components
SDG 6 Monitoring Framework – (MOWS)/MOH	SDG 6.1.1: Proportion of population using safely managed drinking water services, basic service, limited service, unimproved service, surface water (5 service levels)	SDG 6 Monitoring Framework – (MOWS)/MOH
	SDG 6.2.1: Proportion of population using safely managed sanitation services, including a hand washing facility with soap and water (service levels: safely managed, basic, limited, unimproved and open defecation)	Voluntary Reports to UN-Water on annual basis and African Union Secretariat (AMCOW). Sector stakeholders compile the report
	SDG 6.3.1: Proportion of wastewater safely treated	Voluntary Reports to UN-Water on annual basis. The report is compiled by sector stakeholders
	SDG 6.3.2: Proportion of water bodies with good, ambient water quality (SDG 6.4.1-6.6.1)	Voluntary Reports to UN-Water on annual basis and African Union Secretariat (AMCOW). The report is compiled by sector stakeholders

Frameworks	Indicators	Components
Framework for monitoring realisation of the rights to water and sanitation in Kenya (2017) – Human Rights Commission	SDG 6: Monitoring WASH using the following parameters; availability, accessibility, quality, affordability, acceptability, sustainability and enabling environment, governance/institutions, Information management and capacity	Annual reports to commission of human rights. The commission of human rights performs this assessment on an annual basis
DHIS2 & IDSR monitoring framework – MOH	NTD indicators, and other WASH-related indicators are captured	Weekly, monthly analysis, quarterly and annual reports
CLTS online monitoring – MOH	Rural sanitation: Ending open defecation	Monthly, quarterly and annually. Village data is analysed by PHOs and captured through online systems
GLAAS monitoring framework (WHO)	Solicits information on the delivery of drinking water supply, sanitation services, and the status of hygiene promotion activities. Focusing on four sections: Section A on governance; Section B on monitoring; Section C on human resources; Section D on finance	Every two years (country voluntary report) The process starts with inception meeting. Then desk review is carried out by looking at WASH data from all sectors. Validation meeting is held before forwarding to WHO
National Integrated Monitoring and Evaluation Systems (NIMES); County Integrated Monitoring and Evaluation Systems (CIMES)	Created to track the implementation of policies, programmes and projects during the economic recovery strategy period, which ended in 2007. The system has been used to track the medium-term plans of Kenya Vision 2030, the country's economic blueprint and SDGs	Annual reports. The ministry of devolution receives data from all ministries responsible for SDG. Counties report progress to the national level. The national level compiles and forwards Kenya's position on SDG and indicators to the UN
WARIS reporting framework in the Ministry of Water and Sanitation	Information used for performance analysis is collected through the WARIS	Water regulator (WASREB) request for data submission from water utilities and water services board. WASREB reviews the data and makes reports annually

4.25 WASH programme data strengths and gaps

Strengths

- Strong coordination of rural sanitation using CLTS methodology/sanitation marketing (ending open defecation) by Ministry of Health with an online reporting framework. This can be used by partners and other units in the ministries to inform their programmes
- Available data in the Ministry of Water and Sanitation and Ministry of Health can be used to inform other programmes, for instance the Impact Report in Ministry of Water
- The available framework for monitoring realisation of the rights to water and sanitation needs to be rolled out to all counties and WASH implementing partners
- The GLAAS survey tool is available at the national level. The same tool can be disseminated to counties
- AMCOW (WASSMO) online system at national level. This system can be disseminated to counties
- HMIS/DHIS2 online monitoring framework. NTD indicators will be revised (ongoing) and included in the system and disseminated to counties
- WARIS – online monitoring for water services providers with specific key performance indicators

Gaps

- Absence of some baseline data for some indicators in all counties i.e. hand washing with soap, WASH in health facilities
- Fragmented monitoring of WASH by different sectors and institutions
- Units and divisions in the Ministry of Health operate vertically
- NTD Unit has no reporting framework
- Counties are still weak in monitoring WASH indicators
- There is a gap in joint sector reviews. There is need to strengthen this type of review to harmonise the fragmented data sources and have one common position as a country. The only available joint sector review is in the Ministry of Water and Sanitation (Annual Water Sector Review)
- Inadequate capacity on the SDG 6 implementation

4.26 Community-led total sanitation

Community-led total sanitation was introduced in Kenya by the NGO Plan Kenya in May 2007.[64] One village, Jaribuni in Kilifi County, was certified as open defecation free (ODF) in November 2007 following which Plan were able to achieve another 50 open defecation free villages. The interpretation generated interest with the (then) Ministry of Public Health and Sanitation, which rolled out a campaign following the lessons from Plan Kenya.

In 2010, the Ministry of Public Health and Sanitation in partnership with UNICEF and SNV, embarked on a pilot in six districts (now counties) in Nyanza and Western Kenya. Within a

period of one year, this initiative registered over 1,000 villages (571,231 people) attaining ODF status.

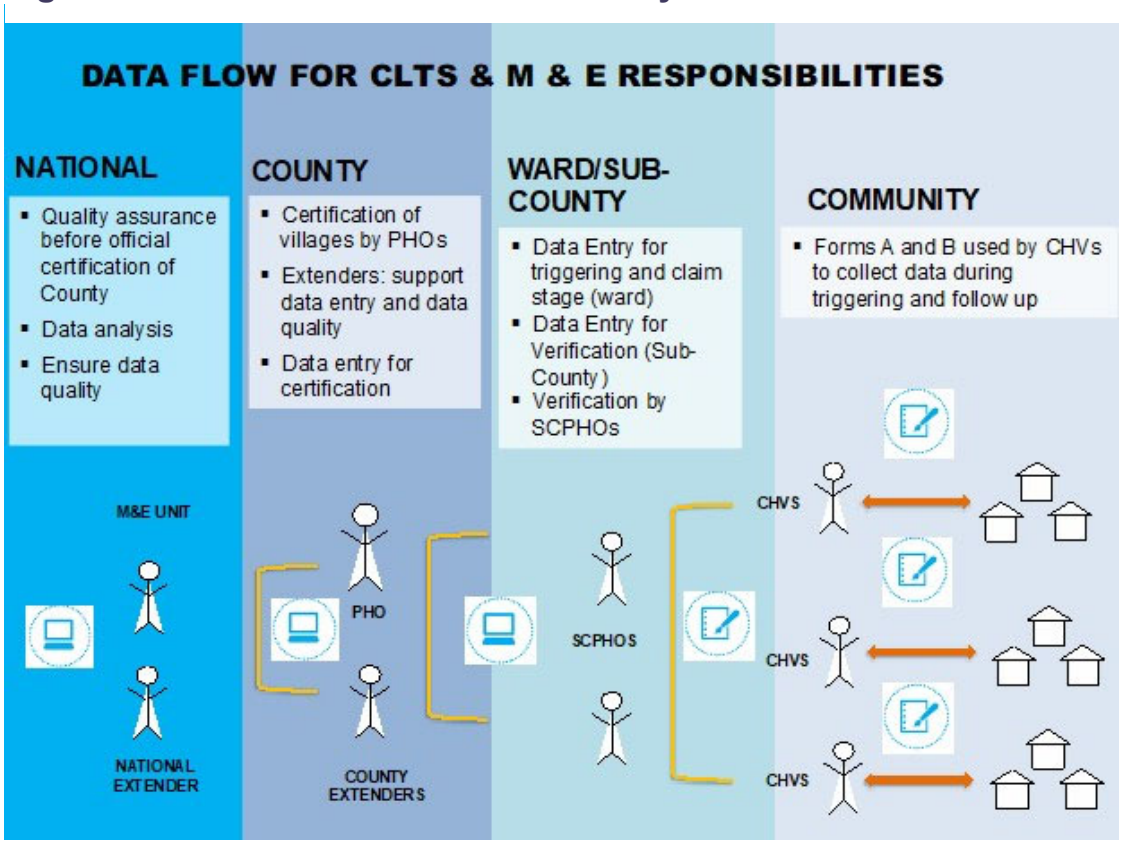
From the lessons learned during the above pilots, Kenya launched a national open defecation free campaign in 2013. The road map entails working with partnerships and devolved government structures to reach the communities and ensure that they are ODF.

Kenya has over 73,971 villages mapped and 13,315 certified villages as at March 2019, with Busia, Kitui, declared ODF counties. Two other counties – Siaya and Isiolo – are working hard to be declared ODF soon.

CLTS – data entry and flow

Data is entered at the village level after triggering by community health workers (CHW) and community health volunteers (CHV) in hard copies (Form A and B), which captured information of the household triggered. The forms are forwarded to the Public Health Technician (PHT) at the location, and public health officer (PHO) ward or division who enters the data real time into a mobile phone or computer for onward transmission. The data captures rural sanitation acceleration of ending open defecation. The next level is to capture post-ODF indicators which focuses on sanitation facilities improvement in line with SDG 6.2 indicators leading towards climbing up the sanitation ladder of basic and safely managed sanitation services. The post-ODF indicators are linked to the main MOH DHIS2 monitoring tool. The online system is hosted in the Ministry of Health with support from UNICEF.

Figure 45: CLTS data flow in the country



How CLTS monitoring is being used

The Community-Led Total Sanitation online system (CLTS WASHhub) is managed by Ministry of Health with support from UNICEF. It is anticipated that, for sustainability, the Ministry of Health will take over and support the running of the system.

Secondly, the system monitors progress on implementation of activity, partnerships for CLTS implementation, lobbying and advocacy for policy influencing, mobilising budgetary and operational support for CLTS implementation and enhancing mutual accountability among WASH stakeholders.

The partners in the counties implementing sanitation and hygiene activities are mapped by the county team and included in the system. Once the partner has been included in the online system, all stakeholders can follow progress of programme implementation.

4.27 Organisations and/or ministries carrying out WASH activities in the focus and other counties in Kenya

There are a number of partners working in the NTD focus and other counties. Below are some of the partners working on water and sanitation. The full list is in Annex 7: Organisations and/or ministries carrying out NTD-related activities in Kenya.

Detailed understanding of who are working in the WASH sector is important in the next phase of NTD WASH programming. To reduce duplication of WASH activities in the same county or sub-county, there is need to know who is working where in order to work together as a team and synergise. The Ministry of Health strategic objective number six has embraced partnership and collaboration.

For example, NGOs working in Turkana implementing WASH and Health activities include: World Vision, SSI, OEU, Caritas Lodwar, community health partners, Feed the Children, AMREF, Food for the Hungry, UNICEF, World Vision, Oxfam GB, Medical Relief International (MERLIN), International Rescue Committee (IRC), Lutheran World Federation (LWF) & United Nations High Commissioner for Refugees (UNHCR). In Marsabit, they include UNICEF, Kenya Red Cross Society, Caritas, and Welthungerhilfe, Catholic Diocese of Marsabit, and Children Investment Fund Foundation among others.

WASH partners in Samburu include: ACTED, World Vision, Compassion, SAIDIA, Childfund, AMREF, FADV, Catholic Relief Services, SNV, IMPACT, BOMA, NRT Plus and Feed the Children and Fred Hollows Foundation. International non-governmental organisations include World Food Programme, FAO and UNICEF.

4.28 Current WASH interventions

Different partners and ministries implement WASH interventions in Kenya. The Ministry of Water and Sanitation is responsible for delivery of water access and sewerage systems in the country. Ministry of Health implements rural sanitation through partnerships at the county level. Institutional WASH in schools is a combined effort between the Ministry of Health and Ministry of Education with sector partners.

The following are WASH interventions currently being implemented. See full list in Annex 8 | WASH Activities in Kenya.

- Water access through the Water Trust Fund in the counties
- Community-led total sanitation with nutrition interventions
- Community-led total sanitation with trachoma interventions
- Drilling of boreholes in the community
- Provision of water tanks for roof harvesting
- Development of posters for hand wash messages and proper use of latrines
- Treatment of water at household level
- Promotion of latrine slabs and squat hole covers in the community

- Development evidence-based policy briefs for advocacy
- Sewerage connections in the urban and peri-urban areas.

4.29 Formative research on WASH and other KAP studies in Kenya's NTD-endemic counties

Formative research findings

Research

Water, Sanitation, Hygiene, and Soil-Transmitted Helminth Infection: A Systematic Review and Meta-Analysis; Eric C. Strunz, David G. Addiss, Meredith E. Stocks, Stephanie Ogden, Jürg Utzinger, Matthew C. Freeman

Published: 25 March 2014: https://doi. org/10.1371/journal.pmed.1001620.

Conclusion: WASH access and practices are generally associated with reduced odds of STH infection. Pooled estimates from all meta-analyses, except for two, indicated at least a 33% reduction in odds of infection associated with individual WASH practices or access. Although most WASH interventions for STH have focused on sanitation, access to water and hygiene also appear to significantly reduce odds of infection.

Findings

Use of treated water was associated with lower odds of STH infection (odds ratio [OR] 0.46, 95% CI 0.36–0.60). Piped water access was associated with lower odds of A. lumbricoides (OR 0.40, 95% CI 0.39–0.41) and T. trichiura infection (OR 0.57, 95% CI 0.45–0.72), but not any STH infection (OR 0.93, 95% CI 0.28–3.11). Access to sanitation was associated with decreased likelihood of infection with any STH (OR 0.66, 95% CI 0.57–0.76), T. trichiura (OR 0.61, 95% CI 0.50–0.74), and A. lumbricoides (OR 0.62, 95% CI 0.44–0.88), but not with hookworm infection (OR 0.80, 95% CI 0.61–1.06). Wearing shoes was associated with reduced odds of hookworm infection (OR 0.29, 95% CI 0.18–0.47) and infection with any STH (OR 0.30, 95% CI 0.11– 0.83). Hand washing, both before eating (OR 0.38, 95% CI 0.26–0.55) and after defecating (OR 0.45, 95% CI 0.35–0.58), was associated with lower odds of A. lumbricoides infection. Soap use or availability was significantly associated with lower infection with any STH (OR 0.53, 95% CI 0.29–0.98), as was hand washing after defecation (OR 0.47, 95% CI 0.24–0.90).

Lesson

Evidence exists on why county government should invest in WASH to control NTDs. Such evidence should be used during forums at counties for political support.

Research

The Causes and Impacts of Neglected Tropical and Zoonotic Diseases: Opportunities for Integrated Intervention Strategies: https://www.ncbi.nlm.nih.gov/books/ NBK62526/

Findings

Several NTDs are zoonoses – infections that can be transmitted between animal and human hosts. Such infections can be transmitted directly; others are transmitted indirectly either through food and water or by means of a vector.

NTDs and Zoonoses not only share features that allow them to persist in conditions of poverty, where they cluster and frequently overlap, but they also present common opportunities for effective, integrated, intervention and control strategies. Significant (though imperfect) control measures—including drugs and vaccines, improvements in water and sanitation, and vector control measures, employed singly or in combination—have been developed for most NTDs and NZDs (Hotez and Pecoul, 2010; Spiegel et al., 2010).

Lesson

There is need to invest in WASH interventions by counties and partners.

Research

Hand washing station formative research for rural Kenya, was conducted by Ministry of Health, Water Sanitation Program of The World Bank and International Finance Corporation in 2013

Findings

The formative research recommended that the hand wash design (Mrembo) must consider; user aspirations, sales channels, security, operations by foot or hand, product segment and soap making.

Lesson

Partners and government to consider funding this hand wash facility that may encourage more people to WASH their hands at the rural level.

Research

An in-depth market research, human centred design approach. MOH division of environmental health, The World Bank & International Finance Corporation carried out this study in in Nyanza, Central Kenya, Rift Valley and Eastern Kenya in 2013/201.

Findings

The results of this study revealed that, Kenyans would like to have a latrine slab that is cost effective and pocket friendly. Seal Africa produced low-cost slabs.

Lesson

Sanitation supply for low-cost slabs and squat holes is needed at the community level. This can be an income generating activity for CHVs.

Research

Determinants of Hand washing practices in Kenya: The role of media exposure, poverty and infrastructure, by Schmidt et al., 2009

Findings

Hand washing with soap was more often practiced after faecal contact (32%) than in connection with food handling (15%). In univariate and multivariate analysis, water access, level of education, media exposure and media ownership were associated with hand washing with soap.

Only households with very poor access to water and sanitation, and with the lowest levels of education and media exposure, washed their hands markedly less than the majority of the households.

Lessons

Hand washing is still a challenge. More effort to be put in place by counties and partners to scale up hand washing with soap

Research

A study on water treatment and hand washing practices in rural Kenyan health care facilities and households.

Findings

80.0% of HCFs had at least one functional hand washing station and 83.3% had at least one functional drinking water station.

Lessons

Health facilities are the places for treatment of NTDs. If we are still having 20% of health facilities without functional hand wash, how will they support the messages of hand washing if they are not practising at the facility level? Health facilities are centres for health education to the community.

Research

SMART surveys in Turkana, West Pokot, Narok, Kajiado, Baringo, Samburu and Marsabit counties in 2017-2018 by UNICEF, Ministry of Health and other partners for nutrition.

Findings

Hand washing facilities in the counties are inadequate and effective hand washing practice with soap and water was low in all the counties.

Lessons

If there is a gap of hand washing at facilities, what happens at the community level?

Research

Policy brief: Understanding pastoralists and their water, sanitation and hygiene needs. https://www.ircwash.org/sites/default/files/pastoralismintzdiscussion.pdf

Findings

Pastoralists, especially women and children, walk long distances to fetch water. During the dry season people walk 5-15 km away to get access to water. This limits the amount of water they can fetch per day. There are very few sources that are improved. In most cases cattle and human beings share the same source – dirty, muddy water from the dam/pond

Community members should suggest solutions to culturally sensitive issues of hygiene and sanitation that are acceptable to them – for example, in order to address the taboos surrounding menstrual hygiene, it could more viable to pilot low-cost solutions for menstrual hygiene management such as putting a bucket in a latrine.

Further research

Develop water supply, sanitation and hygiene solutions that are in harmony with nomadic lifestyle.

5 NTD and WASH coordination information

5.1 WASH, NTD coordination at national and county levels

Background

A health sector coordinating framework was revised and adopted by all stakeholders during the implementation of the first National Health Strategic Plan (NHSSP 1).[65] The framework consisted of the following: the Joint Interagency Coordinating Committee; Global Initiative Committee; Interagency Coordinating Committee (ICC); and the district (now county) Health Stakeholder Committee (DHSF).

The Ministry of Health established a service delivery ICC for coordination of water, sanitation and hygiene activities and other programmes in the country. Its major functions are to:

- Support management of key action points as identified by the stakeholders
- Facilitate formation of working groups or task forces as required to address key issues and tasks
- To coordinate with and oversee work of appointed working groups and task forces.

5.2 Interagency coordinating committees in the health sector

Role

Provide a forum for coordination of specific investments in the sector. These ICCs are:

- Support systems ICC: For coordination of investments in support systems of human resource for health, infrastructure, commodity and supply management, and procurement and financing
- Service delivery ICC: For coordination of investments in sector priority service delivery areas. These include child and adolescent health, maternal health, HIV, TB, malaria, and community strategy, environmental health ICCs.

Functions

- Support management of key action points as identified by the Health Sector Coordinating Committee (HSCC) steering committee

- Facilitate formation of working groups or task forces as required to address key issues and tasks
- Coordinate with and oversee work of appointed working groups and task forces.

Membership

Government of Kenya, represented by:

- Head of Department responsible for area of the ICC
- Representative of HSCC steering committee secretariat
- Heads of related divisions in the responsible department
- Technical advisers nominated by Government

Development partners, represented by:

- Partners supporting the areas of the ICC
- Technical advisers nominated by development partners (DPs)

Implementing partners, represented by:

- Partners supporting the areas of the ICC
- Technical advisers nominated by implementing partners

5.3 National environmental Sanitation and hygiene ICC (WASH)

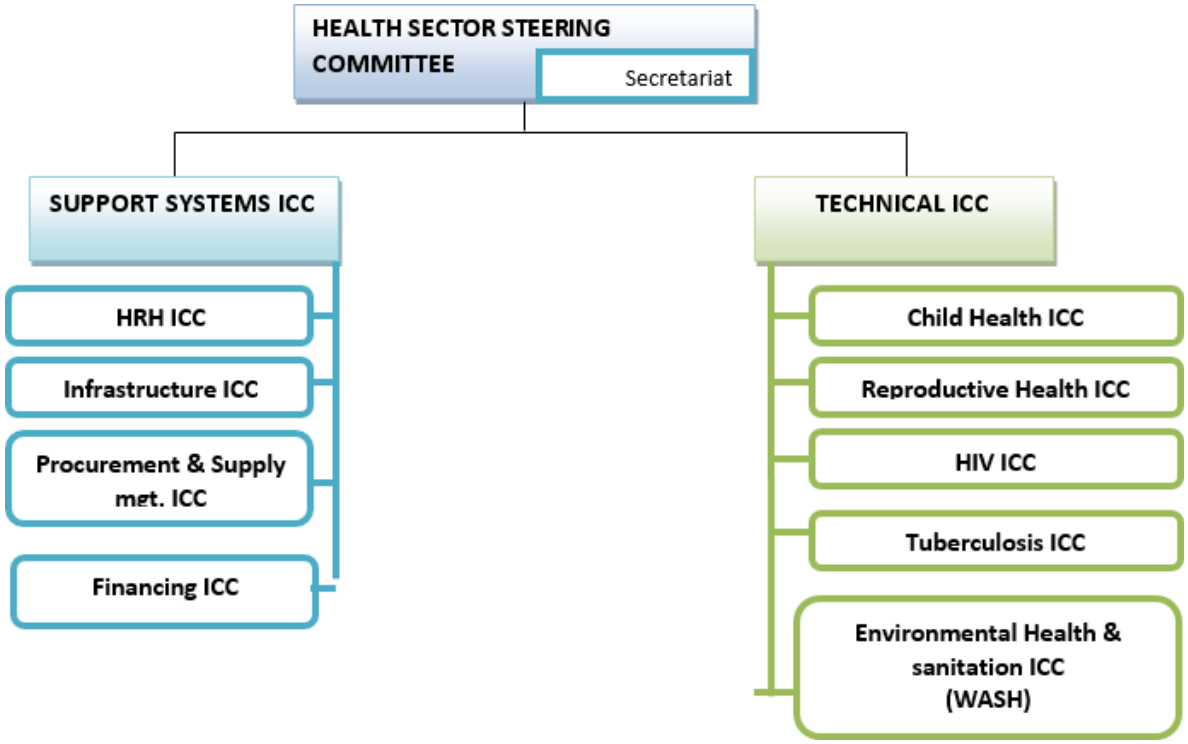
Objectives

- Support the realisation of the Constitution, social pillar of the Kenya's Vision 2030 and SDG 6
- Provide an important and visible platform for debate, advocacy, continued fundraising, and inclusion of new partners for the development of the sector
- Advise the Ministry of Health on the required policies, guidelines and standards required to promote efficient service delivery and enabling environment
- Enrich plans and activities through the active exchange of information and experience
- Make use of the forum meeting for advocacy, communications activities and social mobilisation at national and global levels
- Provide a forum for dissemination of good practice and experience
- Provide a consultation mechanism to mobilise resources for environmental health and sanitation activities at national and county level
- To discuss how the private sector can become a real driver of catalytic partnerships and innovative solutions for inclusive, sustainable development in key sectors

Functions

- Contribute to the development of environmental health and sanitation national annual work plans
- Provide an avenue for consultation and information sharing, joint planning and review
- Oversee the implementation of the KESH Policy, KESSF and the National ODF 2020 Campaign Framework
- Advise the ministry on various environmental health- and sanitation-related issues
- Strengthen the ministry's capacity to streamline coordination and promote sector-wide participation of all actors
- Develop mechanisms to institutionalise lessons learned and integration of the same into existing programmes
- To showcase stories presented by the sector players where successful sector ventures and public-private partnerships have been created which have meaningfully contributed to achieving inclusive growth of the sector
- Promote dialogue on environmental health and sanitation issues, between policymakers, specialised development and financial institutions, civil societies, private sectors, researchers, and professional organisations. (Annex 21: Key WASH partners – Environmental Sanitation and Hygiene national active ICC participants).

Figure 46: Technical coordination framework for national level



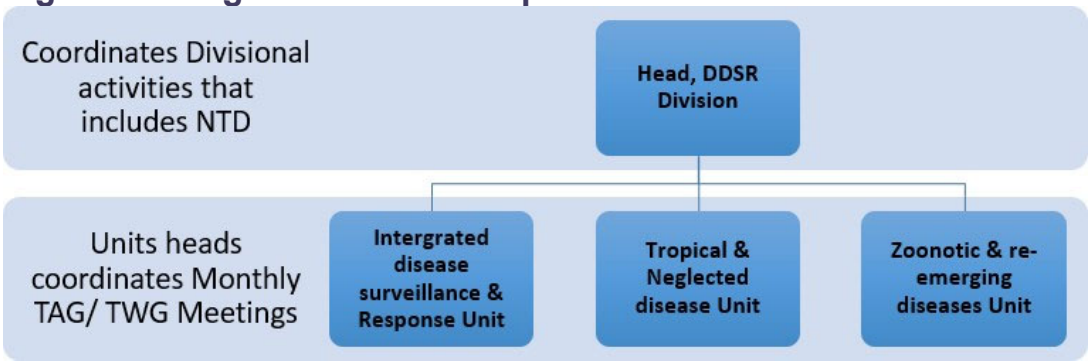
5.4 Organisational set-up for NTD programme coordination

The NTD programme comes under the Division of Disease Surveillance and Epidemic Response of the MOH. Its mandate, among others, is to advocate to the higher-level government officials and other partners for resources for NTD control as well as to guide the implementation of the various control activities. An ICC was launched in June 2014, which is chaired by the director of medical services (now director-general). In addition, there is an existing technical working group with clear terms of reference. The NTD programme ICC meets monthly for planning and review of progress.

The NTD Unit workforce comprises of the following positions and personnel: The head of the NTD programme, one pharmacist, four scientists, one M&E officer, one laboratory technologist, one health promotion officer, an accountant, an administrator, a WASH coordinator and support staff.

The head of the NTD Unit oversees the running and management of the day-to-day activities of the programme and provides guidance to the office of the Division of Disease Surveillance and Epidemic Response concerning NTD planning and management. The head doubles up in providing a link between the MOH, donors, partners and NGOs.

Figure 47: Organisational set-up for NTD coordination



Planning of activities

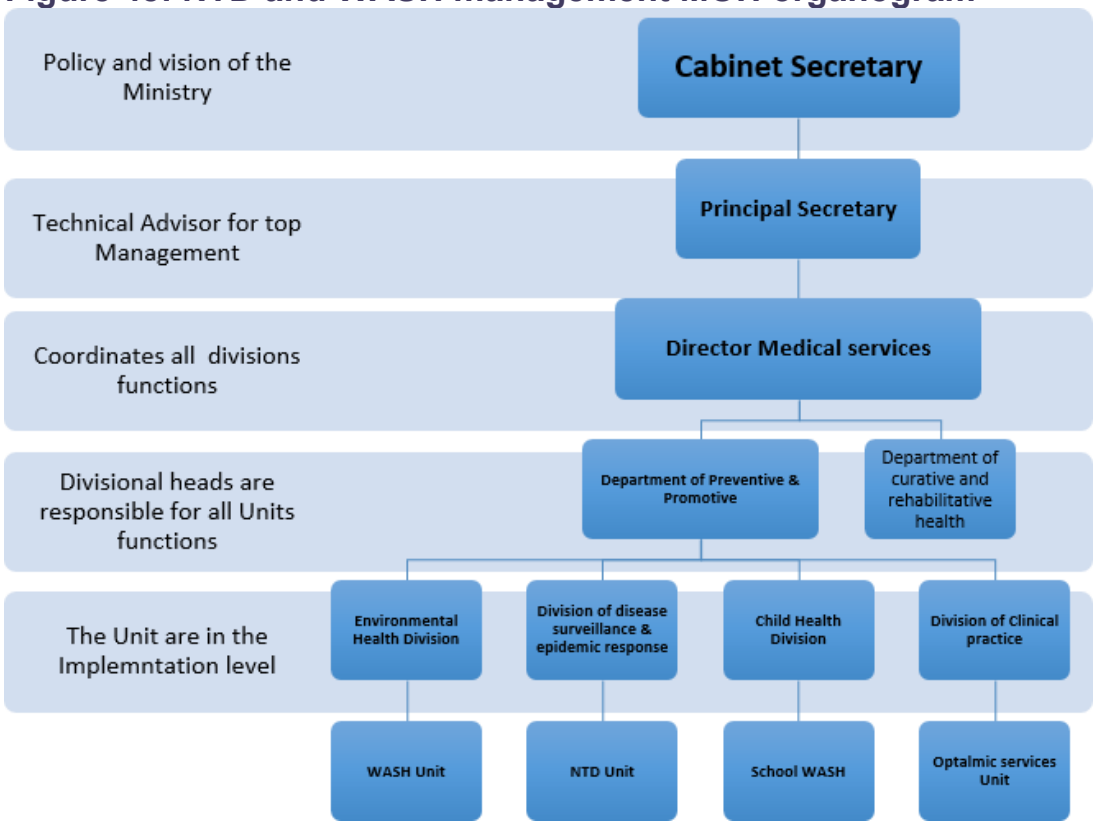
On the basis of the outlined activities, an Annual Operational Plan (AOP), extracted from the activities earmarked in the Strategic Plan 2016-2020, is prepared. The AOP covers the financial year, which runs from July to June of the following year.

Financing

The budgeting process in the Ministry of Health follows programme-based guidelines from the national treasury. Budgets, based on the activities outlined in the Strategic Plan, are made on an annual basis with a quarterly breakdown. These budgets show required funds for programme implementation and also the source of funding (government and partners). The NTD programme staff in consultation with partners and donors prepares the budget. The plans of the unit are linked to overall ministerial medium-term framework.

5.5 NTD and WASH organogram

Figure 48: NTD and WASH management MOH organogram



Ophthalmic services coordination

An ophthalmic service unit is under the department of curative and rehabilitative health services, division of clinical practice as shown in the NTD WASH organogram in the Ministry of Health. This is the unit that coordinates the trachoma programme in the Ministry of Health.

Partnership

Ministry of Health strategic objective number six embraces partnership and collaboration. NTDs and trachoma partners support the Ministry of Health objectives. They specifically support the provision of medicines, training and capacity building of staff, BCC materials and implementation of interventions.

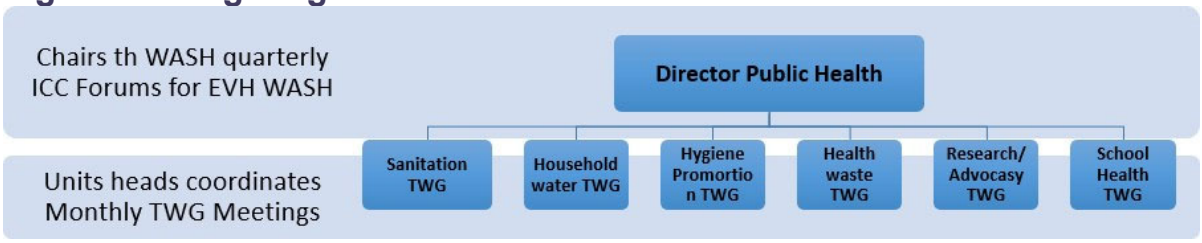
5.6 WASH coordination at the Ministry of Health

National level

The Ministry of Water and Sanitation is responsible for water access and sewerage systems policies and their coordination and implementation, while the Ministry of Health has a constitutional function of sanitation and hygiene policy development.

At the national level, the division of environmental health convenes quarterly at a WASH stakeholders' forum. The division has six technical working heads that meet every month to discuss technical policy issues. The WASHhub coordinates all the WASH activities and offers technical assistance to counties and partners. The NTD-specific coordinators are sometimes involved in the WASH forums.

Figure 49: Organogram for WASH coordination at national level



5.7 County level

The counties are independent and have their own structures for water and sanitation. Like the national level, the Ministry of Water and Sanitation coordinates water access activities, while the Ministry of Health coordinates the sanitation and hygiene in the rural areas. Some counties have established WASHhub at the county level to coordinate sanitation and hygiene; for example, Turkana County has a functional WASHhub.

Baringo county coordination mechanisms

In Baringo, an Annual Sector Development Strategic Plan Coordination mechanism exists for coordinating all departments and development partners within the county and linkage to the national government.

Baringo WASH

Water supply: Being an arid semi-arid (ASAL) county, Baringo has prioritised the provision of water for humans, livestock and for irrigation as a necessary requirement for the general development of the county. Water shortage is prevalent, especially around Lake Baringo and Lake Bogoria, parts of Kerio Valley, Mogotio, western slopes of Ng'elecha (Mochongoi) and the entire Tiaty (Kolloa to Tangulbei). This is caused by the low rainfall received and cyclic droughts. The surface water resources in the county are very scarce due to the unreliable and erratic rainfall,

with most of the flowing rivers being seasonal, with a few of these rivers such as Perkerra river, used for irrigated cropping. Water supplies are managed by the county through two newly formed companies (Kirandich and Chemususu) and the community.

In 2013-2017 period, the county reported interventions which included the construction of new and rehabilitation of 319 water supplies, construction of 145 pan/small dams, drilling and equipping 144 boreholes, expanding 19 small and large irrigation schemes and protecting 42 springs and catchment areas.

Urban sanitation: There is no sewerage plant in any of the towns and trading centres in the county.

Rural sanitation: Baringo County is still far in the CLTS ladder; only 1% of the villages have been triggered, with none claiming ODF certification. The county government promises to support rural sanitation and partner with relevant development agencies to promote sensitisation towards increased latrine coverage as well as mobilising resources for programmes geared towards CLTS and promotion of low-cost latrine construction technologies. CLTS coordination is under the remit of the county Ministry of Health.

Narok County coordination mechanisms

The county executive is charged with the mandate of providing leadership in the implementation of the county's development agenda through coordination and information sharing amongst the county entities to ensure that there is harmony and that development takes place in accordance with existing laws, policies, plans and programmes. Narok County established the departments of medical services, public health and sanitation, and research and development with a mission to promote and participate in the provision of integrated and high-quality preventive, promotive, curative and rehabilitative healthcare services to all.

Narok WASH

Water supply: Narok town is supplied by water from Narok's water supply system completed by Rift Valley Water Services Board. From the SMART survey 2018, only 25.8% of residents obtained their drinking water from safe sources (rain, borehole, spring and pipes). The rest (74.2%) obtained their water from drinking from sources whose safety can be compromised, hence the need for proper treatment before drinking. This is mirrored by the Society for International Development's report on exploring Kenya's inequalities[66] that puts access to improved water sources at 20% in Narok County.

West Pokot coordination mechanisms

There is no clear mechanism for coordinating sanitation or WASH activities in the county. The county acknowledges the need to establish a county development planning and coordination framework to bring together all development players at the county level in its County Integrated Development Plan 2018-2022.

West Pokot WASH

Water supply: Water sources in the county include streams, wells, boreholes, dams, roof catchment and piped water. Households with access to borehole, spring and well water stands at 26%, 25% and 28% respectively. There are also 8,563 households with access to piped water while 1,210 households have access to piped water into their dwellings. However, the majority of the households – 54,977 (59%) – still use rivers/streams as their source of water.[67] The main water supplies in the county are Makutano-Kapenguria, Tartar-Keringet, Karas, Kabichbich and Chepareria water supply systems and are largely gravity-propelled. These schemes are nonetheless inadequate to serve the general population of the county. From the county SMART survey 2017, only 33.1% of the household had access to safe water.

Sanitation:[68] The number of households with latrines stands at 30,449 representing 33% of the population. There are 156 households connected with septic tanks, 1,922 households with ventilated and improved pit latrines, 28,527 households using pit latrines and a massive 62,901 households, representing 67% of the population, practising open defecation, especially in the rural areas.

Turkana coordination mechanisms

Turkana County has water and sanitation coordination mechanism WESCOORD (the technical arm of Kenya food security and steering group) in place. WESCOORD coordinates WASH activities in the county in drought- and emergency-prone areas. Trachoma interventions are coordinated through taskforces that have structured forums for engagement at county level.

Both the water and sanitation sector policy and the strategic plan anticipates establishment of a multi-stakeholder forum for coordination of water services and co-chaired by the Ministry of Health and Sanitation. The membership of the proposed county water sector multi-stakeholders includes: the departments of water and sanitation, health and sanitation, livestock, education lands, planning and economics, environment and natural resources and administration. The policy also proposes a water sector-interagency committee as a technical organ of the county multi-stakeholders' forum. These structures are in operation at the county level. The county has established WASHhub to coordinate CLTS activities.

Note: Naming of ministries in counties can differ from national structure.

Turkana WASH

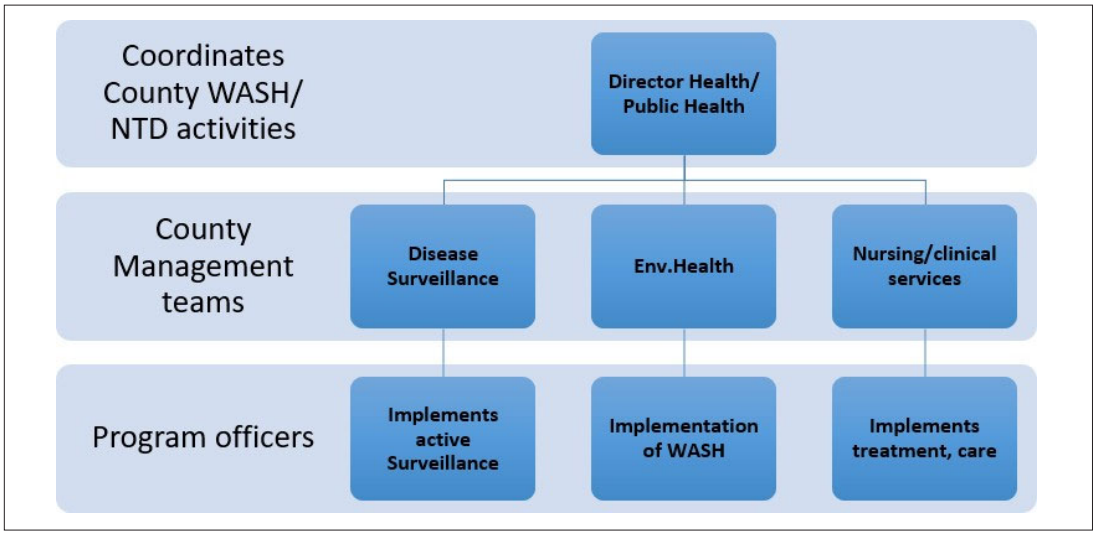
Water supply: Access to safe water in Turkana County is around 51%.[69] Lodwar Water and Sewerage Company is the only company that provides water to Lodwar town and its environs serving about 33,000 households. According to this SMART nutrition survey of 2018, only 60.3% of the households in Turkana access their water through safe sources (improved) like piped water, borehole and protected shallow well.

Urban sanitation: There is no sewage system yet in any of the urban centres in Turkana County. The county Water and Sanitation Sector Policy and Strategic Plan proposes development of sewerage systems for urban areas[70]. The County Integrated Development Plan indicates that the county is in the process of constructing sewerage systems in all major towns starting with Lodwar.

5.8 Ministry of Health generic county/sub-county organogram

The counties and sub-counties organogram varies from county to county. They have the responsibility of the implementation and coordination of all WASH services and NTDs. The counties have management teams responsible for coordination of health, sanitation and hygiene activities as well as NTDs. Other coordination bodies at the county are WESCOORD and task forces that bring together other sectors for a specific agenda.

Figure 50: County WASH – NTDs Department of Health organogram



Sub-county level

The sub-county public health officer heads up water sanitation and hygiene activities at the sub-county level. They work hand in hand with the community strategy coordinator that brings together all community units and health facilities within the sub-county. The NTD-specific coordinators (sub-county) works together with the office of sub-county public health whenever there is an intervention to be done at the community level. Data is compiled for subsequent submission to the county level by the respective coordinators of programmes. Some of the information is submitted through the online DHIS2 and CLTS online systems, and other reports are compiled and forwarded to the program coordinators at counties for onwards transmission to the national level.

Primary care level: The first physical level of the health system, comprising all dispensaries, health centres, maternity/nursing homes in the country. This is the first care level, where most clients' health needs should be addressed. Information on water and sanitation-related diseases and indictors are compiled here by the CHVs, nurse in charge and public health officers or health records information officers in the facilities. At this level information comes from the community in a paper form to be compiled by the technical teams at the facility.

Community level: Community units are the foundation of the service delivery system, with demand creation (health promotion services), and specified supply services that are most effectively delivered at the community. In the essential package, all non-facility-based health and related services are classified as community services.

The roles and responsibilities of CHV as defined in community health service guidelines in relation to WASH, NTD coordination are:

Household visits

Household visits provide opportunities for CHVs to learn to sit alongside and experience first hand what the family is experiencing. The home visit becomes the place of private sharing, where concerns, loss, grief and hope are expressed.

Facilitation of neighbourhood conversations

The conversations taking place in homes quickly expand to include other households, through relationship connections between local people. There is an increasing sharing and acknowledgement in and between families.

Community dialogue

As home visits and neighbourhood conversations continue, people want to talk openly and together about their shared concerns. The CHV plays a major role in collection of information that is summarised and discussed during quarterly community dialogue days.

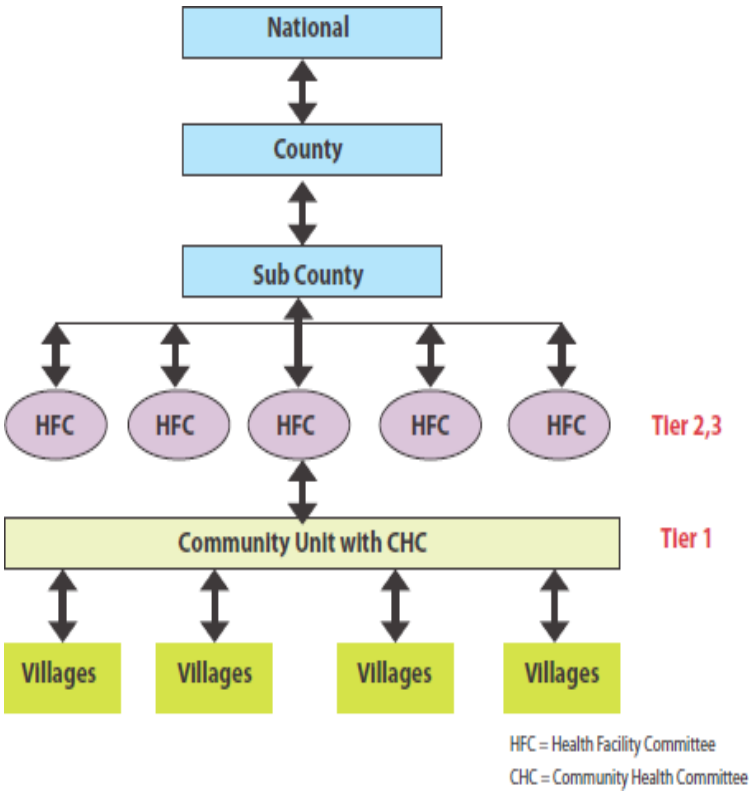
Community health action day

During community dialogue, decisions are made for change. The community members hold collective responsibility on the timeline for taking health actions based on the nature and magnitude of the identified health problems.

Management of community-based health information

Using community-based health information, communities can assess their achievement and progress. CHVs collect and analyse the information together with CHV and community health and extension worker and support the community to see and think together: Have we changed and how? Are we succeeding? Are fewer people sick? Has behaviour changed? How do we know? What further action is needed?

Figure 51: Community-level governance structure



CLTS coordination

There is a well-structured national and regional coordination mechanism in Kenya for CLTS including an information/knowledge management at the WASHhub to create enabling environment for achieving the road map for open defecation free Kenya. CLTS-implementing partners are part of this movement working at the community level in close collaboration with the county public health office and reporting to the National Ministry of Health WASHhub. The coordination is linked to community health unit governance structures and environmental health structure.

5.9 Health and WASH technical work force in the counties

Article 235 of the Kenya Constitution empowers the counties to establish offices and employ individuals performing functions allocated to them in Fourth Schedule. This means that they have the power to establish a functional structure in every ministry at all level for WASH-related activities.

5.10 Coordination overlaps at the Ministry of Health

- At national level, we have several interagency coordination mechanisms that address different issues. The NTD Unit might not participate in environmental health ICC (WASH) if they are not invited. Every unit and division organises their own ICC to deliver specific objectives
- Invitations are sometimes sent to related units and divisions if the resources are available
- Ophthalmic services have benefited before in the environmental health ICC forums where they made presentations on trachoma
- There has been weak coordination between NTD units and WASH unit previously
- Currently, there is a progressive move to strengthen WASH integration in the NTD Unit.

5.11 Gaps in the current national and county structures

- Fragmentations of coordination in different department. For example, trachoma, which comes under ophthalmic services, is coordinated under the division of clinical practice in the department of curative services. On the other hand, the NTD Unit is under the department of preventive and promotive services
- The monitoring system does not capture all indicators for NTDs
- The NTD Unit and the Ophthalmic Services Unit are domiciled in different sections of the MOH – but they both deal with NTDs. Trachoma coordination may not be affiliated with coordination of the other PCNTD
- The Coordination's structures vary in every county. At community level, the community health volunteers (CHV) are tasked with almost everything that relates to health at community level.

5.12 Ministry of Water & Sanitation coordination

The Ministry of Water and Sanitation has an enabling environment for coordination that clarifies the decision-making levels and dialogue platforms.

- Coordination and decision-making – through two organs: the Inter-Ministerial Water Committee (IWCC) and National Water Sector Standing Committee (NWSSC)
- Dialogue reporting – through a notional consultative forum, the annular water sector conference and the water sector working groups

WESCOORD

The Water and Environmental Sanitation Coordination mechanism (WESCOORD) was established in 2001 as a technical arm of the Kenya Food Security Steering Group to tackle the La Nina-related drought of 2000/2001. WESCOORD was created to bring together agencies that are active in water and sanitation in areas that are commonly affected by drought and floods. It was also formed with the purpose of achieving a

coordinated and integrated approach in the implementation of WASH emergencies response. WESCOORD has been active in drought-affected areas but less so in areas affected by other emergencies. WESCOORD expanded its scope to priority counties that are prone to various emergencies including: drought and food insecurity, floods, conflict and disease outbreaks.

Membership (can change from time to time)

- Ministry of Water and Sanitation (Secretariat)
- Ministry of Health (Environmental health)
- UNICEF – Chief operations and emergency
- UNICEF – Cholera coordinator
- OXFAM – Solar pumping coordinator
- Kenya Red Cross
- Plan International
- Catholic Relief Services
- World Vision
- UN – Security officer
- AKUO. Org – Programme coordinator
- Samaritans Purse – Programme officer
- WASH ALLIANCE – Coordinator
- International organisation for migration

5.13 CLTS interventions taking place in trachoma-focused counties as at 29 April 2019[71]

Table 17: CLTS status in the eight focused counties – journey to ODF

		Triggered		Claimed**		Verified		Certified***		Remaining	
County	Vijiji*	No.	%	No.	%	No.	%	No.	%	No.	%
Baringo	2,529	170	7	55	32	37	67	17	46	2,474	98
Kajiado	1,182	344	29	159	46	52	33	33	63	1,023	87
Meru	2,489	409	16	180	44	107	59	47	44	2,309	93
Marsabit	665	122	18	53	43	42	79	17	40	612	92
Narok	2,012	394	20	124	31	99	80	92	93	1,888	94
Samburu	498	160	32	26	16	19	73	5	26	472	95
Turkana	1,974	639	32	94	15	81	86	75	93	1,880	95
West Pokot	2,373	522	22	164	31	73	45	56	77	2,209	93

Notes: *Vijiji = Village **Claimed- you claim what you have triggered, then ***certify what has been verified

The data indicates that there is still a long road to end open defection in the NTD-endemic counties. There is need to change the approach to fast track these achievements.

(See Annex 22: Open defecation free progress as at March 2019).

5.14 Distribution level of WASH staff

The Ministry of Health at county level has distributed WASH staff to sub-counties, wards, location and the village level. The WHO requirement for environmental health officers are: one public health officer for 10,000 people and one public health technician for 5,000 people. The staff have been trained on various methodologies for WASH implementation. The public health officers and technicians total more than 6,000, distributed in the national government and counties. They are responsible for all environmental health activities at the county. The sister Ministry of Water at county level has water engineers and hydrologists that are responsible for water access at the counties. The 47 counties have a serious shortage of water personnel to support the water activities.

Table 18: Distribution of WASH Staff

Intervention	Position	Specific areas
Disease prevention	County: PHO, disease surveillance PHO	Disease prevention, environment, environment and behaviour change, weekly reporting of outbreaks and disease upsurge
Health education and behaviour change	Sub-county: PHOs Ward: PHOs, PHTs, CHWs	Health education and health promotion activities. Planning for health education. Community analysis and diagnosis. Promotion of hygiene in schools and communities
Community water supplies	Ward and location: PHO, PHT	Areas like rain water harvesting, support community in spring protection (water safety), implement water safety planning from source to the households
Solid and liquid waste management	Ward: PHO, PHT location, CHW, CHVs	Sanitation and hygiene activities, within the communities, sitting of pit latrines, sitting of soak away pits, garbage removal in public places and within the households Promotion of latrine construction and use, CLTS methodology, implementation, sanitation safety planning methodology promotion

Intervention	Position	Specific areas
Food hygiene	Sub-county: PHO, Ward PHO, PHT in the locations	Investigate food-borne illnesses, inspection of various foods, hygienic handling of food (HACCP methodology), implements food laws, promotion of five keys to safer food
Disease vector and their control	Sub-county: PHO, Ward, location PHTs	Manage vectors of public health importance: bedbugs, cockroaches, houseflies, mosquitoes, sand-flies, blackflies, ticks, tsetse flies, rats and mice. Gives information on Indoor residual spraying technique
Parasitic disease control	Ward: PHO, PHTs, CHWs	Leishmaniasis, African trypanosomiasis, intestinal worms, genital flagellates, malaria and helminthiasis, lymphatic filarial, distribution of IEC materials, MDA drugs and follow-up

5.15 Hygiene education in the primary school curriculum

The Ministry of Education is structured with the cabinet secretary of education as the head. It is a constitutional office that provides policy and strategy leadership to the ministry. Under this remit are the office of the Director-General of Education, directorate of primary education, directorate of secondary and tertiary education and four other directorates.[72]

The Ministry of Education and Ministry of Health developed a Kenya National School Health Policy and Strategy – 2009 and the second revision was finalised in 2018.[73] The Kenya comprehensive School Health Policy is based on the realisation that education as a social determinant is affected by health and vice versa. Pupils who do not wash hands at critical times – like after visiting the toilets – are at risk of being infected with intestinal worms and trachoma.

Hygiene education in primary schools

The Kenyan primary education curriculum does not comprehensively include hygiene education but touches on personal hygiene in lower primary school grade III and upper primary grade VI. The new curriculum gives a basic overview on hygiene and nutrition. The sanitation and hygiene plans are well stipulated in the policy and school health guidelines, implemented by MOH, Ministry of Water and Sanitation, Ministry of Education and parent-teachers' associations (PTA) board of management.

5.16 National level pre-primary school coordination

The cabinet secretary in charge of education appoints a director: early childhood education to strengthen systems and structures to support county government in planning and

delivery of quality pre-primary education. The directorate works with other directorates dealing with pre-primary education and teacher education.

County-level coordination

At the county level, the County Executive Committee member in charge of education is responsible for the management and coordination of pre-primary education. A County Early Childhood Education Committee shall be established comprising line ministries, key departments and other stakeholders in the county. The pre-primary education committee is chaired and housed by the County Executive Committee member in charge of education.

Development directorate has the mandate of:

- Liaising with the director, early childhood education (MOE) on matters of policy
- Establishing and supporting county-based governance structure to manage pre-primary education services that are equitable and all-inclusive
- Strengthening coordination, linkage and collaboration with key stakeholders, that is, early childhood development service providers; and the private sector, government agencies, and development partners among others
- Development of strategies and budgetary plans for resource mobilisation to ensure quality service delivery
- Building the capacity of pre-primary education service providers on management and strategic leadership
- Development and enforcement of regulations which hold management bodies individually and collectively responsible for appropriate use of pre-primary education resources
- Ensuring only approved pre-primary education curricula and programmes are implemented
- Ensuring pre-primary education quality standard guidelines are adhered to
- Instituting measures to enhance participation by parents, community and other stakeholders
- Establishing administration and management structure at the sub-county ward and centre levels
- Ensuring establishment of board of management at the pre-primary education level.

Primary and secondary institutional framework and coordination

The School Health Programme is an intersectoral initiative in which ministries, stakeholders and agencies collaborate in planning, implementation, monitoring and evaluation of activities. The overall coordination of all aspects of implementation of health-related activities within schools is the responsibility of the Ministry of Education and its stakeholders in collaboration with the Ministry of Health who will provide integrated preventive, promotive, curative and rehabilitative health services.

Joint responsibilities

The Ministry of Education and Ministry of Health are responsible for all aspects of school health with regard to:

- Development and review of the National School Health Policy and guidelines
- Coordination of all school health stakeholders, bilateral and multilateral partners at the national level
- Planning of School Health Programme activities, e.g. school health action days
- Resource mobilisation and utilisation
- Implementation of all aspects of the School Health Policy in schools
- Supervision, monitoring and evaluation
- Conducting pre-entry and routine screening
- Dissemination of reports and school health information to parents and community
- Facilitation of referral between school and health facility conducting research (school-based and community-linked health research)
- Capacity building of teachers and health workers on school health needs
- Keeping confidential information gathered as per the laid down government regulation
- Linking the community to the schools and the health services.

To ensure success in the implementation of the programmes, stakeholders will be expected to carry out the following:

- Advocacy
- Capacity building and strengthening of systems
- Complementing government efforts in mobilising resources and in programme implementation
- Dissemination of information on school health matters.

Responsibilities of the Ministry of Health

The Ministry of Health is responsible for the following aspects of a comprehensive School Health Programme:

- Health quality control and all treatment aspects of school health services
- Logistic management (selection, quantification, procurement, storage, distribution and quality control of medications, vaccines, micronutrients, and other medical materials)
- Provision of technical advice on the required health standards including infrastructure, water and sanitation facilities in schools
- Advising and training on changes in health policies
- Provision of technical assistance on the implementation of core health and nutrition activities.

Responsibilities of the Ministry of Education

The Ministry of Education is be responsible for the following aspects of the School Health Programme:

- Ensuring the revision of teacher training and the school curricula in order to include all aspects of school health education
- Development and implementation of in-servicing programmes on issues of health for the revised curricula
- Advising on changes in education policies that will affect the School Health Programme
- Establishment and promotion of health clubs in schools
- Involvement of learners, communities and stakeholders in campaigns to promote health in schools
- Provision of adequate and accessible infrastructure conforming to the required health standards.

The County Department of Health

- Enforcement of required health standards including infrastructure, water and sanitation facilities in schools (this is done by the public health department when the laws are not followed)
- Ensuring that all relevant Health Acts, rules and regulations are enforced
- Ensuring constant availability of essential drugs in the existing government of Kenya health facilities
- Provision of technical support in the training and in-servicing of school personnel
- Provision of rehabilitative health services.

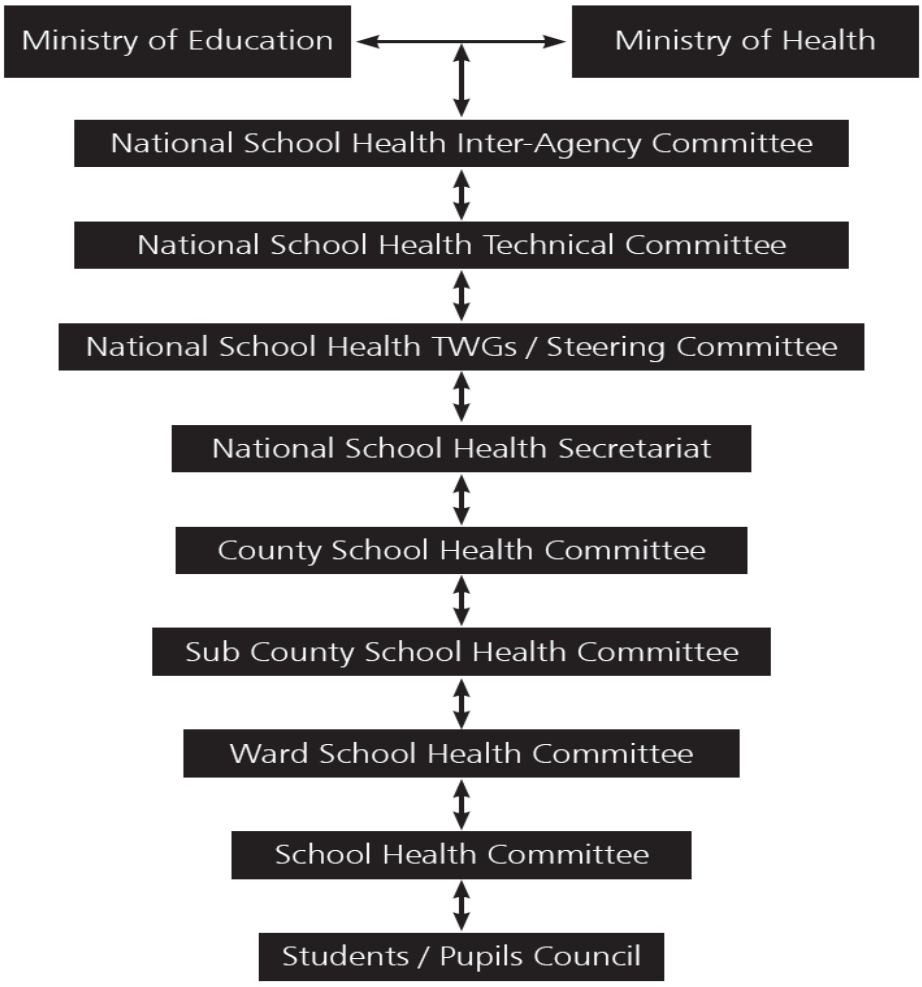
Responsibilities of the community

The community around the school is be responsible for the following aspects of the School Health Programme:

- Resource mobilisation
- Active participation in the management of schools

- Maintenance of appropriate safe and healthy environment around their schools and in their homes.

Figure 52: School health governance structure



5.17 Basic education curriculum (new)

The basic education curriculum for Kenya was revised in 2017.[74] The competency-based curriculum has identified seven core competencies, namely: communication and collaboration; critical thinking and problem solving; creative and imagination; citizenship; digital literacy; learning to learn; and self-efficacy. It provides a variety of opportunities for identification and nurturing of a learners' potentials and talents in preparation for life and the world of work.

The framework is geared towards making learning enjoyable. Suitable curriculum designs have been developed to facilitate the implementation of the Basic Education Curriculum Framework.

The designs contain the national goals of education, outline of the Early Years Education (EYE) and general and specific learning outcomes of each subject. They also suggest a variety of learning experiences, assessment and resources. The designs also link the topics to values, and pertinent and contemporary issues.

The new curriculum for primary schools has incorporated social, environmental, and health practices that ensures that by the end of the sub-strand (lesson/topic) the learner should be able to: (a) wash hands appropriately for personal hygiene; (b) demonstrate hand washing behaviour at critical times; (c) appreciate the need to wash hands for personal hygiene; and (d) tell the importance of washing hands. The core competence to be developed are: communication and collaboration through working in groups, self-efficacy, washing hands appropriately, learning to learn – demonstrate hand washing behaviour at critical times.

In terms of sanitation, the learner should be able to: (a) identify toilet facilities in the school; (b) talk about the importance of toilet facilities for personal hygiene; (c) express the urge for toileting; (d) use toilet facilities properly for personal hygiene; and (e) appreciate the need to use a clean toilet for personal hygiene. These are some of the lessons that are taught in primary one.

5.18 Other stakeholders that have not been involved in the landscape analysis that could contribute to NTD programming

Table 19: Potential WASH and NTD Stakeholders

Stakeholders	How to bring them on board	Their support/contribution
Water Services Trust Fund	During the County WASH, NTD planning meetings and at the national WASH, NTD forums	Resources for major water projects through water services providers at county level
The World Bank	Counties to invite them during capital planning and investment projects for WASH forums at county and national level	Make proposal for investment projects for WASH
The Veterinary division	Invite them during WASH, NTD planning forums at the county and national level	Contribute on how to deal with zoonotic diseases
The Water Regulatory Boards (WASREB)	Include them in the planning WASH/NTD forums	Support in monitoring the access of water though their WARIS system

Stakeholders	How to bring them on board	Their support/contribution
Ward administrators and constituency development fund chairpersons	Invited in the sub-county WASH, NTDs planning forums	Facilitate some resources to support the programmes at ward level. The WASH, NTD activities will be incorporated in the wards' plans
Directorate of Ministry of Water and Sanitation at national and county level	Be part of the WASH NTD planning forums at national and county level	Support in terms of resources for water access and sewerage connections
Women leadership at county and sub-county	Invited in the planning forums at counties	Support in behaviour change communication
The media	Be part of the WASH/NTD partners	Support in advocacy and create demand for WASH/NTD services
Private sector such as Kentainers, SATOPAN Group, Seal Africa, others	Be part of the county and national WASH, NTD planning forums	Contribute in the supply side of water and sanitation products

6 Behaviour change initiatives, tools and approaches

Prevention of many NTDs relies in part on WASH behaviours such as improved hygiene and sanitation practices at the individual, household, community and institutional levels. It is well documented that behaviour change is influenced by many interrelated factors, such as perception of risk or benefit related to a given behaviour; the skills and belief in the ability to change; access to resources necessary to perform the new behaviour; and norms and values within the family, community and society that make the behaviour acceptable.

Figure 53: Government IEC materials on NTD programmes

Figure 54: Is caption wording required here?

6.1 Ongoing WASH-related social and behaviour change communication campaigns

The following are initiatives that are being conducted at the national, and county level with NTD-related messages.[75]

School-based programming

The pupils are given information on the importance of hygiene at school and in their households according to the School Health Policy. Public health officers within the county provide this information. For sustainability, schools are encouraged to have school health clubs through their school health committees. Partners with leadership of government develop the WASH and NTD messages to address some of the behaviours that affects the health of the children. For WASH and NTD messages, the health promotion technical group drives the review and development. These information education materials are developed to pass messages of latrine utilisation, hand washing with soap, face washing with soap, food hygiene, nutrition, wearing of shoes and the importance of drugs adherence.

Behavioural determinants are used to bring out the desired behaviour change in pupils. For example, in school-led total sanitation, a motivator for the children to change is disgust (or pride). When they know that the open defecation leads to water sources or to the food that they eat, they change practising the same behaviour and become champions of the desired change of not defecating in the open. This applies to face washing and general hygiene of the pupils.

Community-based programming

The CHVs play a critical role in community-based programmes, especially in behaviour change communication. They contribute in advocacy and social mobilisation. The volunteers are trained using an approved manual – Community Health Volunteers' Basic Manual 2013. Some of these programmes include HIV/Aids, community-led total sanitation, Kenya Trachoma Elimination, and water and sanitation hygiene. In Kenya, community programmes are carried out according to the community strategy policy document at the county level.

Mass media approaches

News articles, radio, television, publications, newsletters and the internet provide useful tools to reinforce WASH and/or NTD content delivered in individual, institutional and community settings. Kenya utilises mass media tools during NTD campaigns and awareness creation days. The same approach is used during the global menstrual hygiene day, global hand washing day and world toilet days. The WASHhub unit at the Ministry of Health has utilised print media to publish and rank performance of counties based on their sanitation coverage and economic loss due to poor sanitation. Radio talk shows for trachoma prevention and control are implemented using national and local language.

Social marketing approaches

Social marketing in Kenya uses marketing approaches to match available resources with social needs. Social marketing may be applied to service provision and use the development and acceptance of products or the adoption of new behaviour. It can be product or behaviour focused. For instance, when community-led total sanitation was adopted in Kenya, it created demand for improved latrine usage, especially in counties that are open defecation free. The country launched a sanitation marketing campaign with support of The World Bank's Water and Sanitation Programme (WSP).[76]

To help businesses reach the underserved consumers who are in most need, World Bank's International Finance Corporation's water and sanitation programme worked with private and public sectors to remove market barriers through business development support, targeted consumer awareness, market intelligence, public sector engagement and pro-poor financing.

The overall objective was to inform people on where to get artisans and supplies for improved latrine or sanitation. The team promoted the plastic latrine slabs and use of SATOPAN squat hole covers. The messages behind the campaign were that use of these slabs would provide health benefits. Information was delivered through road shows and posters.

The same strategy was carried out for NTD such as lymphatic filariasis: messages conveyed through the local radios, posters and through roadshows so that the members of the public can utilise bed-nets properly and understand where to access bed-nets and medicines.

Community-led total sanitation programme

CLTS is an innovative methodology for mobilising communities to completely eliminate open defecation. Through triggering and emergence of natural leaders, communities are facilitated to conduct their own appraisal and analysis of open defecation and take their own action to become open defecation free.

In all the counties in which CLTS is being implemented, households covered under the CLTS model have shown a recognisable behaviour change, adaptation of hygiene practices towards claiming and certification of open defecation free status. However, this only occurs when community hygiene committees are active.

Use of health outreach programmes

The Ministry of Health uses outreach programmes in hard-to-reach areas to deliver services. Counties such as Turakana, West Pokot, Baringo and Narok use this approach to reach people with trachoma and provide nutrition activities and immunisation services. In such areas, the health facility is distant and the communities are nomadic depending on the availability of water and pasture for their animals. WASH activities are a considerable challenge since the community is moving from time to time. Construction of improved facilities in such communities is difficult. As such, some CHVs advocate for simple latrines.

The pastoral community is unique and there is need to have some sanitation designs that will suit these moving communities.

Behaviour change materials used during NTD, MDA campaigns

Information education materials currently being utilised in Kenya take the form of posters and brochures, murals, branding of T-shirts, and lessos, drawing messages on MDA. (See Annex 10: WASH and NTD-related social and behaviour change interventions).

6.2 Organisations undertaking WASH-related social and behaviour change interventions

The most commonly used motivator for hygiene promotion within counties is still 'health', which is rarely a sole trigger for behaviour change. Globally, it has been found that social, physical and emotional drivers (pride, loss of face, convenience, comfort) are some of the most common reasons households choose to invest in latrines. The partners implementing WASH BCC interventions combine some of these drivers of behaviour change.

There are a number of organisations that are supporting development of behaviour change materials and sanitation marketing in Kenya. These organisations partner with the Ministry of Health's specific technical working group to develop behaviour change materials and tools. These organisations include Sightsavers, UNICEF, USAID, KEMRI, WHO, World Vision, AMREF Health Africa, END Fund (Annex 11: Organisations undertaking WASH-related behaviour change interventions).

6.3 Tools that currently exist in country for NTDs and WASH behaviour change

With the realisation that improved knowledge and awareness alone often does not result in behaviour change, systematic efforts are now beginning to be made in the WASH and NTD sectors to apply successful practices from the field of social behavioural change in order to achieve better and more sustainable behaviour change results and outcomes. This is needed to achieve desired improved health impacts from the investment in WASH programming (Annex 10: WASH and NTD-related social and behaviour change interventions).

Tools that are currently available:

- CLTS protocols and manuals are available at the Ministry of Health for trainer of trainers
- Community-led total sanitation communication strategy
- Participatory rapid appraisal tools are often used during as a community walk, to identify open defecation areas and water sources within the community. The community makes decisions based on what they saw in their community visits

- Developing a flow diagram. This targets urban towns to visualise excreta management in cities and trigger management behaviour to manage the risks. This was done for Nairobi city, Kisumu and Nakuru
- Profiling sanitation coverage and publishing them in the dailies to trigger sanitation and hygiene investment by counties
- Showing the public a case of filarial infection through a poster to trigger change of behaviour and embrace prevention
- Using successfully treated trachoma cases to give a testimony in the community on how they underwent surgery and now they recovered their sight (video shooting)
- Showing the community a bolus of worms that came from a person to trigger change. This can be done by use of posters or videos

Availability of these materials

The CLTS manuals for triggering can be obtained from the WASHhub in the Ministry of Health. The other IEC materials can be obtained from the NTD programme and Ophthalmic Services Unit.

Responsibility of development of IEC materials

The Ministry of Health is responsible for development and distribution of NTD and WASH communication materials. The division of health promotion is a dedicated unit that is responsible for IEC materials. These materials are developed in the technical working group forums and approved by the top director of medical services in the Ministry of Health. Most of the time, partners support the development of these behaviour change materials.

Process within the government for approving health and WASH communication strategies and materials

Partners in the various technical working group forums with government leadership develop the communication strategies. When the document is fully accepted in the technical working groups (TWGs), the strategy is presented to interagency committee for input and recommendations. The final draft copy is then forwarded to director and principal secretary for approval. After the approval, the documents can be widely distributed to partners and counties.

Main media channels in the country and endemic counties

Kenya is endowed with wide coverage of media and internet connectivity. The national broadcasting television and radio stations reach all parts of the country, provided the household is able to purchase a TV set and top box, or radio or phone that has FM radio. National Kenya Broadcasting Corporation (KBC) has TV and radio in addition to regional stations that broadcast in local dialects. Other national media stations such as Citizen; NTV; KTN and their radio stations of Citizen radio, Classic and Easy FMs; Radio Maisha and Radio Jambo have national coverage, while Royal Media again has radio stations that broadcast in local dialects.

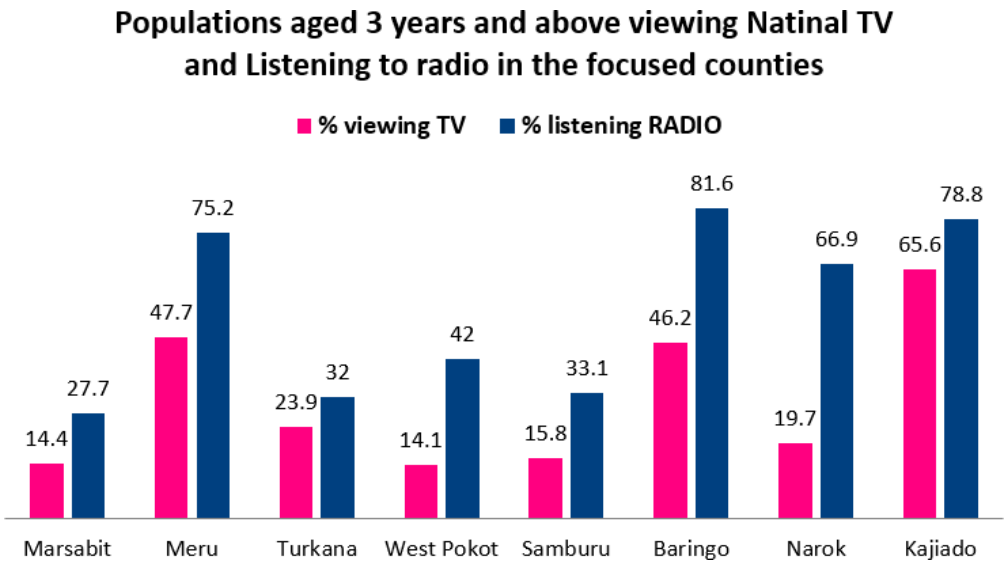
Additionally, there are local community radios serving the NTD-endemic counties including:

- Ata Nayeche FM, a community radio station started by Nayanae – Emeyen Youth Group (NYG). The radio station is located in Kakuma
- Maata FM, a community radio station based in Turkana County broadcasting in the North Rift part of Kenya
- Ekeyokon Radio in Turkana
- Turkana FM, a local station, providing information for the community, talk, news and traditional music
- SIFA FM Marsabit (formerly Marsabit FM), is a radio station serving Marsabit County from Marsabit town
- Ibse Radio in Marsabit
- Radio Jangwani, a community radio station situated in Marsabit County broadcasting from Marsabit town
- Serian FM, a local radio station in Samburu County, specifically located in Maralal town 22%
- Mchungaji Radio, a community radio station in Samburu
- Radio Domus (99.9 FM), a community radio station based in Ngong, Kajiado county
- Oltoilo Le Maa FM, located in Suswa, a town in Narok County
- Serian 88.9FM, in Samburu and Laikipia counties
- Muuga FM 10% in Meru
- Radio Citizen, Radio Maisha, Radio Jambo and KBC Radio reach all the NTD-prevalent counties

PC NTD counties viewing TV and listening to radios

Kenyans in rural and urban areas listen to and view national news and other programmes through radios and television. After devolution of services to counties in 2010, media houses have emerged at the county level that utilise the local language to disseminate information through print and mass media. The top three counties in terms of numbers of listeners and viewers of television from the eight focused counties are Baringo (81%), Kajiado (78.8%) and Meru (75.2%).

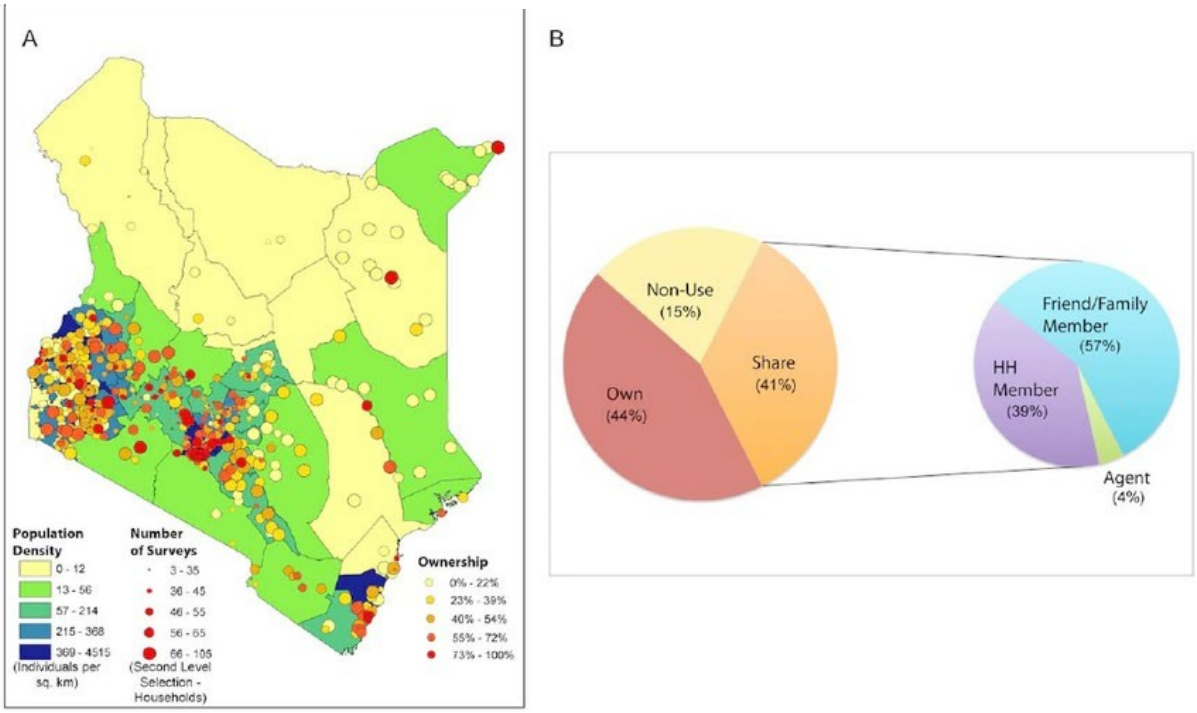
Figure 55: Proportion of the households listening to radio in trachoma-endemic counties



Mobile phones network coverage[77]

By June 2014, the total number of mobile subscriptions was recorded as 32.2 million, up from 15,000 posted in 1999. Mobile penetration and coverage have also been steadily growing.

Figure 72: Mobile phone coverage in Kenya



A) Mobile phone ownership in Kenya

Map showing the survey locations (based on 2 and level selection) and number of surveys across the country as part of the FSDK 2009. Map background is divided into counties and coloured according to population density (see colour bars).

B) Proportion of Kenyans who own or use a mobile phone, and proportion of non-owners who share a phone. Of those who share (left), the second pie chart shows that they share with household member, friend or family member, or local mobile phone agent.

7 Advocacy

Advocacy is the process of strategically managing and sharing knowledge to change and/or influence policies and processes that affect people lives.

Table 20: NTDs and WASH priorities within government

	National agenda	Resource allocation	National health strategy	External funding
NTD	The NTDs have received attention in a National Agenda: Second Kenya NTD Strategy 2016-2020, aligned to Ministerial Health Policy. It is linked to the Ministry of Health policy 2013-2030	Some support comes from government during the planning of policy development and payment of salaries	Second NTD Strategy in operation 2016-2020 & Breaking NTDs Transmission strategy	END Fund, Deworm the World, WHO
WASH	WASH has received national attention to access of basic water and sanitation by 2030. This is very clear in Kenya's Vision 2030.	At national level, the water ministry budgets for water access but sanitation and hygiene receives minimal funding At Ministry of Health national, NO funds are allocated for the sanitation and hygiene Counties are progressively allocating resources to WASH interventions	Kenya Environmental Sanitation & Hygiene Strategic Framework 2016-2020	UNICEF, USAID, AMREF Health Africa, Global Fund

7.1 WASH and NTD advocacy

A high level of advocacy is key to sustainability of any programme and its impacts. NTD elimination and eradication interventions can be significantly boosted through advocacy to scale up WASH, NTD and BCC activities with active support from the county governments and the national government. The advocacy should target different departmental heads and agencies.

This landscape analysis established that responsible units for WASH and NTDs have not presented a joint shared investment plan to decision-makers and partners. There needs to be a mutual accountability framework for WASH and NTDs advocacy with a clear monitoring framework.

Advocacy objectives in Kenya's national environmental sanitation strategies

The Kenya Environmental Sanitation & Hygiene Strategic Framework 2016-2020 is reviewed every five years. This strategy has very clear advocacy objectives for sanitation and hygiene behaviour change (Table 21). It states that environmental sanitation education and promotion must be made an integral part of all sanitation and hygiene activities at all levels. A key goal in the strategic objective is to develop and implement a national and county environmental sanitation and hygiene education and promotion programme. The second key goal is to develop and disseminate training modules and BCC materials to support county and national programmes. The strategy stipulates who is responsible for these key goals.[78]

Key results

- Improved household and personal hygiene behaviour and practices
- Increased household, community and individual awareness on the negative impact of poor environmental sanitation and the benefits of good sanitation and hygiene practices
- At least 90% of the households using appropriate hand washing facilities with soap by 2020
- At least 90% of the villages reached with BCC/sanitation and hygiene education and promotion messages by 2020.

Table 21: Please add caption wording

Key interventions	Recommended/proposed actions	Responsible agency
Develop and implement national and county environmental sanitation and hygiene education	Design and implement national sanitation and hygiene education – BCC programme	Ministry of Health and partners
	Develop county sanitation hygiene education and BCC programme	County health departments, development partners, NGOs, CBOs, FBOs

Key interventions	Recommended/proposed actions	Responsible agency
and promotion programme	Establish and declare national sanitation clean-up days to be held up at all levels	National and county government, development partners, community units, NGOs, FBOs
Develop and disseminate training modules and BCC materials to support county and national programme	Establish and facilitate vigorous national and county sanitation and hygiene campaigns	Ministry of Health county department of health, community units, FBOs, NGOs
	Develop and disseminate training modules, advocacy and multimedia BCC materials on improved sanitation and hygiene	National and county government
	Develop a sanitation sector communication and media relations strategy	National and county government Ministry of Health, NGOs, FBOs, and private sector

The second National NTD Strategic Plan 2016-2020 has advocacy objectives. These objectives are: strengthen coordination mechanisms for NTDs; strengthen and foster partnership for control, elimination and eradication of targeted NTDs at national and county level; enhance high-level reviews of NTD programme performance, and the lessons learned should enhance advocacy. To achieve this, the unit plans to strengthen NTDs secretariat and joint reviews through task forces and ICCs.

7.2 Primary decision-makers influencing WASH at the national, county and community levels

The Ministry of Health and Ministry of Water and Sanitation at national and county level are responsible for WASH decisions and policymaking made at their respective ministries (Table 22).

Table 22: Primary WASH decision-makers

	Decision-makers	Have they been approached to collaborate with NTD effort?	Involvement in NTDs initiatives
National	Cabinet Secretary	Ministry for WASH and NTDs	Strategic plans for NTDs
	Principal Secretary	Accounting officer at the Ministry for WASH and NTDs	Accounting officer for the resources allocated to NTDs initiatives
	Director-General for Health	Technical adviser for the top management	He/she is the custodial of the initiatives for WASH and NTDs

	Decision-makers	Have they been approached to collaborate with NTD effort?	Involvement in NTDs initiatives
County	County executive committee members for health	Policymakers at county level. WASH and NTD strategies were launched in collaboration with the counties	The head of all health-related matters
	Directors for public health	Technical advisers at county	They own the interventions activities
	Chief officers	Accounting officers at the counties. The strategy for WASH and NTDs were launched in collaboration with counties	This is their mandate as accounting officers of the counties
Community	Gate keepers, chiefs and assistant chiefs, and WASH implementers	They are the opinion leaders and local administrators. They support intervention at the community level	They are the beneficiaries and have played key role in social mobilisation and advocacy

The cabinet secretary who is the decision-maker in the Ministry of Health has given his commitment in the 2nd Kenya National Strategy Plan for Control of Neglected Tropical Diseases 2016-2020 that outlines the approaches of the national NTD programme. The plan states the government of Kenya's aim of accelerating the reduction of disease burden and overall poverty alleviation through control, elimination and eradication of NTDs. It also lays out the operational framework proposed by the national NTD programme to achieve its objectives.

The strategy is in line with the SDG 3 which seeks to end the epidemics of Aids, tuberculosis, malaria and NTDs by 2030; and in line with SDG 6, which seeks to ensure availability and sustainability management of water and sanitation for all.

Kenya has developed the Breaking Transmission Strategy 2018-2023 as a commitment of the government to achieving the global and national goals of control and elimination of four preventive chemotherapy (PC) NTDs endemic in the country: STH, schistosomiasis, LF, and trachoma. The WASH component is weak under this strategy and needs strengthening. This landscape analysis recommends more WASH interventions and collaboration with other sectors and partners.

7.3 Potential joint advocacy objectives for an integrated WASH/NTD initiative

Table 23: Advocacy areas for WASH/NTDs

Advocacy objectives	Primary key imple-menters	Intervention areas	Key coordin-ation overlaps	Barriers and gaps	Synergies
To sensitise and raise public awareness on the benefits of improved environ-mental sanitation and hygiene practice – (2016-203 policy)	County governments	Develop and implement national and county sanitation and hygiene education and promotion. Develop and disseminate training modules and BCC materials to support county and national programmes	Partners to utilise the public health teams for various intervention s at different times ICC, TWGs	Capacity of some of the officers still low on NTD and WASH interven-tion, financing, political prioritisation at county	Utilise the knowledge already gained buy the officers. Have a joined capacity for WASH/NTDs interventions
To Strengthen coordination mechanisms NTDs;	National government county, NTD partners. Sight savers consortium and WASH teams	Develop coordination protocols for county and national coordination	The sectors have similar ICC and TWGs housed in different department s and units	Fragmented coordinatio n structures housed in different sectors	Decentralised governance and existing coordination mechanisms should come together
To strengthen and foster partnership for control, elimination and eradication of targeted NTDs at national and county level	National and county government	Develop coordination and mutual accountability framework for partners engagement	National and county partners undertaking different functions	Duplication of activities	Have a common understanding or one plan

Advocacy objectives	Primary key imple-menters	Intervention areas	Key coordin-ation overlaps	Barriers and gaps	Synergies
To enhance high-level reviews of NTDs programme performance, and the lessons learned should enhance advocacy	National and county government, NTD partners, WASH partners	Develop monitoring frameworks for communication and advocacy	Existing coordination in every units	Every unit/ partner drives their own agenda and activities	There is room in the next programming to have one plan

School health policies and guidelines

School environments provide an organised structure that is conducive for the provision of health and nutrition services as well as a key avenue for disease prevention and control. Schools are ideal for promoting behaviour change that can be transferred to the household level. Knowledge on NTDs and how to prevent and control them can be achieved if the communication materials are tailored for all levels of learning.[79] Schools are ideal settings to implement health programmes:

- An efficient and effective channel to reach many people for introducing health promotion practices through behaviour change communication
- Provide interventions in a variety of ways (learning experiences, linkages to services, supportive environment)
- Learners are admitted at early stages of their development when lifelong behaviours, values, skills and attitudes are being formed
- Improved health enhances cognitive development, concentration, participation and retention of learners in school. It also reduces absenteeism, increases enrolment and improves academic performance.

Comprehensive school health programmes meet a greater proportion of health and psychosocial needs of learners in and out of school. The ministries of education and health implement this School Health Programme with support of partners in pre-primary and primary schools. Counties that are endemic with NTDs carry out specific WASH NTD programmes. For example, trachoma-endemic counties have involved schools in face washing activities and health education messages that are written on murals hang on the walls of schools.

The programme leads to efficient resource utilisation resulting in greater impact. The components of a comprehensive School Health Programme include: values and life skills; gender, growth and development; child rights and responsibilities; water, sanitation and hygiene; and nutrition. Therefore, advocacy for the education directors, School Health

Programme implementers and school heads to enhance knowledge and interventions in terms of WASH, BCC and NTDs awareness and reporting should be stressed.

7.4 The Kenyan Constitution and Human Rights Watch

Kenya Vision 2030, International commitments including SDGs, Agenda 2030, Ending Drought Emergencies, and the Constitution of Kenya 2010 all have provisions for the government's accountability in terms of reporting on progress made towards meeting the rights to access to safe water, adequate sanitation, universal education and universal health care. The Kenya National Human Rights Commission's focus of late has been on access to water as a human right; this could be expounded to cover sanitation and healthcare especially on NTDs as part of universal access to health.

Kenya as a country has a strong background in policy and strategy development but very weak implementation and sustainability. Most of the road maps and strategies to eradicate or eliminate citizens' economic and social plights end up being reviewed after little progress on achieving targets is reported. Examples include the CLTS road map 2013, NTD elimination 2015, Access to water by 2002. Stronger advocacy focusing on annual accountability mechanisms to the citizens and human rights watchdogs need to be put in place. There is need for policies that focus on WASH, NTDs, BCC and health at county level.

7.5 The county governments

The county governments are grappling with development agendas for their people with greater intentions and plans for their constituents. Advocacy on budget provisions, allocation and monitoring needs to be strengthened. County strategies and policies merging WASH and NTD integration and synergies need putting in place. The county governors need to be champions for WASH NTD elimination in their counties.

The counties are funded by the national government through their county treasuries from the exchequer. It is the responsibility of the county assemblies to appropriate the funds based on the budget proposals from ministries. It is the responsibility of every ministry to spend the funds allocated to them within a given financial year.

Some of the activities in the health sector and Ministry of Water include advocacy to the gatekeepers within the community in order to change a given behaviour. A good example is the cultural leadership of Meru community called Njuri-Ncheke (Meru language). In recent years they were incentivised by the public health team to advocate for sanitation and hygiene interventions. Their support enabled people to build more sanitary facilities.

Second, the leadership of Meru County government organised the distribution of water tanks to schools, protected springs and drilled boreholes in hard-to-reach areas to improve water access. They also have a strong community strategy implementation framework that has brought on board more youths to deliver community-level activities. The community health workers visit the households on a monthly basis to remind families on their

responsibilities with regards to WASH, NTD issues and other health concerns. This could be one of the reasons why Meru County has low TF in most parts of its sub-counties.

7.6 Media coverage

Media focus on NTDs emerges only when there is outbreak. In terms of coverage, information sharing and awareness creation, media should be approached to have targeted programmes to create awareness on breaking transmission, elimination and eradication programmes for NTDs in Kenya, especially in endemic counties.

8 Analysis

This analysis first looks at key issues underpinning NTD prevalence and WASH, BCC programming in the country.

8.1 Issues underpinning disease prevalence

In this landscape analysis, it was noted that there are a number of issues underpinning disease prevalence and programming in Kenya:

Behaviour: Men defecating in the open because of not wanting to share toilets with children and women in some counties like (Narok and Pokot); lack of shoe-wearing in the communities; lack of hand washing facilities and their usage in schools and communities; nomadic community accepting flies as normal (it is associated with having more animals); children and community members bathing in streams and rivers; using the same clothing/bed sheets in the *manyattas*; not using the toilets appropriately (defecating outside the squat hole); children playing and swimming in rivers and earth pools or streams; and ignoring drugs instructions and prescriptions.

Environment: A comprehensive approach to environmental sanitation is needed to achieve disease control objectives by safely separating waste from humans and animals and reduce the risk of vector breeding and contamination of water and soil. In our healthcare facilities, there needs to be infection prevention and control and vector control measures. Safe, reliable, affordable, universally accessible and sustainable water infrastructure is also needed to prevent consumption of contaminated water, reduce contact with surface water and enable personal hygiene practices. A robust approach to NTD control must also include use of integrated vector management. Additionally, veterinary public health services should be incorporated within disease control efforts, ensuring appropriate livestock keeping and food safety practices and utilising the available expertise for disease surveillance and control. Therefore, the issues underpinning disease prevalence are: insufficient basic/safe latrines in schools and households, poor maintenance of latrines, lack of insecticides to reduce fly density and screening materials, lack of nets to manage flies and mosquitoes, poor waste management in the environment, discarding waste in the household indiscriminately, lack of drainage and maintenance for storm water around the villages and urban areas, and insufficient improved water for drinking and domestic use.

Social inclusion: Quality health services and prioritising coverage of populations at risk of NTDs is a critical step towards equity and inclusion. Progress towards social inclusion and equity can only be achieved by addressing barriers to participation in a person's environment, improving universal access to quality promotive, preventive, curative and rehabilitative services and ensuring poverty is not a barrier to accessing NTD services. Addressing stigma and discrimination against people affected by NTDs will mean provision of high-quality social support services in the family and the community, and formal and informal work. Issues affecting social inclusion are: inappropriate management of disgust

when implementing CLTS so that community members are not alienated by the process (elders may not appreciate a discussion on faeces in the community – this reduces male involvement in decision-making at the village level); discrimination of those who are affected with lymphatic filariasis (people fear associating themselves with those with swollen legs: they believe it is a curse); reduced work and education opportunities; impediments in sexuality and relationships, and social isolation of those affected with Lymphatic filariasis and the blind. There is also discrimination against those infested with STHs (they have enlarged stomachs so are associated as people who eat a lot) and among boys and girls between those who urinate blood and those who do not.

Treatment and care: Preventive chemotherapy is a fundamental component of NTD programmes. Disease management and self-care are essential for reducing the severity of many diseases, to prevent suffering and increased vulnerability to poverty, stigma and exclusion. The problems associated with NTD treatment and care are: some of the medicines are very expensive; there is a lack of reliable safe water for use during treatment; insufficient knowledge and capacity from staff to diagnose and treat NTDs and insufficient surgeons in these targeted counties to address the surgeries of trachoma and lymphatic filariasis. Additionally, there is occasional stigma associated with seeking treatment, and fear of surgery.

8.2 Key implementers

The primary key implementers for NTDs vary from one to another. Trachoma interventions are implemented by national and county governments funded/supported by Sightsavers, Fred Hollows Foundation, Operation Eyesight Universal and Christian Blind Mission. Soil-transmitted helminth interventions are funded by Children Investment Fund Foundation, Deworm the World Initiative, and Evidence Action. Schistosomiasis interventions are funded and supported by Children Investment Fund Foundation, the END Fund, Deworm the World and Medical Assistance International. Lymphatic filariasis support is funded by WHO, Evidence Action, Kenya Medical Research Institute (KEMRI), and African Institute for Health.

Based on this analysis, there exist opportunities for synergies. There a number of coordination mechanisms like interagency coordination at the Ministry of Health for every division, and WESCOORD coordination at the Ministry of Water and Sanitation. The national and county treasuries have a structured coordination and planning circles that must be followed. Medium-term planning framework and county integrated development plans are some of the examples that can be utilised to get finding. The Kenya government has embraced programme-based budgeting. There is an opportunity to utilise these coordination mechanisms in integrating WASH, NTDs programming to get resources from government.

8.3 Main interventions

The key interventions areas for WASH and NTDs based on this landscape analyses are community-led total sanitation at the village level, community-led total sanitation with integration of trachoma and nutrition activities, household water treatment and safe storage at household level, screening of houses to reduce mosquito density, advocating for shoe-wearing, use of toilets and hand washing, implementation of surgery antibiotics, facial cleanliness and environmental management (SAFE) strategy in trachoma-endemic areas. There are also mass drug administration, media campaigns and raising awareness on the use of insecticide-treated nets in areas infested with mosquitoes that can transmit LF and dengue fever.

Partners who are in the endemic counties with special focus on NTD are implementing these interventions. The national government supports counties with technical assistance, policy formulation and monitoring and evaluation of the NTD indicators.

Partners and county governments implement the WASH strategies that are aligned to the county integrated development plans. Some of the WASH partners have specific goals for WASH within the counties that are not aligned with NTD programme but contribute to NTD control and elimination.

8.4 Behaviour change materials

There are a number of organisations that are supporting development of behaviour change materials and sanitation marketing in Kenya. Some of the materials are developed during hygiene promotion days, for example, during global hand washing days, world toilet days and for community-led total sanitation and CLTS with trachoma intervention (CLTS+) campaigns. The major ones are Sightsavers, UNICEF, USAID, WHO, AMREF Health Africa, World Vision, SNV, CBM, FHF.

8.5 Further research

Following a policy brief discussed by Water Aid,[80] it was recommended that further research should be undertaken to develop WASH solutions that are in harmony with nomadic lifestyle of communities like Turkana, Pokots and Maasai in Kenya.

8.6 Key opportunities

There are opportunities to utilise government planning circles and coordination mechanisms to develop joint integrated WASH and NTD plans and accountability systems for reporting on progress based on existing policies and strategies. The NTD Unit, WASH Unit and Ophthalmic Services Unit need to realign activities and utilise the interagency forums that are in the Ministry of Health. This coordination mechanism can only be strengthened if the resources are pulled together into one forum with an expanded agenda.

There are WASH partners and government agencies such as Water Trust Fund that can be approached by counties to invest in water access infrastructure. The counties are supported with resources by the national government. NTD evidence exists that should be used for lobbying more funding for WASH and NTD integration. Turkana and Meru are some of the counties that are progressively allocating resources for water and sanitation.

Partner funds should be utilised as a seed funding for the programmes. Counties should be encouraged to progressively allocate matching funds equivalent to partners funding. This will enable county governments to sustain the programmes when the partner exits.

Counties have human resources that are paid by the government to serve the people. The human resources at the county and national levels should have capacity built to improve financial management and skills of lobbying for more resources at county assemblies based on evidence.

9 Discussions

9.1 Kenya's demographics

Demographically, Kenya's population is growing steadily with yearly change of 2.48%. This translates to an increase of 1,263,912 people that require WASH and NTD services within the NTD-endemic counties.[81] Those affected by NTDs tend to be populations living in poverty, without adequate sanitation and in close contact with vectors, domestic animals and livestock.[82] Most of the NTDs are not a direct cause of mortality, but they cause immense suffering and often lifelong disabilities. NTDs are also known to impair growth and development in children. More populations are at risk if the interventions are not geared towards elimination or eradication of the NTDs.

9.2 WASH and NTDs information

There is a direct relationship between WASH and NTDs. Water can act as a source of infections or as a breeding ground for vectors. On the other hand, an adequate safe water supply is vital for hygiene and the avoidance of infection. Inadequate safe sanitation plays a key role in transmission of NTDs such as trachoma and STH. For control of trachoma, the SAFE strategy based on facial cleanliness demonstrates the importance of access to adequate water supply, not only for drinking but also for washing. Water for personal and domestic hygiene has been found important in reducing rates of STH, schistosomiasis and trachoma. Sanitation facilities decrease severity of hookworm infestations. Review of soil-transmitted helminths and schistosomiasis shows that when sanitation improvements are made alongside deworming, the results obtained last longer.[83] In some cases, vectors may increase in domestic water sources. This is particularly important for mosquito vector of dengue fever and lymphatic filariasis. Therefore, the right to water and sanitation in Kenya is a demand from the Kenyan population under Article 43 of the Constitution and it should be provided for the population. Water and sanitation are the key intermediary social determinant for NTDs.

The WHO aims to hasten the control and elimination of some of the aforementioned diseases by developing various strategies. A recently published implementation guide developed by a consortium of NTD and WASH organisations add to the limited literature that encourages integration of WASH and NTD activities.

Similarly, Kenya has developed a strategy for blocking the transmission for the NTDs, which focuses on WASH interventions as an effective way of eliminating NTDs.

9.3 BCC initiatives/tools and approaches

People in the medical, public health and intervening organisations in Kenya know most of the neglected tropical diseases. But the majority of Kenyans still lack deeper understanding on the preventions and effects of NTDs and therefore the need to use

behaviour change initiatives. Community-led total sanitation is one of the methodologies used to change behaviour.

Government interventions and coverage

The Kenyan government has developed very elaborate policies and strategies towards tackling the health problems in the country. Most of these strategies outlive their timelines without achieving the overall goals. The reasons for this are:

- WASH and NTDs linkage; collaboration and cross interventions have largely been untapped
- There is inadequate mapping of the various NTDs across the country; discrepancies in data and information are widely witnessed at the county and national records
- Fragmented approach: NTD interventions have been targeted to specific diseases. Trachoma has received the largest attention followed by STH and LF; others like dengue fever and chikungunya only attract attention when there is an outbreak in a certain area, while others are totally neglected in terms of information and intervention
- Inadequate social mobilisation of the communities and actors
- There is little national government and county government ownership and focus on
  - trained personnel
  - coordination
  - reporting
  - funding or investment.

9.4 County focus

County focus on NTDs is lacking in many aspects including resource allocation, implementation, coordination and reporting. Unless there is a strong implementation agency for specific NTD interventions, elimination or eradication of the NTDs control and elimination may take longer than expected.

There is also weak linkage between the national government and county government in terms of WASH, BCC and NTDs data sharing and networking.

9.5 Gaps in policy and legislation and advocacy

Health sector partnership and coordination structures have not been functioning optimally since devolution.

- There are weak and disjointed coordination mechanisms among the stakeholders at national level and in the counties
- There is weak linkage between planning, budgeting and available resources
- Coordination mechanisms in health sector and Ministry of Water and Sanitation needs to be strengthened
- The working relationship between counties and national government needs to be strengthened

- Planning and budgeting need to be aligned together with available funds.

9.6 Gaps in interventions and integrations

Programme-wise, WASH, nutrition, maternal health, HIV/Aids have their own programmes and funding. Even though each have a contribution towards NTDs interventions or are affected by the prevalence of NTDs among their targeted individuals, there has been no direct linkage in the interventions with joint implementation, integration and reporting of the achievements and challenges. Programmes embrace vertical implementation of activities.

Within the different NTDs, interventions have also been independent with Irachoma, LF, schistosomiasis or STH having individual programmes focusing only on each NTD.

Opportunities

- Targeting special groups for NTDs mitigation; these include pre-schoolers, out of school children, street families, refugees and IDPs
- Utilising the existing government structures especially the devolved structures to align WASH NTDs programming
- Lobbying for funding from the counties through county assemblies.

Key problems and challenges

Behaviour

- Men defecating in the open in the name of not sharing toilets with children and women (Narok, Pokot)
- Poor hygiene practices
- Lack of maintenance of latrines at home and in school
- Lack of shoe-wearing in the communities
- Lack of hand washing facilities in schools and communities
- Nomadic community accepting flies as normal (it is associated with having more animals)
- Children and community members bathing in streams and rivers
- Using the same clothing/bed sheets in the Mayetta's
- Not using the toilets appropriately (defecating outside the squat hole)
- Children playing and swimming in rivers and earth polls or streams
- Low levels use of toilets
- Poor children's faeces disposal
- Acceptance presents of dung in close proximity to the households.

Environment

- Lack of latrines in schools and households
- Poor maintenance of latrines
- Lack of insecticides/screening materials, nets to manage flies and mosquitoes

- Poor waste management in the environment
- Discarding waste in the household indiscriminately
- No drainage for water around the villages and urban areas
- Limited waste disposal options
- Inequity resource allocation for sanitation and hygiene
- Long distance to health care facilities
- Limited veterinary public health.

Social inclusion

- Management of disgust when implementing CLTS+ so that communities or individuals are not stigmatized in the process. Elders may not appreciate the language of faeces being discussed in the community
- Discrimination of those who are affected with lymphatic filariasis (people fear associating themselves with those with swollen legs)
- Reduced work and education opportunities, impediments in sexuality and relationships, and social isolation for those affected with LF
- Increased security risk for marginalised populations (or women) when accessing services or latrines.

Treatment and care

- Some of the medicines are very expensive
- Lack of reliable water for use during treatment
- Insufficient knowledge and capacity from staff to diagnose and treat NTDs
- Insufficient surgeons in these targeted counties to address the surgeries of trachoma and LF
- Lack of follow-up of patients
- Aversion of undergoing surgery
- Ineffective communication around side effects (for MDA)
- Negative/apathetic attitudes among some health workers.

10 Recommendations

Based on the findings of this landscape analysis, the prevalence of NTDs varies from county to county, and sub-county to sub-county. There is a need to plan for interventions based on the endemicity and prevalence rates. For instance, prevalence of TF is still high in Turkana, West Pokot, Baringo and Narok counties. National, county and NTD WASH partners should develop these interventions and ensure that they are captured in the various development and investment plans. The plans should include contribution from partners such as Sightsavers and UNICEF bring on board more men during the awareness dialogue days to support and invest in WASH activities.

There are a number of partners implementing WASH interventions in the counties. Future programmes should consider utilising these partners and plan together at the county level when implementing NTD interventions. Utilise the existing planning forums and circles at national and county levels.

There are similar WASH and NTD coordination structures at the national and county level (for instance ICC, WESCOORD) that meet at different times. Future programming should endeavour to utilise these coordination structures and develop a formula of bringing the different forums together at all levels of with the leadership of government.

Partners and government have developed WASH and NTD information education materials. There needs to be a repository of all the IEC materials available in one portal for easy access. This will reduce duplications are maximise on the little available resources. The various established WASHhubs, and TWGs at county and national level should ensure that this is done with support of partners.

There are a number of policy documents that have been developed for WASH and NTDs in Kenya. It is high time that at the next programming of NTD, WASH should follow and have a joint review every year to evaluate progress. The joint review should be included in the annual work planning for national and county governments. The responsibility rests on the WASH and NTD coordinators and their partners.

Utilise the high level of radio listeners (in Coast) to address WASH and NTDs challenges. County and the NTD partners need to prepare terms of reference of engagement with the media.

Public health officers (WASH implementers) have been posted to the location level at the sub-counties. This cohort should be utilised during the WASH NTD integration programming.

The healthcare needs of refugees displaced by natural disasters or conflicts (for instance in Kakuma and Turkana County) should be catered for with regard to NTDs and WASH and other relevant diseases.

Curative and preventive interventions must be tailored to local conditions, including patterns of mobility, morbidity, and environmental and sociocultural factors.

Develop accessible web-based platforms for information on WASH and NTDs. This should be done by the national and county government in partnership with WASH NTD partners.

10.1 Specific recommendations for future programming

To deliver sustainable WASH, NTD and BCC services progressively, and eliminate inequalities in access, the NTD Unit and the sector partners must put in place the five critical blocks as in table 24.

Table 24: Specific recommendations

Critical blocks (What)	Responsible	Purpose	Level
Policies & Guidelines: NTD and WASH, BCC Communication plan and monitoring framework with outcome indicators for WASH and disease specific behaviour change	MOH, NTD Unit and WASH, NTD partners	To monitor achievements of WASH NTDs integrations; to encourage synergy and reduce duplication; have consistency of messages to the community and schools	National and county
Institutional Arrangements: Coordination mechanisms that allow for participation of a broad range of stakeholders in dialogue, communication, and identification of mutual interest around service delivery and sector Learning. Identification and allocation of institutional roles and responsibilities	MOH, NTD Unit and WASH and NTD partners	To reduce duplication of activities by multiple partners, develop mutual understanding/ responsibilities for government and all partners implementing WSH+NTD & BCC	National and county
Financing WASH & NTD, BCC: Include WASH & NTD integration in the Medium-Term Expenditure Framework, which matches government priorities with available resources. Develop Realistic and transparent sector budget with identifiable funding stream	MOH, NTD Unit, WASH Unit and partners MOWS	Investing in WASH, NTD, and BCC will reduce prevalence and burden of disease within the community	National and county donors, CSOs, academia

Critical blocks (What)	Responsible	Purpose	Level
Planning monitoring and review: effective, inclusive and systematic planning, monitoring and evaluation of sector performance to ensure the most effective route to achieve goals. Mid- and longer-term review of sector dialogue and learning. Clearly defined accountability mechanisms. Data transparency and public access to information	MOH, NTD Unit, WASH Unit and partners	To achieve the intended goals of our strategic framework, for partner and government accountability in all activities	National and county government, partners, CSOs, academia and research institutions
Capacity development: The capacity of institutions to fulfil sector roles and responsibilities for sustainable service delivery at scale, including the availability of – necessary structures, tools, training, and incentives. The capacity of individuals to effectively engage in the sector through sector institutions or as educated consumers. The capacity of sector stakeholders to adapt and innovate by engaging in sector learning	MOH, WASH, NTD, BCC partners	To fulfil sector roles and responsibilities for sustainable service delivery at scale	National and county, partners

10.2 Sectors general recommendations

National government

- Develop accountability mechanism for reporting on progress based on policies and strategies implementation in relation to WASH, NTDs and health
- Have clear and documented linkages with international intervention partners to support interventions and monitoring of WASH and NTDs in the country
- Have dedicated coordination and staff to support counties in WASH and NTD interventions. Encourage and reward county governments' efforts and achievements towards elimination and eradication. These staff and coordination structures should also provide oversight, monitoring and reporting platform for partners and counties.

County governments

- Work with county health and the sub-units working on NTDs to increase integration and coordination with WASH departments in terms of interventions, community outreach, targeting, focusing and monitoring of NTDs interventions and achievements
- Allocate budgets for interventions and demand accountability of all the departments in terms of monitoring and reporting on cases, treatments and interventions
- Build capacity of staff and community health strategy team including CHVs on WASH NTDs and BCC
- Ride on CLTS implementation and reporting to track NTDs in endemic counties.

Partners

- Align their interventions and budget with the national and county plans
- Support in the development of investment plans
- Provide and encourage matching funds with the national and county governments
- Support in the review of strategies and Policies for WASH and NTDs
- Support county and national governments in research and generation of policy briefs for WASH and NTD interventions
- Mobilise resources for WASH, NTD and BCC.

11 Conclusions

The Kenyan population remains still at risk of NTD infections due to environmental, climatic and economic conditions. For prevalence of NTDs to be reduced, a series of comprehensive health, political and social strategies will need to be implemented. There is also an urgent need to invest in impactful combination interventions to drastically reduce the number of new infections and infestations. This will require more government commitment and for tough decisions to be made at multiple levels – political, technical and operational.

This includes domestic funding for the national response, which is currently underfunded and heavily donor dependent.

Targeting inclusive WASH services towards the most affected and at-risk individuals and groups should therefore be fundamental to NTD control efforts, and programmes and policies should go beyond the practical needs of affected individuals to transformative WASH interventions that can positively impact on power relations within communities and societies.

NTD interventions must be integrated with programmes focusing on health care, water sanitation and hygiene, and behaviour change methodologies. It is evident based on this landscape analysis that eliminating NTDs as a public health problem should include a call for increased access to safe water, sanitation, hygiene and health education through intersectoral collaboration. Efforts must be channelled towards reducing the amount of human faeces in the environment, daily practice of personal and environmental hygiene activities. Therefore, it is widely accepted that WASH interventions are essential in preventing NTD infection and that mass drug administrations alone will not protect people from reinfection.

12 Annexes

Annex 1: NTD-endemic counties in Kenya

County	Population	Urban	Rural	STH	Trachoma	LF	S.Mansonai	S.HAematobium
Nairobi	4,253,330	100%	0%	14.8%	0%	0%	3.05%	0%
Nyandarua	722,498	19%	81%	9%	0%	0%	0%	0%
Nyeri	720,708	24%	76%	3.8%	0%	0%	0%	0%
Kirinyaga	595,379	16%	84%	10%	0%	0%	5%	0%
Muranga	973,231	16%	84%	6.3%	0%	0%	0.40%	0%
Kiambu	2,032,464	61%	39%	4%	0%	0%	1%	0%
Mombasa	1,242,908	100%	0%	3.8%	0%	3.2 %	0%	0%
Kwale	833,528	18%	82%	4%	0%	1%	0%	17.8%
Kilifi	1,466,856	26%	74%	3.80%	0%	3%	0%	11.3%
Tana River	301,073	15%	85%	4%	0%	2%	0%	55%
Lamu	137,180	20%	80%	3%	0%	6%	0%	10%
Taita Taveta	345,800	23%	77%	4%	0%	3%	0%	10%
Marsabit	372,931	22%	78%	1.9%	5.6%	0%	0%	0%
Meru	1,609,629	12%	88%	5%	7.2%	0%	0%	0%
Tharaka Nithi	421,914	7%	93%	4.5%	0%	0%	0%	0%
Embu	577,390	16%	84%	10%	0.2%	0%	4%	0%
Kitui	1,086,598	14%	86%	8.40%	4.8%	0%	3.8%	0%
Machakos	1,290,672	52%	48%	22%	0%	0%	4.5%	0%
Makueni	989,050	12%	88%	4.80%	0%	0%	7.8%	0%
Garissa	849,457	24%	76%	0%	0%	0%	0%	14.6%
Wajir	852,963	15%	85%	0.10%	0%	0%	0%	6.9%
Mandera	1,399,503	18%	82%	0%	0%	0%	0%	0%
Siaya	964,390	11%	89%	41.6%	0%	0%	17.3%	0%
Kisumu	1,145,747	52%	48%	23%	0%	0%	9.20%	0%

Homabay	1,177,181	14%	86%	20.6%	0%	0%	8.9%	9.5%
Migori	1,243,272	34%	66%	27%	0%	0%	22.3%	9.15%
Kisii	1,367,049	22%	78%	29.2%	0%	0%	0.9%	0%
Nyamira	692,641	14%	86%	40%	0%	0%	1.4%	0%
Turkana	1,427,797	14%	86%	7%	10%	0%	0%	0%
West-Pokot	777,180	8%	92%	6%	0%	0%	0.3%	0%
Samburu	319,708	17%	83%	0.4%	8.3%	0%	0%	0%
Kajiado	999,819	41%	59%	**	9.7%	0%	0.1%	0%
Kakamega	2,028,325	15%	85%	41.9%	0%	0%	0.01%	0%
Bungoma	1,655,281	22%	78%	47.6%	0%	0%	0%	0%
Busia	953,337	9.6%	91.5%	27.1%	0%	0%	11%	0%
Baringo	723,411	11%	89%	17.7%	12.8%	0%	2.35%	0%
Uasin-Gishu	1,211,853	39%	61%	0.2%	0%	0%	0.2%	0%
Elgeiyo Marakwet	460,092	14%	86%	**	0%	0%	0%	0%
Bomet	891,168	18%	82%	31.1%	0%	0%	0%	0%
Kericho	910,006	28%	72%	31.7%	0%	0%	0%	0%
Nandi	955,683	14%	86%	31.5%	0%	0%	0%	0%
T/Nzoia	1,100,794	20%	80%	30.1%	0%	0%	0%	0%
Isiolo	191,627	44%	56%	0%	3.30%	0%	0%	0%
Nakuru	2,046,395	46%	54%	0.9%	0%	0%	5.6%	0%
Narok	1,021,104	7%	93%	39%	14.9%	0%	1.20%	0%
Laikipia	479,072	25%	75%	0%	2.24%	0%	0%	0%
Vihiga	606,856	31%	69%	**		0%	0%	0%

Annex 2 | Projected Population for Under Five by Sex and County, (2019)

County	Male	Female	Total
Mombasa	82,455	80,562	163,017
Kwale	75,405	74,635	150,039
Kilifi	124,184	123,229	247,413
Tana River	31,709	30,645	62,354
Lamu	10,296	9,836	20,133
Taita Taveta	23,729	23,865	47,594
Garissa	29,279	27,444	56,723
Wajir	30,345	29,486	59,831
Mandera	47,534	48,046	95,581
Marsabit	26,394	24,237	50,631
Isiolo	13,650	12,281	25,931
Meru	109,232	103,668	212,899
Tharaka Nithi	28,654	27,116	55,770
Embu	37,612	35,737	73,349
Kitui	92,187	87,386	179,574
Machakos	83,748	79,136	162,884
Makueni	72,329	68,299	140,627
Nyandarua	52,883	51,534	104,417
Nyeri	48,272	46,329	94,600
Kirinyaga	36,052	35,861	71,913
Murang'a	71,308	70,263	141,572

Kiambu	127,130	126,944	254,075
Turkana	76,607	73,578	150,185
West Pokot	66,357	65,934	132,291
Samburu	28,533	28,970	57,503
Trans Nzoia	95,074	94,613	189,687
Uasin Gishu	90,585	90,850	181,435
Elgeyo Marakwet	40,967	41,155	82,122
Nandi	83,093	82,865	165,958
Baringo	62,782	60,777	123,559
Laikipia	38,969	38,839	77,808
Nakuru	162,517	160,265	322,782
Narok	113,977	112,435	226,412
Kajiado	73,950	73,070	147,020
Kericho	84,956	76,800	161,757
Bomet	87,589	77,471	165,060
Kakamega	174,567	173,844	348,411
Vihiga	52,545	51,426	103,971
Bungoma	150,655	145,543	296,198
Busia	79,477	77,453	156,930
Siaya	80,323	80,263	160,586
Kisumu	90,306	90,411	180,717
Homa Bay	99,337	99,458	198,795
Migori	100,580	100,802	201,382
Kisii	109,617	109,240	218,858

Nyamira	54,767	54,203	108,969
Nairobi City	363,631	355,766	719,397
Total	3,716,149	3,632,572	7,348,721

Annex 3 | Population of School-going Children by County

3-5 years

County	% Currently attending	% not attending	No. of individuals (000s)	Total no. attending (000s)
Mombasa	98.7	1.3	56	55.272
Kwale	100	0	42	42
Kilifi	96.5	3.5	92	88.78
Tana River	100	0	17	17
Lamu	96.4	3.6	7	6.748
Taita/Taveta	100	0	21	21
Garissa	100	0	4	4
Wajir	100	0	10	10
Mandera	100	0	11	11
Marsabit	100	0	11	11
Isiolo	98.7	1.3	9	8.883
Meru	98.7	1.3	69	68.103
Tharaka-Nithi	100	0	18	18
Embu	100	0	22	22
Kitui	99.2	0.8	60	59.52

Machakos	99	1	46	45.54
Makueni	99.4	0.6	48	47.712
Nyandarua	97.6	2.4	36	35.136
Nyeri	100	0	41	41
Kirinyaga	100	0	31	31
Murang'a	98.5	1.5	56	55.16
Kiambu	100	0	101	101
Turkana	98.6	1.4	59	58.174
West Pokot	97	3	40	38.8
Samburu	98.7	1.3	20	19.74
Trans Nzoia	100	0	56	56
Uasin Gishu	100	0	74	74
Elgeyo/ Marakwet	97.8	2.2	31	30.318
Nandi	99.3	0.7	65	64.545
Baringo	100	0	47	47
Laikipia	97.9	2.1	18	17.622
Nakuru	99.6	0.4	126	125.496
Narok	100	0	66	66
Kajiado	100	0	48	48
Kericho	98.5	1.5	50	49.25
Bomet	99.8	0.2	58	57.884
Kakamega	98.5	1.5	120	118.2
Vihiga	100	0	32	32
Bungoma	99.6	0.4	97	96.612

Busia	99	1	47	46.53
Siaya	99.5	0.5	63	62.685
Kisumu	100	0	87	87
Homa Bay	99.7	0.3	82	81.754
Migori	100	0	77	77
Kisii	99.2	0.8	107	106.144
Nyamira	100	0	49	49
Nairobi City	98.6	1.4	305	300.73
Average	99.23	0.77	56	55.53

6-13 years

County	% Currently attending	% not attending	No. of individuals (000s)	Total no. attending (000s)
Mombasa	99.7	0.3	210	209.37
Kwale	97.5	2.5	195	190.125
Kilifi	98.4	1.6	35	34.44
Tana River	96.9	3.1	72	69.768
Lamu	97.1	2.9	30	29.13
Taita/Taveta	99.9	0.1	74	73.926
Garissa	98.6	1.4	59	58.174
Wajir	98.2	1.8	95	93.29
Mandera	99.5	0.5	153	152.235
Marsabit	97.8	2.2	55	53.79
Isiolo	99	1	32	31.68

Meru	96.9	3.1	301	291.669
Tharaka-Nithi	99.1	0.9	83	82.253
Embu	100	0	112	112
Kitui	100	0	275	275
Machakos	99.4	0.6	209	207.746
Makueni	99.9	0.1	210	209.79
Nyandarua	99.3	0.7	162	160.866
Nyeri	100	0	133	133
Kirinyaga	98.3	1.7	119	116.977
Murang'a	98.5	1.5	216	212.76
Kiambu	100	0	316	316
Turkana	96.1	3.9	187	179.707
West Pokot	96.9	3.1	147	142.443
Samburu	100	0	57	57
Trans Nzoia	99.6	0.4	240	239.04
Uasin Gishu	99.8	0.2	240	239.52
Elgeyo/ Marakwet	99.9	0.1	104	103.896
Nandi	99.8	0.2	207	206.586
Baringo	100	0	159	159
Laikipia	99.6	0.4	110	109.56
Nakuru	99.8	0.2	494	493.012
Narok	99.6	0.4	267	265.932
Kajiado	99	1	170	168.3
Kericho	99.8	0.2	227	226.546

Bomet	100	0	249	249
Kakamega	99.6	0.4	449	447.204
Vihiga	98.7	1.3	158	155.946
Bungoma	99.7	0.3	395	393.815
Busia	99.6	0.4	216	215.136
Siaya	99.2	0.8	238	236.096
Kisumu	98.2	1.8	271	266.122
Homa Bay	99.6	0.4	290	288.84
Migori	100	0	302	302
Kisii	99.7	0.3	328	327.016
Nyamira	99.8	0.2	166	165.668
Nairobi City	97.3	2.7	629	612.017
Average	99.05	0.95	201	199.22

14-17 years

County	% Currently attending	% not attending	No. of individuals (000s)	Total no. attending (000s)
Mombasa	81.7	18.3	59	48.203
Kwale	84.6	15.4	78	65.988
Kilifi	90.2	9.8	140	126.28
Tana River	85.6	14.4	28	23.968
Lamu	84.7	15.3	11	9.317
Taita/Taveta	90.5	9.5	33	29.865
Garissa	92.6	7.4	35	32.41

Wajir	90.9	9.1	38	34.542
Mandera	92.6	7.4	63	58.338
Marsabit	88.7	11.3	20	17.74
Isiolo	87	13	13	11.31
Meru	84	16	136	114.24
Tharaka-Nithi	92.1	7.9	39	35.919
Embu	91.9	8.1	49	45.031
Kitui	90.6	9.4	114	103.284
Machakos	94.3	5.7	115	108.445
Makueni	91.5	8.5	112	102.48
Nyandarua	90.2	9.8	76	68.552
Nyeri	95.1	4.9	70	66.57
Kirinyaga	90.4	9.6	50	45.2
Murang'a	82.9	17.1	100	82.9
Kiambu	85.7	14.3	168	143.976
Turkana	87.6	12.4	64	56.064
West Pokot	94.6	5.4	64	60.544
Samburu	92.8	7.2	18	16.704
Trans Nzoia	87.7	12.3	110	96.47
Uasin Gishu	92.1	7.9	108	99.468
Elgeyo/ Marakwet	95.9	4.1	45	43.155
Nandi	89.1	10.9	102	90.882
Baringo	89.2	10.8	73	65.116
Laikipia	91.2	8.8	44	40.128

Nakuru	86.5	13.5	165	142.725
Narok	87.4	12.6	94	82.156
Kajiado	88.5	11.5	70	61.95
Kericho	95.5	4.5	89	84.995
Bomet	93.1	6.9	90	83.79
Kakamega	92.7	7.3	228	211.356
Vihiga	90.3	9.7	64	57.792
Bungoma	98.5	1.5	186	183.21
Busia	90.5	9.5	99	89.595
Siaya	88.1	11.9	113	99.553
Kisumu	88.3	11.7	100	88.3
Homa Bay	89.7	10.3	112	100.464
Migori	92.6	7.4	149	137.974
Kisii	94.6	5.4	138	130.548
Nyamira	93.9	6.1	74	69.486
Nairobi City	86.7	13.3	219	189.873
Average	90.10	9.90	88.62	79.93

Annex 4 | Proportions of literacy rate for male and female in NTDs co-endemic counties

County	Male (%)	Female (%)
Mombasa	96.9	94
Kwale	81.1	56.5
Kilifi	92.8	73.6
Tana River	80.4	61.3
Lamu	88.9	79.7
Taita/Taveta	92.4	85.5
Garissa	54.3	32.4
Marsabit	48.1	99.2
Meru	83.4	77.3
Embu	91.2	84
Kitui	89.6	77.7
Machakos	95.7	89.7
Makueni	85.9	80.2
Kirinyaga	95.2	85.9
Kiambu	96.1	92.7
Turkana	57.7	27.2
West Pokot	70.2	55.7
Samburu	46.5	34.1
Trans Nzoia	94.5	88.8
Uasin Gishu	90.7	87.1
Baringo	88	80.8
Narok	79.8	63.7
Kajiado	87.7	81

Vihiga	92.1	88.1
Bungoma	92.7	86.4
Busia	91.9	71.8
Siaya	93.9	84.9
Kisumu	97.5	91.7
Homa Bay	92.7	82.6
Migori	97.1	82.4
Kisii	94.2	88.9
Nyamira	92.3	83.9
Nairobi City	99.5	98.7

Percentage Distribution of Population aged 15-24 years by ability to Read and Write in all counties

County	Male literate (%)	Male not stated (%)	Female literate (%)	Female not stated (%)
Mombasa	99.3	0	98.9	0
Kwale	92.6	0.4	80.8	0
Kilifi	93.6	2.1	93	3.1
Tana River	91	1.6	82.1	0.2
Lamu	96.5	0.6	96	0
Taita/Taveta	96.5	1	97	0.8
Garissa	81.3	0	67	1.5
Wajir	70.4	8.6	53.4	4.8
Mandera	87.2	1	57.1	1.6
Marsabit	66.2	0.8	59.5	2.5
Isiolo	76.4	0	81.9	0
Meru	91.8	3	93.6	0
Tharaka-Nithi	96.6	0.6	97.5	0.7
Embu	96.8	0.9	100	0
Kitui	97.2	0.6	99	0
Machakos	99.7	0.3	99.2	0
Makueni	94.4	0.7	98.1	0
Nyandarua	99.2	0.5	99.6	0
Nyeri	98.2	0	97.9	1.6
Kirinyaga	97.3	0.6	94.9	3.8
Murang'a	97.9	1	96.7	1
Kiambu	99.4	0	100	0
Turkana	79.6	0.9	53.3	1.6

West Pokot	85.9	1.6	80.9	0.6
Samburu	55.5	0	52.1	0
Trans Nzoia	96.8	1.8	97.6	1.4
Uasin Gishu	89.6	7.7	93.4	5.9
Elgeyo/Marakwet	96.2	0	96.3	0
Nandi	98.6	0.4	99	1
Baringo	91.9	0	96.9	0
Laikipia	90.8	0.8	87.7	3.2
Nakuru	98.9	1.1	99	0.7
Narok	88.1	1.6	84	0.9
Kajiado	90.8	1.5	92.4	0.1
Kericho	96.9	1	97.2	0.5
Bomet	93.4	1.2	91	4.8
Kakamega	93.4	0.8	95.4	0.5
Vihiga	97.6	0.2	98.9	1.1
Bungoma	95.3	0.5	98.7	0.5
Busia	97.2	0	97.1	0
Siaya	96.1	0.7	98.5	0
Kisumu	98.7	0.7	98.5	0.9
Homa Bay	96.5	0	96.4	0
Migori	98.8	1.2	98.6	0
Kisii	97.8	0.2	98.1	1.3
Nyamira	98.5	0	97.3	0.5
Nairobi City	100	0	99.2	0.5

Annex 5: Prevalence of Disease for which Mass Drug Administration Programmes are being Delivered

County	Disease	Sub-Counties	Prevalence	MDA coverage	Implementers	Date of Data	Source
Pokot	Trachoma	Kacheliba	13.8%	81%	Fred Hollows Foundation	2017	Impact surveys
	Trachoma	Sigor	10.3%	81%	Fred Hollows Foundation	2017	Impact surveys
	Trachoma	Kapenguria	5.2%	81%	Fred Hollows Foundation	2017	Impact surveys
Turkana	Trachoma	Turkana West	17.5%	86%	Sightsavers	2017	Impact surveys
	Trachoma	Loima	11.5%	86%	Sightsavers	2017	Impact surveys
	Trachoma	North	9.3%	86%	Fred Hollows Foundation	2017	Impact surveys
	Trachoma	Kakuma	5.2%	86%	Sightsavers	2017	Impact surveys
	Trachoma	South	6.9%	86%	Fred Hollows Foundation	2017	Impact surveys
	Trachoma	East	8.6%	86%	Fred Hollows Foundation	2017	Impact surveys
Narok	Trachoma	South 4/SE	12.2%	87%	Fred Hollows Foundation	2019	Impact surveys
Baringo	Trachoma	Tiaty	12.8%	61%	Fred Hollows Foundation	2018	Impact surveys
Samburu	Trachoma	East,North West	8.0%	80%	AMREF Health Africa	2017	Impact surveys
Meru	Trachoma	Igembe North	7.2%	0	CBM	2018	Impact surveys
Marsabi	Trachoma	Laisamis	5.6%	96%	CDO	2017	Impact surveys

	Trachoma	Saku	5.6%	96%	CDO	2017	Impact surveys
Kajiado	Trachoma	West	9.7%	90%	AMREF Health Africa	2017	Impact surveys
Kilifi	LF	Kilifi	3%	88%	MOH/partners	2018	NPELF
	LF	Malindi	3%	82%	MOH/Partners	2018	NPELF
	LF	Kaloleni	2%	93%	MOH/Partners	2018	NPELF
Kwale	LF	Kwale	1%	73%	MOH/Partners	2018	NPELF
	LF	Mswambeni	1%	96%	MOH/Partners	2018	NPELF
	LF	Kinango	1%	73%	MOH/Partners	2018	NPELF
Tana River	LF	Wanje	0	80%	MOH/Partners	2018	NPELF
	LF	Kipini	1.8%	107 %	MOH/Partners	2018	NPELF
Mombasa	LF	Bamburi	2.9%	90%	MOH/Partners	2018	KEMRI
	LF	Kisauni	4.2%	90%	MOH/Partners	2018	KEMRI
	LF	Likoni	4.1%	99%	MOH/Partners	2018	KEMRI
	LF	Majengo	3%	99%	MOH/Partners	2018	KEMRI
	LF	Miritini	2%	94%	MOH/Partners	2018	KEMRI
Taita Taveta	LF	Taita	2%	90%	MOH/Partners	2018	NPELF

For STH see Annex: 18

Limitation: The Consultant did not manage to get aggregated data for School Deworming and Schistosomiasis MDA

Annex 6 | NTD Interventions

Programme: Kenya Trachoma Elimination Programme

Training of HCW, CHV on MDA and follow up of patient care Surgeries, Mapping, mobilization, Advocacy, trachoma IEC material.

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: Sightsavers & implementing partners (FHF, OEU, CBM), MOH at National and County level

Geographic scope: 12 Trachoma endemic counties

Funding: The Queen Elizabeth Diamond Jubilee trust (QEDJT)

Supported by government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Surgeries (door to door - mobile teams)

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: Spanish doctors

Geographic scope: Turkana North

Funding: Spain

Supported by government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Surgeries (door to door - mobile teams)

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: Comic Relief

Geographic scope: Marsabit County

Funding: Partners

Supported by government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Provision of Zithromax (MDA) & Community mobilization on Trachoma, & surgery activities

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: Catholic Diocese of Marsabit

Geographic scope: Marsabit County

Funding: Catholic Church

Supported by government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Provision of Zithromax (MDA) & Community mobilization on Trachoma, & surgery activities

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: AMREF Health Africa

Geographic scope: Samburu, Narok south & West

Funding: Partners Donations

Supported by government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Provision of Zithromax (MDA) & Community mobilization on Trachoma, & surgery activities

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: ARSIM/Lutheran Church

Geographic scope: Samburu North (2006-2011)

Funding: Church Donations/Partners

Supported by government officers by paying salaries (Trachoma human resources)

Dates: 2011

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: Kenya Trachoma Elimination Programme

Surgeries (door to door mobile teams)

Target: Communities endemic with TF >5%

Coordinating partners: National government, Ministry of Health Ophthalmic Services Unit

Implementing partners: Lions club (Loresho)

Geographic scope: Narok West/South-(Marasiana & Loita Ward)- 2011-2012

Funding: Lions club

Supported by government officers by paying salaries (Trachoma human resources)

Dates: 2012

Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: National school based Deworming Programme (NSBDP)

Deworming with Albendazole, demonstration of MDA adherence, health education, promote school clubs, peer to peer discussion of STH, shoe wearing, preventions talk

Target: Schools age children in all 44 endemic counties

Coordinating partners: National Government, Ministry of Health Division of child Health and Ministry of Education

Implementing partners: MOH (County), MOH (National), MOE and Implementing Partners i.e. Deworm the World initiative/Evidence Action

Geographic scope: 44 STH endemic counties

Funding: MOH, Deworm the World initiative/Evidence Action, Children's' Investment Fund Foundation (CIFF), The END Fund, KEMRI, WHO, JICA, Kenya Red-cross, Innovations for poverty Action (ipa)

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase (2018-2022) Ongoing

Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Programme: Schistosomiasis Programme

Advocate for gumboots wearing in rice fields, reduce contact to surface water in endemic areas, health seeking, prevention messages

Target: Communities in schistosomiasis-endemic counties

Coordinating partners: National Government, Ministry of Agriculture, Ministry of Health

Implementing partners: National irrigation board, Ministry of Agriculture, MOH (County), MOH (National) partners

Geographic scope: 32 Schisto-endemic counties

Funding: The end fund, Children's Investment Fund Foundation (CIFF), Deworm the World initiative/Evidence Action

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase (2018-2022) Ongoing

Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Programme: Kenya National Programme to Eliminate Lymphatic Filariasis (NPELF)

MDA, and advocate for adherence, Surgery, post surgery follow up, TNs, House screening, Health education to the community, talk shows & road shows, community outreach, environmental management, protective clothing

Target: Communities in Coastal region

Coordinating partners: National Government, Ministry of Health NTD Unit

Implementing partners: MOH (National and County)

Geographic scope: 5 LF endemic counties

Funding: WHO, END fund, Evidence Action, KEMRI, MOH-KEMSA, African institute for health and development, interconnected health solutions, Pharmacy and Poisons Board, County Government

Support government officers by paying salaries (human resources), procurement and distribution of drugs

Dates: Ongoing (Kenya National Breaking Transmission Strategy (2019-2023)

Reported through (NPELF) Programme.

Annex 7: Organisations and/or Ministries Carrying out NTD-related Activities in Kenya

Kenya Trachoma Elimination Programme

Partner: MOH at county level & National

Partner type: Government

Role: Coordination & Implementation

Sector/s: Ministry of Water, Ministry of Education, Ministry of Gender

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Intervention: Training of HCW, CHV on MDA and follow up of patient, care & treatment to ensure clients take medicine and advise on side effects

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: FHF, OEU, CBM, Sightsavers, AMREF health Africa,

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Ministry of water (county)

Partner type: Government

Role: Coordination & design of water infrastructure

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: The National Treasury

Intervention: Provision of Zithromax (MDA) & Community mobilization

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: Sightsavers, FHF, OEU, CBM,

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Sightsavers

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Intervention: Training of HCW, CHV on MDA and follow up of patient care Surgeries, Mapping, mobilization, Advocacy, trachoma IEC material

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: FHF, OEU, CBM

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Spanish Doctors

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Spain

Intervention: Surgeries (door to door - mobile teams)

Geographic scope: Turkana North Sub-County

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Comic Relief

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Partners

Intervention: Surgeries (door to door - mobile teams)

Geographic scope: Marsabit County

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Catholic Diocese of Marsabit

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Catholic Church

Intervention: Provision of Zithromax (MDA) & Community mobilization on Trachoma, & surgery activities

Geographic scope: Marsabit County

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: AMREF Health Africa

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Partner donations

Intervention: Provision of Zithromax (MDA) & Community mobilization on Trachoma, & surgery activities

Geographic scope: Samburu, Narok South & West

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: ARSIM/Lutheran Church

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Partners / church donations

Intervention: Provision of Zithromax (MDA) & Community mobilization on Trachoma, & financing surgery activities

Geographic scope: Samburu North

Partner organisations: Sightsavers, FHF, OEU, CBM, AMREF Health Africa

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Lions Club

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Lions Club

Intervention: Provision of Zithromax (MDA) & Community mobilization on Trachoma, & financing surgery activities

Geographic scope: Narok West/South-(Marasiana & Loita Ward)- 2011-2012

Partner organisations: Sightsavers, FHF, OEU, CBM, AMREF Health Africa

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

National school-based Deworming Programme (NSBDP)

Partner: Deworm the World initiative/Evidence Action

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: MOH, Deworm the World initiative/Evidence Action, Children's' Investment Fund Foundation (CIFF), The END Fund

Intervention: Deworming with Albendazole, demonstration of MDA adherence, health education, promote school clubs, peer to peer discussion of STH, shoe wearing, preventions talk

Geographic scope: 44 STH-endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: NTD, Child Health, School Technical working groups

Schistosomiasis Programme

Partner: Ministry of Agriculture

Partner type: Government

Role: Implementation and coordination

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: Children's' Investment Fund Foundation (CIFF), The END Fund

Intervention: Advocate for gumboots wearing in rice fields, reduce contact to surface water in endemic areas, health seeking, prevention messages

Geographic scope: 32 endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: NTD, Child Health, School Technical working groups

Kenya National Programme to Eliminate Lymphatic Filariasis (NPELF)

Partner: National Government, Ministry of Health NTD Unit

Partner type: Government

Role: Implementation and coordination

Sector/s: MOH NTD Unit, KEMRI, County Government

Funding: Children's' Investment Fund Foundation (CIFF), The END Fund

Intervention: WHO, END fund, Evidence Action, KEMRI, MOH-KEMSA, African institute for health and development, interconnected health solutions, Pharmacy and Poisons Board, County Government

Geographic scope: 6 endemic counties

Partner organisations: KEMRI, KEMSA, AMREF

Forums/coordination groups: NTD Technical working group, MOH Inter-agency coordinating committee

Annex 8: WASH Activities in Kenya

Programme: Kenya Trachoma Elimination Programme

Training of HCW, CHV on water treatment, safe storage follow up of households and schools with basic water, Sanitation & Hygiene (CLTS+), Advocacy, health promotion, radio programmes, TV, road shows, Murals, posters, hand washing with soap, face cleaning

Target/ Audience: Communities endemic with TF >5%

Partner coordinating: National Government, Ministry of Health Ophthalmic Services Unit, (WASH focal person)

Partners implementing: Sightsavers & implementing partners (FHF, OEU, CBM), MOH at national and county level

Geographic Scope: 12 Trachoma-endemic countries

Funding: The Queen Elizabeth Diamond Jubilee trust (QEDJT)

Support government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007 -National Breaking Transmission Strategy (2019-2023)

Data reporting: Reported through KTEP Programme. Eye infection data through DHIS2 tool.

Programme: National school-based Deworming Programme (NSBDP)

Triggering schools on SLTS and handwashing at critical times, food safety, Latrine uses advocacy, wearing of shoes, water provision, hygiene murals, training of teachers.

Target/ Audience: Schools in all 44 endemic counties

Partner coordinating: National Government, Ministry of Health Division of child Health and Ministry of Education

Partners implementing: MOH (county), MOH (national), MOE and Implementing Partner (IP) (vary between counties)

Geographic Scope: 44 STH-endemic countries

Funding: MOH, Deworm the World initiative/Evidence Action, Children's' Investment Fund Foundation (CIFF), The END Fund

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase(2018-2022 National Government, Ministry Of Health Ophthalmic Services Unit, (WASH focal person)) Ongoing

Data reporting: Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Programme: Schistosomiasis Programme

Advocate for / provision of gumboots wearing in rice fields, reduced contact with surface water, use of latrines, health promotion, hand washing

Target/ Audience: Communities in schisto infestations-endemic counties

Partner coordinating: National Government, Ministry of Agriculture, Ministry of Health

Partners implementing: National irrigation board, Ministry of Agriculture, MOH (county), MOH (national)

Geographic Scope: 32 Schisto-endemic counties

Funding: The end fund, Children's Investment Fund Foundation (CIFF), Deworm the World initiative/Evidence Action

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase (2018-2022) Ongoing

Data reporting: Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Programme: Kenya National Programme to Eliminate Lymphatic Filariasis (NPELF)

ITNs, House screening, Health education to the community, talk shows & road shows, community outreach, environmental management, protective clothing, Advocate for proper environmental management (eliminating stagnant water and other breeding sites for mosquitoes)

Target/ Audience: Communities in Coastal region

Partner coordinating: National Government, Ministry of Health NTD Unit

Partners implementing: MOH (county and national)

Geographic Scope: 5 LF-endemic counties

Funding: WHO, END fund, Evidence Action, KEMRI, MOH-KEMSA, African institute for health and development, interconnected health solutions, Pharmacy and Poisons Board, County Government

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Ongoing (Kenya National Breaking Transmission Strategy (2019-2023)

Data reporting: Reported through (NPELF) Programme

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding, SOPO Soap talking Books.

Target/ Audience: Communities in 9 Counties in UNICEF Focus areas: Baringo, Turkana, Kitui, Isiolo, Garissa, West pokot, Siaya, Mandera.

Partner coordinating: National and County Government

Partners implementing: County government

Geographic Scope: 9 UNICEF focus Counties & 9 WSSCC Counties

Funding: UNICEF, Global Fund through AMREF Health Africa & USAID through KIWASH, World Vision, PLAN International

Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Ongoing-CLTS Campaign 2016-2020

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T-shirts branding

Target/ Audience: Communities in 9 Counties in UNICEF Focus areas: Baringo, Turkana, Kitui, Isiolo, Garissa, West pokot, Siaya, Mandera.

Partner coordinating: National Government

Partners implementing: AMREF HEALTH Africa and County Government, through local NGO/CBOs

Geographic Scope: 11 WSSCC/GSF Counties: Nakuru, Muranga, Kwale, Wajir, Uasin-Gishu, Kisii, usia, Migori, Embu, Tharaka, Narok

Funding: GSF/WSSCC

Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2021

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T-shirts branding

Target/ Audience: Communities in PLAN international Focus Counties

Partner coordinating: National and county Government

Partners implementing: PLAN Kenya

Geographic Scope: PLAN International focus counties

Funding: Plan International

Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2022

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T-shirts branding

Target/ Audience: Communities in World Vision Focus Counties

Partner coordinating: National and county Government

Partners implementing: World Vision Kenya

Geographic Scope: World Vision focus counties

Funding: World Vision

Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2023

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. BCC/Social Marketing/ Creative Media (Super School of Five)

Target/ Audience: Communities in Unilever Focus Counties

Partner coordinating: National and county Government

Partners implementing: Unilever

Geographic Scope: Turkana, Kitui

Funding: Unilever

Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2024

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: Community Led Total Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. CLTS+, BCC, IEC Murals for Schools, Capacity on BCC

Target/ Audience: Communities in all 12 Trachoma endemic counties and schools with TF>5%

Partner coordinating: National and county Government

Partners implementing: Sightsavers & implementing partners (FHF, OEU, CBM), MOH at county level

Geographic Scope: 12 Trachoma-endemic countries

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2025

Data reporting: Reported through CLTS Online system at Ministry of Health

Programme: SANIVATION Sanitation Programme

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Citywide inclusive sanitation planning, reuse business model

Target/ Audience: Urban communities

Partner coordinating: County Government

Partners implementing: SANIVATION

Geographic Scope: Nakuru

Funding: Partners & Donors

Support government officers by paying salaries (human resources)

Dates: Ongoing in Urban slums of Nakuru

Data reporting: Report through the County

Programme: Water and Sanitation for the Urban Poor Program (WSUP)

Focused on Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma. Citywide inclusive sanitation planning, reuse business model

Target/ Audience: Urban communities

Partner coordinating: County Government

Partners implementing: WSUP

Geographic Scope: Nakuru, Kisumu, Kilifi, Mombasa

Funding: UK Aid

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Report through the County

Water Sanitation & Hygiene Program by World Vision

WASH Related diseases: ie STH, Trachoma, Schistosomiasis. Water access, Sanitation improvement and Hygiene promotion

Target/ Audience: WASH in emergencies in refugee camps/communities and in Schools

Partner coordinating: County Government

Partners implementing: World Vision

Geographic Scope: Turkana, West Pokot, Baringo, Wajir, Tana River Kilifi., Marsabit, Garissa

Funding: World Vision & Partners / Donors, USAID, OCHA, Bill & Melinda Gates foundation

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Reported through CLTS Online system at Ministry of Health

Hygiene Promotion Program

WASH Related diseases: ie STH, Trachoma, Schistosomiasis. Hygiene promotion in schools –Menstrual hygiene management (MHM)

Target/ Audience: Communities & Schools

Partner coordinating: County Government

Partners implementing: World Vision, UNICEF, WSSCC, Afripads, Garden of Hope, Global Sanitation environmental programme

Geographic Scope: 9 UNICEF focused Counties &WVI counties ie Turkana, West Pokot, Baringo, Wajir, Tana River Kilifi. Marsabit, Garissa

Funding: UNICEF * WSSCC

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Reported through CLTS Online system at Ministry of Health

Hand Washing Programme

WASH Related diseases. Hand washing with soap promotion in schools and communities

Target/ Audience: Communities & Schools

Partner coordinating: County Government

Partners implementing: Tippy tap

Geographic Scope: Nairobi (Kawangware)

Funding: Partners and donations

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: There is a gap in hygiene data

WASH in Schools Programme

WASH Related diseases. Hygiene promotion in Schools

Target/ Audience: Schools

Partner coordinating: County and national Government

Partners implementing: Kenya Red Cross, UNICEF, CARITAS Swiss,

Geographic Scope: 47 counties

Funding: Partners and donors

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: There is a gap in hygiene data

Water Access Program

WASH Related diseases. Supply of water to communities and schools - Drilling boreholes, dams and water tanks

Target/ Audience: Communities and schools

Partner coordinating: County and national Government

Partners implementing: MOWS, Water service providers, Water Boards

Geographic Scope: 47 counties

Funding: Government, Partners and donors

Government allocate funds for water activities

Dates: Ongoing in the counties

Data reporting: Through Water Boards- /WARIS

Football for Water programme

WASH Related diseases. Football for Water is working to provide sustainable and safe water and sanitation facilities

Target/ Audience: Schools

Partner coordinating: Football for Water

Partners implementing: Football for Water

Geographic Scope: Kisumu, Trans-nzoia, Migori, kakamega, Mombasa, Kilifi

Funding: Football for WASH and Partners

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Data gap in getting structured data for WASH in schools

Food for the Hungry –WASH Programme

WASH Related diseases. Implementing CLTS methodology

Target/ Audience: Communities

Partner coordinating: County Government

Partners implementing: Food for the Hungry, WASH partners at the Counties

Geographic Scope: Moyale, Marsabit

Funding: Food for the Hungry, partners

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Reported through CLTS Online system at Ministry of Health

Water access programme

WASH Related diseases. Support in water access, distribution of hygiene Kits during Emergencies (Humanitarian response)

Target/ Audience: Communities

Partner coordinating: County Government

Partners implementing: Medical Emergency Relief International-(MERLIN)-Kenya/ Save the Children

Geographic Scope: Turkana

Funding: MERLIN / Save The Children, partners

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Data reported through water service providers

Water access programme

Water-related diseases. Support in water access

Target/ Audience: Communities

Partner coordinating: County Government

Partners implementing: Nyasare Water Supply Association Migori

Geographic Scope: Migori

Funding: Members of the Association and partners

Support through CDF funds. Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Data reported through water service providers

Water safety programme

Water-related diseases. Safe water for the communities

Target/ Audience: Communities

Partner coordinating: County Government

Partners implementing: Safe water and Aids Project (SWAP)

Geographic Scope: Western Kenya

Funding: Partners & Safe water and Aids project

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Water data reported through water service providers

Water safety programme

Water-related diseases. Safe water for the communities

Target/ Audience: Communities and schools

Partner coordinating: National and County Government

Partners implementing: National government

Geographic Scope: 47 counties

Funding: WHO – Funding & Technical assistance, Pr

Support government officers by paying salaries (human resources)

Dates: Ongoing

Data reporting: Water data reported through water service providers.

Annex 9: Organisations and/or Ministries Carrying out WASH Activities in Kenya

Kenya Trachoma Elimination Programme

Partner: MOH at county level & National

Partner type: Government

Role: Coordination & Implementation

Sector/s: Ministry of Water, Ministry of Education, Ministry of Gender

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Intervention: Training of HCW, CHV on MDA and follow up of patient, care & treatment to ensure clients take medicine and advise on side effects

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: FHF, OEU, CBM, Sightsavers, AMREF health Africa,

Forums/coordination groups: NTD, Ophthalmic services Technical Working Groups Task forces and inter-agency coordinating Committees

Kenya Trachoma Elimination Programme

Partner: Ministry of Water (county)

Partner type: Government

Role: Coordination and design of water infrastructure

Sector/s: MOH, MOWS & MOE

Funding: The national treasury

Intervention: Provision of water to communities and schools

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: Sightsavers, FHF, OEU, CBM,

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Kenya Trachoma Elimination Programme

Partner: Sightsavers

Partner type: INGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Intervention: Training of HCW, CHV on water treatment, safe storage follow up of households and schools with basic water, Sanitation & Hygiene (CLTS+), Advocacy, health promotion, radio programmes, Tv, road shows, Murals , posters, hand washing with soap, face cleaning

Geographic scope: 12 Trachoma-endemic countries

Partner organisations: FHF, OEU, CBM

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Kenya Trachoma Elimination Programme

Partner: Catholic Diocese of Marsabit

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: The Catholic Church

Intervention: Community Led Total Sanitation (CLTS+), Promotion of face washing & Hygiene

Geographic scope: Marsabit County

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Kenya Trachoma Elimination Programme

Partner: AMREF Health Africa

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, ophthalmic Unit, Child health division, MOWS & MOE

Funding: Partner donations

Intervention: Community Led Total Sanitation (CLTS+), Promotion of face washing & Hygiene

Geographic scope: Samburu, Narok south & West

Partner organisations: Sightsavers, FHF, OEU, CBM

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

National school-based Deworming Programme (NSBDP)

Partner: Deworm the World initiative/Evidence Action

Partner type: NGO

Role: Implementation

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: MOH, Deworm the World initiative/Evidence Action, Children's Investment Fund Foundation (CIFF), The END Fund

Intervention: Hand washing at critical times, food safety, Latrine uses advocacy, wearing of shoes, water provision, hygiene murals, training of teachers

Geographic scope: 44 STH-endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Schistosomiasis Programme

Partner: Ministry of Agriculture

Partner type: Government

Role: Implementation and coordination

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: Children's Investment Fund Foundation (CIFF), The END Fund

Intervention: Advocate for gumboots wearing in rice fields, Advocate for reduced contact with surface water

Geographic scope: 32 endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Schistosomiasis Programme

Partner: National Government Ministry of Agriculture, MOH

Partner type: Government/NGO

Role: Implementation and coordination

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: Children's Investment Fund Foundation (CIFF), The END Fund

Intervention: Advocate for reduced contact with surface water

Geographic scope: 33 endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Schistosomiasis Programme

Partner: MOH (county) & Deworm the World initiative/Evidence Action

Partner type: Government/NGO

Role: Implementation and coordination

Sector/s: MOH NTD units, Division of Child Health, and KEMRI, MOE

Funding: Children's Investment Fund Foundation (CIFF), The END Fund

Intervention: Provision of gumboots wearing in rice fields, reduced contact with surface water, use of latrines, health promotion, hand washing

Geographic scope: 34 endemic counties

Partner organisations: KEMRI, KEMSA, AMREF, MOE

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community Led Total Sanitation Programme

Partner: Sightsavers

Partner type: INGO

Role: Implementation

Sector/s: MOH National & County

Funding: UNICEF, AMREF Health Africa, UNICEF, World Vision, PLAN Kenya

Intervention: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, t-shirts

Geographic scope: 12 Trachoma-endemic counties

Partner organisations: FHF, OEU, CBM,

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community Led Total Sanitation Programme

Partner: World Vision (Kenya)

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: World Vision

Intervention: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, t-shirts

Geographic scope: Norok south

Partner organisations: Sightsavers, FHF, OEU, CBM, AMREF Health Africa.

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community Led Total Sanitation Programme

Partner: County government

Partner type: Government

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: UNICEF, GSF/WSSCC

Intervention: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, t-shirts

Geographic scope: 11 GSF-WSSCC Counties, 9: Nakuru, Muranga, Kwale, Wajir, Uasin-gishu, Kisii, Busia, Migori, Embu, Tharaka-Nithi and Narok and 10 UNICEF Counties: W/Pokot, Baringo, Turkana, Siaya, Kitui, Garissa, Samburu, Migori, Marsabit, Isiolo

Partner organisations: Sightsavers, FHF, OEU, CBM, AMREF Health Africa.

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community Led Total Sanitation Programme

Partner: Neighbours International Agency

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: Neighbours International Agency

Intervention: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, t-shirts

Geographic scope: Turkana East & Central

Partner organisations: Sightsavers, FHF, OEU, CBM,UNICEF

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community Led Total Sanitation Programme

Partner: Feed the Children

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: Feed the Children partners

Intervention: CLTS, Sand dams, Borehole drilling, water piping, school health

Geographic scope: Turkana Central, Kajiado, Kiambu

Partner organisations: Sightsavers, FHF, OEU, CBM,UNICEF

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community-Led Total Sanitation Programme

Partner: Dig Deep

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: Feed the Children partners

Intervention: Construction of sanitary facilities at schools and demonstrations at households & Support hygiene activities

Geographic scope: Narok West

Partner organisations: AMREF health Africa, County of Narok

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Community-Led Total Sanitation Programme

Partner: World Concern

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: World concern partners

Intervention: Renovation of boreholes & construction of water pans

Geographic scope: Narok South

Partner organisations: AMREF health Africa, County of Narok

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water Trust Fund Programme

Partner: Water Trust Fund (WTF)

Partner type: Government SAGAS (Institutions) under Ministry of Water & Sanitation

Role: Implementation

Sector/s: MOH National WASHhub,

Funding: Trust Fund through Ministry of Water & Sanitation

Intervention: Renovation of boreholes & construction of water pans

Geographic scope: Narok South, West, East & Trans Mara West

Partner organisations: County government

Forums/coordination groups: WSTF/Ministry of water and Sanitation committees, Water services providers forums

Water Services Programme

Partner: Lake Victoria South Basin Authority

Partner type: Government SAGAS under Ministry of Water & Sanitation (Parastatal)

Role: Implementation

Sector/s: MOH National WASHhub, ministry of Environment

Funding: The National Treasury

Intervention: Provision of Water tanks in schools

Geographic scope: Trans Mara East & West

Partner organisations: County government and WASH partners

Forums/coordination groups: MOWS Forums

Water Services Programme

Partner: Counties

Partner type: Government

Role: Implementation

Sector/s: MOH National WASHhub, ministry of Environment

Funding: The National Treasury

Intervention: Provision of Water tanks in schools communities through springs and drilling of boreholes

Geographic scope: 47 counties

Partner organisations: County government and WASH partners

Forums/coordination groups: MOWS Forums

Water and Sanitation & hygiene Programme (WASH)

Partner: Kenya Water for Health Organization (KWAHO)

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, County government

Funding: KHWAHO –Partners

Intervention: CLTS , Water supply, water safety at household level & School WASH

Geographic scope: 9 Counties: Kwale, Laikipia, Muranga, Kiambu, Homabay, Migori, Kisumu

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: Kenya Integrated Water, Sanitation and hygiene Project (KIWASH)

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: USAID

Intervention: Water Management & Infrastructure with water services board, WASH and Nutrition, Sanitation Marketing, Social behavior Change,

Geographic scope: 9 Counties: Kitui, Makueni, Nairobi, Kakamega, Busia, Siaya, Kisumu, Nyamira, Migori

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: PLAN Kenya

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: PLAN International Partners

Intervention: Community Led Total Sanitation, Water safety, School WASH

Geographic scope: 9 Counties: Kilifi, Kwale, Homabay, Siaya, Nairobi, Machakos, Tharaka-Nithi, Kisumu, Migori

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: Netherlands Development Organization (SNV)

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: SNV-Organization

Intervention: Scaling up market based sanitation solutions, CLTS implementation, Documentation and Knowledge development, bringing evidence for policy improvement, water access support

Geographic scope: 5 Counties: E/Marakwet, Homabay, Kisumu, Kericho, Kilifi

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: Water & Sanitation for the Urban Poor (WSUP)

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: UKAID

Intervention: Influence regulatory environment, Support investment in water and sanitation sectors

Geographic scope: 6 Counties: Nairobi, Naivasha, Mombasa, Nakuru, Kisumu, Kilifi (Malindi)

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: SANERGY

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: SANERGY partners

Intervention: Build affordable sanitation products for slums and franchise to serve all residents, collect faecal matter, treat and convert into manure

Geographic scope: Nairobi

Partner organisations: County government and WASH partners, Universities, Ministry of Agriculture

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County, Ministry of agriculture committees

Water and Sanitation & hygiene Programme (WASH)

Partner: UMANDE Trust

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: UMANDE partners

Intervention: Governance and Advocacy capacity building

Geographic scope: Nairobi, (Kibera), Nakuru

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: CABDA-Community assets building & development

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: CABDA partners

Intervention: Water Sanitation and Hygiene (WASH), Orphans Vulnerable Children and Caregivers support (OVCs), community empowerment through Self-Help Group Approach (SHG) and Community Development Project (CDP),

Geographic scope: Western and Nyanza (Kakamega, Busia, Vihiga)

Partner organisations: County government and WASH partners

Forums/coordination groups: Environmental health coordinating committee, and WASH technical working groups both at National & County

Water and Sanitation & hygiene Programme (WASH)

Partner: Maji na ufanisi

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: partners

Intervention: WASH capacity building, evidence based policy making, sustainability, gender equity inclusion: support national policies and laws which provide a legal framework and lead to the institutional setup through which water resources and water services in the country are managed.

Geographic scope: 47 counties

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WASH forums at Counties, Water service providers

Water and Sanitation & hygiene Programme (WASH)

Partner: Kenya Red Cross Society

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Donations from partners

Intervention: WASH in emergencies

Geographic scope: 47 counties

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WESCOORD forums, Environmental health inter-agency coordination committee

Water and Sanitation & hygiene Programme (WASH)

Partner: KEWASNET

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Donations from partners

Intervention: Coordination of partners, capacity building and Advocacy on WASH

Geographic scope: 47 counties

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WESCOORD forums, Environmental health inter-agency coordinating committee, WASH forums in Ministry of Health & Ministry of Water & Sanitation

Water and Sanitation & hygiene Programme (WASH)

Partner: Care International

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Donations from partners

Intervention: Implementation of WASH in Schools

Geographic scope: Garissa County (Dadaab), Kisumu

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: School Health Technical Committees, WASH Forums

Water and Sanitation & hygiene Programme (WASH)

Partner: Oxfam

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Donations from partners

Intervention: WASH in Emergencies

Geographic scope: Turkana

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WESCOORD Forums, WASH forums in Counties

Water and Sanitation & hygiene Programme (WASH)

Partner: Millennium Water Alliance

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: USAID

Intervention: Water Sanitation & Hygiene, Governance, Private partnership

Geographic scope: 5 Counties: Garissa, Wajir, Marsabit, Isiolo, Turkana

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WESCOORD Forums, WASH forums in Counties

Water and Sanitation & hygiene Programme (WASH)

Partner: Practical Action

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Department for International Development, Comic Relief, World Vision, Danish International Development Agency

Intervention: Improving Sanitation & Hygiene & Resilience and Disaster management

Geographic scope: 3 Counties: Turkana, Kisumu, Homabay

Partner organisations: County government and WASH partners, Community based organization

Forums/coordination groups: WESCOORD Forums, WASH forums in Counties

Humanitarian response Programme

Partner: Save the Children & MERLIN Kenya

Partner type: NGO

Role: Implementation

Sector/s: MOH National WASHhub, Ministry of water & Sanitation, County government

Funding: Department for International Development, Comic Relief, World Vision, Danish International Development Agency

Intervention: Responding to Humanitarian crisis, Water safety , access & Nutrition

Geographic scope: Turkana 47-Counties

Partner organisations: UNICEF, County Government, WHO,

Forums/coordination groups: WESCOORD, Forums, WASH Forums

Water safety Programme

Partner: WHO

Partner type: UN

Role: Technical assistance to Government

Sector/s: MOH National & Health Department at Counties, Ministry of Water & Sanitation – Water services boards

Funding: WHO

Intervention: Water safety

Geographic scope: 47 Counties

Partner organisations: KWAHO, UNICEF, PSI, MOWS, County Government, SWAP,

Forums/coordination groups: WESCOORD Forums, WASH Forums at National & County

Annex 10: WASH & NTD related Social and Behaviour Change interventions

Kenya Trachoma Elimination Programme

Disease: Trachoma

Intervention and description: Training of HCW, CHV on MDA and follow up of patient and care to ensure clients take medicine and advise on side effects, Community Mobilization (sensitization for MDA), Men advocacy to address sanitation and hygiene in the community through goat eating (Narok county), Triggering communities using CLTS+ methodology for trachoma prevention, Radio Programmes - talk shows, announcements, Trachoma branded t-shirts and Lesos, Trachoma Posters, Trachoma Manuals and brochures, Trachoma Foldable murals

Target/audience: Communities endemic with TF >5%

Partner coordinating: National Government, Ministry Of Health Ophthalmic Services Unit

Partners implementing: Sightsavers & implementing partners (FHF, OEU, CBM), MOH at national and county level

Geographic scope: 12 Trachoma-endemic countries

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Support: Support government officers by paying salaries (Trachoma human resources)

Dates: Ongoing from 2007 -National Breaking Transmission Strategy (2019-2023)

Data reporting: Reported through KTEP Programme. Eye infection data through DHIS2 tool

National school based Deworming Programme

Disease: Worm infestations

Intervention and description: Demonstration through mass media and encourage community to practice food safety, Health education & promotion on hygiene and sanitation and adherence to prescribed medicine, child to child initiative: engage children to talk to each other about hygiene

Target/audience: Schools in all 44 endemic counties

Partner coordinating: National Government, Ministry of Health Division of child Health and Ministry of Education

Partners implementing: MOH (county), MOH (national), MOE and Implementing Partner (IP) (vary between counties)

Geographic scope: 44 STH-endemic counties

Funding: MOH, Deworm the World initiative/Evidence Action, Children's' Investment Fund Foundation (CIFF), The END Fund

Support: Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase (2018-2022) Ongoing

Data reporting: Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Schistosomiasis Programme

Disease: Schisto infestations in rice fields

Intervention and description: Advocate for gumboots wearing in rice fields, advocate for reduced contact with surface water, Health education on vector control for Schistosomiasis, Health education on hygiene and sanitation, Community outreach through local TV and Radio stations, Advocate for enhanced health seeking behaviour and adherence

Target/audience: Communities in schisto infestations endemic counties

Partner coordinating: National Government, Ministry of Agriculture, Ministry of Health

Partners implementing: National irrigation board, Ministry of Agriculture, MOH (county), MOH (national),

Geographic scope: 32 Schisto endemic counties

Funding: The end fund, Children's' Investment Fund Foundation (CIFF), Deworm the World initiative/Evidence Action

Support: Support government officers by paying salaries (human resources), procurement of drugs, their distribution and research

Dates: Second Phase (2018-2022) Ongoing

Data reporting: Reported through (NSBDP) Programme. Intestinal Worms infection data through DHIS2 tool

Kenya National Programme to Eliminate Lymphatic Filariasis(NPELF)

Disease: Lymphatic Filariasis

Intervention and description: Discourage through road shows and community gatherings stigmatization of people suffering from LF, MDA and advocate for adherence, Health education on hygiene and sanitation, Community outreach through local TV and Radio stations, Advocate for enhanced health seeking behaviour and adherence, Posters on screening of houses and use of treated bed nets to reduce mosquito densities

Target/audience: Communities in Coastal region

Partner coordinating: National Government, Ministry of Health NTD Unit

Partners implementing: MOH (national and county)

Geographic scope: 5 LF endemic counties

Funding: WHO, END fund, Evidence Action, KEMRI, MOH-KEMSA, African institute for health and development, interconnected health solutions, Pharmacy and Poisons Board, County Government

Support: Support government officers by paying salaries (human resources),procurement and distribution of drugs

Dates: Ongoing (Kenya National Breaking Transmission Strategy (2019-2023)

Data reporting: Reported through (NPELF) Programme.

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding, SOPO Soap talking Books

Target/audience: Communities in 9 Counties in UNICEF Focus areas.- Baringo, Turkana, Kitui, Isiolo, Garissa, West pokot, Siaya, mandera

Partner coordinating: National & County Government

Partners implementing: County Government

Geographic scope: 9 UNICEF focus Counties & 9 WSSCC Counties

Funding: UNICEF, Global Fund through AMREF Health Africa & USAID through KIWASH, World Vision, PLAN International,

Support: Support government officers by paying salaries (human resources), procurement and distribution of drugs

Dates: Ongoing-CLTS Campaign 2016-2020

Data reporting: Reported through CLTS Online system at Ministry of Health

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding

Target/audience: Communities in WSSCC/GSF Counties,

Partner coordinating: National Government

Partners implementing: AMREF HEALTH Africa and County Government

Geographic scope: 11 WSSCC/GSF Counties

Funding: UNICEF, USAID through KIWASH, World Vision, PLAN International,

Support: Support government officers by paying salaries (human resources),

Dates: Ongoing-CLTS Campaign 2016-2021

Data reporting: Reported through CLTS Online system at Ministry of Health

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding

Target/audience: Communities in PLAN international Counties,

Partner coordinating: National and County Government

Partners implementing: PLAN Kenya

Geographic scope: PLAN International

Funding: UNICEF, Global Fund through AMREF Health Africa & USAID through KIWASH, World Vision,

Support: Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2022

Data reporting: Reported through CLTS Online system at Ministry of Health

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding

Target/audience: Communities in World Vision focus Counties,

Partner coordinating: National and County Government

Partners implementing: World Vision Kenya

Geographic scope: World Vision focus areas

Funding: UNICEF, Global Fund through AMREF Health Africa & USAID through KIWASH

Support: Support government officers by paying salaries (human resources),

Dates: Ongoing-CLTS Campaign 2016-2023

Data reporting: Reported through CLTS Online system at Ministry of Health

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: BCC/Social Marketing/ Creative Media (Super School of Five)

Target/audience: Communities in Unilever focus Counties,

Partner coordinating: National and County Government

Partners implementing: Unilever

Geographic scope: Unilever focus areas

Funding: Unilever

Support: Support government officers by paying salaries (human resources),

Dates: Ongoing-CLTS Campaign 2016-2024

Data reporting: Reported through CLTS Online system at Ministry of Health

Community Led Total Sanitation Programme

Disease: Diarrheal Diseases, Soil Transmitted Helminths, Schistosomiasis, Trachoma

Intervention and description: CLTS+, BCC, IEC Murals for Schools, Capacity on BCC

Target/audience: Communities in all 12 Trachoma endemic counties and schools with TF>5%

Partner coordinating: National and County Government

Partners implementing: Sightsavers & implementing partners (FHF, OEU, CBM), MOH at county level

Geographic scope: 12 Trachoma-endemic countries

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Support: Support government officers by paying salaries (human resources)

Dates: Ongoing-CLTS Campaign 2016-2025

Data reporting: Reported through CLTS Online system at Ministry of Health

Annex 11: Organisations undertaking WASH-related Behaviour Change interventions

Programme: Kenya Trachoma Elimination Programme

Partner: MOH at county level & National

Type of Partner: Government

Role: Coordination & Implementation

Sector(s): Ministry of Water, Ministry of Education, Ministry of Gender

Funding: The Queen Elizabeth Diamond Jubilee Trust (QEDJT)

Intervention: WASH, BCC, CLTS+, CLTS and manuals for triggering, Manuals, Posters, Murals, Posters,

Geographic Scope: 12 Trachoma endemic countries

Partner Organisations: FHF, OEU, CBM, Sightsavers, AMREF health Africa,

Forums/Coordination Groups Involved: WASH & F&E Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Programme: National school based Deworming Programme (NSBDP)

Partner: MOH (county), MOH (National), MOE and Implementing Partner (IP) (vary between counties)

Type of Partner: Government/Partners

Role: Coordination, Implementation and design

Sector(s): MOH WASH unit, Division of Child health, NTD, and MOWS, MOE

Funding: MOH, Deworm the World initiative/Evidence Action, Children's' Investment Fund Foundation (CIFF), The END Fund

Intervention: Demonstration through mass media and encourage community to practice food safety, Health education & promotion on hygiene and sanitation and adherence to prescribed medicine, child to child initiative: engage children to talk to each other about hygiene

Geographic Scope: 44 STH endemic counties

Partner Organisations: KEMRI, KEMSA, AMREF, MOE, WHO, JICA,

Forums/Coordination Groups Involved: WASH Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Programme: Schistosomiasis Programme

Partner: MOH (county), MOH (National), MOE and Implementing Partner (IP) (vary between counties)

Type of Partner: Government/Partners

Role: Coordination, Implementation and design

Sector(s): MOH WASH unit, Division of Child health, NTD, and MOWS, MOE

Funding: MOH, The end fund, Children's' Investment Fund Foundation (CIFF), Deworm the World initiative/Evidence Action

Intervention: Advocate for gumboots wearing in rice fields, advocate for reduced contact with surface water, Health education on vector control for Schistosomiasis, Health education on hygiene and sanitation, Community outreach through local TV and Radio stations, Advocate for enhanced health seeking behaviour and adherence

Geographic Scope: 32 Schisto endemic counties

Partner Organisations: KEMRI, KEMSA, AMREF, MOE, WHO, JICA,

Forums/Coordination Groups Involved: WASH Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Kenya National Programme to Eliminate Lymphatic Filariasis (NPELF)

Partner: MOH (county), MOH (National), MOE and Implementing Partner (IP) (vary between counties)

Type of Partner: Government/Partners

Role: Coordination, Implementation and design

Sector(s): MOH WASH unit, Division of Child health, NTD, and MOWS, MOE

Funding: MOH, WHO, END fund, Evidence Action, KEMRI, MOH-KEMSA, African institute for health and development, interconnected health solutions, Pharmacy and Poisons Board, County Government

Intervention: Discourage through road shows and community gatherings stigmatization of people suffering from LF, MDA and advocate for adherence, Health education on hygiene and sanitation, Community outreach through local TV and Radio stations, Advocate for enhanced health seeking behaviour and adherence, Posters on screening of houses and use of treated bed nets to reduce mosquito densities

Geographic Scope: 5 LF-endemic counties

Partner Organisations: KEMRI, KEMSA, AMREF, MOE, WHO, JICA,

Forums/Coordination Groups Involved: WASH Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Community Led Total Sanitation Programme

Partner: MOH (county), MOH (National), MOE and Implementing Partner (IP) (vary between counties)

Type of Partner: Government/Partners

Role: Coordination, Implementation and design

Sector(s): MOH WASH unit, Division of Child health, NTD, and MOWS, MOE

Funding: UNICEF, WSSCC/GSF, The queen elizabeth diamond jubilee trust fund (DEDJTF), USAID, World Vision

Intervention: Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding, SOPO Soap talking Books

Geographic Scope: focused counties

Partner Organisations: KEMRI, KEMSA, AMREF, MOE, WHO, JICA,

Forums/Coordination Groups Involved: WASH Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Community Led Total Sanitation Programme

Partner: MOH (county), MOH (National), MOE and Implementing Partner (IP) (vary between counties)

Type of Partner: Government/Partners

Role: Coordination, Implementation and design

Sector(s): MOH WASH unit, Division of Child health, NTD, and MOWS, MOE

Funding: UNICEF, WSSCC/GSF, The queen elizabeth diamond jubilee trust fund (DEDJTF), USAID, World Vision

Intervention: BCC/Social Marketing/ Creative Media (Super School of Five), CLTS+, BCC, IEC Murals for Schools, Capacity on BCC Open defecation free communication plan, CLTS protocol & CLTS Training Manuals, Posters, T -shirts branding

Geographic Scope: focused counties

Partner Organisations: KEMRI, KEMSA, AMREF, MOE, WHO, JICA,

Forums/Coordination Groups Involved: WASH Technical Working Groups and inter-agency coordination Committees & Health Promotion Technical working Groups

Hygiene Promotion Programme

Partner: UNICEF

Type of Partner: UN

Role: Implementation

Sector(s): WASH

Funding: UNICEF, WSSCC, Garden of Hope

Intervention: Advocacy on Menstrual Hygiene Management, Hygiene Promotion in Schools through SOPO talking Books

Geographic Scope: 10 Counties: W/Pokot, Baringo, Turkana, Siaya, Kitui, Garissa, Samburu, Migori, Marsabit, Isiolo

Partner Organisations: PSI Kenya, MOE, AMREF Health Africa

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Hygiene Promotion

Partner: WSSCC-Through AMREF Health Africa

Type of Partner: NGO

Role: Implementation

Sector(s): WASH sectors

Funding: Global Sanitation Fund (GSF)

Intervention: Advocacy and demonstration of menstrual hygiene Management (MHM) products

Geographic Scope: 9 Focused Counties: Nakuru, Muranga, Kwale, Wajir, Uasin-gishu, Kisii, Busia, Migori, Embu, Tharaka-Nithi and Narok

Partner Organisations: UNICEF, MOH,CBOs in the 9 focused Counties, Afripads

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Hygiene Promotion

Partner: Garden of Hope

Type of Partner: NGO

Role: Implementation

Sector(s): WASH sectors

Funding: Donations

Intervention: Hygiene Promotion on Menstrual Hygiene

Geographic Scope: Nairobi (Kibera), Samburu, Kajiado, Kitui

Partner Organisations: WSSCC, AMREF Health Africa, UNICEF, Afripads

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Hygiene Promotion Programme

Partner: UNICEF

Type of Partner: INGO-UN

Role: Implementation

Sector(s): WASH sectors

Funding: UNICEF, WSSCC, Garden of Hope

Intervention: Menstrual Hygiene Management in schools

Geographic Scope: W/Pokot, Baringo, Turkana, Siaya, Kitui, Garissa, Samburu, Migori, Marsabit, Isiolo

Partner Organisations: WSSCC, AMREF Health Africa, Afripads

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Sanitation & Hygiene Promotion (BCC)

Partner: Population Service (PS)- Kenya-

Type of Partner: NGO

Role: Implementation

Sector(s): WASH sectors

Funding: Population Service International (PSI), Partners, Donors

Intervention: Works with National & County government to change key WASH behaviours;

Geographic Scope: National

Partner Organisations: MOH, County governments, UNICEF, & WASH and partners

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Hygiene Promotion Programme

Partner: World Vision Kenya (WV-K)

Type of Partner: NGO

Role: Implementation

Sector(s): WASH sectors

Funding: Donations

Intervention: Hygiene Promotions in Schools and Communities using Social Behaviour Change Communications (SBCC) models

Geographic Scope: National and county

Partner Organisations: MOH, County governments,

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Financial Inclusion Improves Sanitation & Health in Kenya - Programme

(FINISH INK)

Partner: FINISH INK, Supported by AMREF

Type of Partner: NGO

Role: Implementation

Sector(s): WASH sectors

Funding: WASTE, AMREF, Flying Doctors

Intervention: Create awareness on the need for a safe and durable toilet, strengthen local businesses to facilitate supply side requirements and design markets that increase affordability.

Geographic Scope: Kilifi, Kwale, Embu, Isiolo, Tharaka-Nithi, Busia, Meru

Partner Organisations: WASTE, AMREF

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

Hygiene Promotion Programme

Partner: Unilever Kenya

Type of Partner: Private Sector

Role: Implementation

Sector(s): WASH sectors

Funding: Unilever Kenya LTD

Intervention: Hygiene Promotion in Schools through Super School of Five

Geographic Scope: Kitui

Partner Organisations: MOH, County Government

Forums/Coordination Groups Involved: Hygiene promotion Technical Working Groups and inter-agency coordination Committees & WASH Forums

School WASH Programme

Partner: National & County Government

Type of Partner: Government

Role: Implementation

Sector(s): WASH sectors

Funding: County governments

Intervention: WASH in Schools

Geographic Scope: 47 counties

Partner Organisations: MOH, MOE, MOWS, WASH Partners

Forums/Coordination Groups Involved: WASH Forums

Health Care Waste Management Programme

Partner: National & County Government

Type of Partner: Government

Role: Implementation

Sector(s): WASH sectors

Funding: County governments

Intervention: Implementation of Non-Burn technologies at the Counties and hygiene promotion in Hospitals- Hand washing

Geographic Scope: Nakuru, Kisii, Mombasa, Uasin-Gishu referral Hospitals. Hygiene promotion in all 47 Counties' hospitals

Partner Organisations: MOH, Ministry of Environment, UNDP, PATH & partners

Forums/Coordination Groups Involved: WASH Forums

Annex 12 | Prevalence and Programme Information on Endemic NTDs

Disease	Endemic districts / suspected]	Prevalence/ incidence / cases	Programme & coverage	Date	Source	Implementers/ organisations
Buruli ulcer	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic
Chagas disease	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic
Chromoblastomycosis	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic

Dengue fever	Mandera South (12), Nyali Mombasa (1), Changamwe (1), Mandera North (105) and Mvita (118) sub-counties	237 cases were reported in the week 9 March 2019	Active surveillance, IRS-indoor residual spraying, for mosquito vector control	2019	IDSR weekly bulletin	Ministry of Health
Dracunculiasis (Guinea worm)	West Pokot	Non endemic	Active Surveillance in West Pokot. No case for the last two years. Environmental Manipulation	2019	MOH	WHO, MOH
Echinococcosis/ hydatidosis	*Did not get data	*Did not get data	*Did not get data	*Did not get data	*Did not get data	MOH
Endemic treponematoses (Yaws)	*Did not get data	*Did not get data	*Did not get data	*Did not get data	*Did not get data	MOH
Foodborne trematode infections	*Did not get data	*Did not get data	*Did not get data	*Did not get data	*Did not get data	MOH
Human African trypanosomiasis (Sleeping sickness)	*Did not get data	*Did not get data	*Did not get data	*Did not get data	*Did not get data	MOH

Leishmaniasis (Visceral/ cutaneous)	Macllakos, Kitui, Makueni, Nidii, Isiolo, Laikipia, Baringo, Samburu, Nakuru,Laikipia, Mandera, Busia, Kajiado, Narok	Varies from endemic counties	Behaviour communication, WASH interventions, vector control	2019	NTDs Strategic plan	MOH, counties
Leprosy	Non endemic	Non endemic	Non endemic	Non endemic	Non endemic	MOH, County government (say non-endemic)
Lymphatic Filariasis	5 Endemic counties	3.00%	Active surveillance, IRS-indoor residual spraying, for mosquito vector control	2019	MOH NTDs unit	MOH and Partners
Onchocerciasis (River blindness)	Not endemic	Not endemic	WASH interventions	2017		MOH, counties
Rabies	Not endemic	Not endemic	Not endemic	Not endemic	Not endemic	MOH, counties
Scabies	Not endemic	Not endemic	Not endemic	Not endemic	Not endemic	MOH, counties
Schistosomiasis	32 Endemic counties	Varies in the endemic counties	MDA, WASH interventions, behaviour change	2019	NTDs strayegic plan	MOH, partners

Snakebite	Mapped counties with venomous snakes			MOH	-	MOH, counties
Soil-transmitted helminthiases	44 Endemic counties	44 Endemic counties	MDA, WASH interventions	MOH and partners	ESPEN data and MOH	MOH, counties
Taeniasis/ Cysticercosis	Not endemic	Not endemic	Not endemic	Not endemic	Not endemic	MOH, counties
Trachoma	12 endemic counties	5-over 10% TF	MDA, Surgery, WASH interventions, F & E	2019	2018/ 2019	

Annex 13 | WASH Information for Households in NTD endemic Counties (Note: Sub Counties data could not be obtained from the KNBS)

County	Date of data	Proportion of Access to improved water	Proportion Access to improved sanitation	Proportion of Population practicing open defecation	Proportion of households with hand-washing facilities (of which % with soap and water)
Turkana	2017	39%	6.7%	81.6%	18%
Marsabit	2017	38%	12.9%	50.9%	14%
Samburu	2017	34 %	3%	62.8%	7%
Meru	2017	59%	24.6%	51.5%	35%
Kajiado	2017	66%	21.7%	14.9%	30%

Narok	2017	20%	25.3%	27.9%	7%
West Pokot	2017	25%	22%	50.3%	3%%
Baringo	2017	56%	28%	40%	7%
Tana River	2017	67%	4.9%	58.0%	17%
Taita Taveta	2017	80%	41.1%	1.9%	37%
Mombasa	2017	82%	20.0%	0.1%	18%
Lamu	2017	75%	29.0%	12.1%	21%
Kwale	2017	60%	21.9%	42.1%	12%
Kilifi	2017	78%	22.1%	24.3%	17%
Embu	2017	70%	29%	3%	15%
Kitui	2017	53%	24%	21%	11%
Machakos	2017	68%	43%	3%	16%
Makueni	2017	53%	33%	2.4%	5%
Kirinyaga	2017	64%	33%	0.4%	21%
Kiamabu	2017	93%	21%	0.8%	41%
Uasin-gishu	2017	69%	22%	2%	14%
Vihiga	2017	88%	13%	1%	16%
Busia	2017	75%	11%	2.2%	16%
Siaya	2017	57%	23%	11%	23%
Kisumu	2017	80%	32%	11%	19%
Homabay	2017	34%	19%	29%	18%
Migori	2017	61%	22%	23%	5%
Kisii	2017	89%	17%	3%	3%
Nyamira	2017	84%	31%	0.5%	5%
Nairobi	2017	97%	25%	6%	44%
Garissa	2017	60%	15%	35%	6%

Annex 14 | Health Facilities Access to Water and Sanitation

Counties	H-Facilities	Safe water	Sanitation and hygiene
Baringo	162	78%	83%
Bomet	106	84%	90%
Bungoma	130	73%	78%
Busia	73	88%	86%
Elgeyo-Marakwet	107	74%	76%
Embu	141	73%	71%
Garissa	120	65%	73%
Homa Bay	167	91%	89%
Isiolo	38	78%	73%
Kajiado	194	67%	69%
Kakamega	213	79%	82%
Kericho	163	79%	77%
Kiambu	294	69%	69%
Kilifi	188	55%	59%
Kirinyaga	120	66%	61%
Kisii	122	85%	78%
Kisumu	137	85%	86%
Kitui	300	70%	72%
Kwale	91	77%	83%
Laikipia	82	70%	74%
Lamu	39	63%	65%
Machakos	247	61%	62%

Makueni	172	71%	76%
Mandera	59	38%	44%
Marsabit	85	61%	64%
Meru	336	49%	47%
Migori	156	86%	86%
Mombasa	278	40%	38%
Muranga	174	71%	71%
Nairobi	790	47%	48%
Nakuru	300	64%	66%
Nandi	170	70%	69%
Narok	122	65%	68%
Nyamira	106	87%	90%
Nyandarua	103	69%	67%
Nyeri	205	59%	61%
Samburu	67	74%	78%
Siaya	147	89%	91%
Taita Taveta	78	78%	75%
Tana River	46	55%	64%
Tharaka Nithi	109	55%	53%
Trans-Nzoia	131	46%	50%
Turkana	129	60%	74%
Uasin Gishu	134	65%	71%
Vihiga	79	82%	78%
Wajir	99	43%	60%
West Pokot	79	63%	65%

Annex 15 | Pupil to Toilet Ratio in NTD endemic Counties

Counties	Male Ratios	Female Ratios
Turkana	109:1	74:1
Marsabit	41:1	31:1
Samburu	45:1	35:1
Meru	25:1	22:1
Kajiado	37:1	32:1
Narok	43:1	35:1
West Pokot	54:1	33:1
Baringo	32:1	25:1
Tana River	38:1	34:1
Taita taveta	29:1	24:1
Mombasa	54:1	48:1
Lamu	30:1	28:1
Kwale	41:1	37:1
Kilifi	49:1	43:1
Embu	22:1	17:1
Kitui	28:1	26:1
Machakos	28:1	25:1
Makueni	28:1	24:1
Kirinyaga	21:1	17:1
Kiambu	25:1	21:1
Uasin-gishu	30:1	27:1
Vihiga	31:1	26:1
Busia	46:1	43:1

Siaya	40:1	34:1
Kisumu	43:1	37:1
Homabay	44:1	38:1
Migori	54:1	46:1
Kisii	34:1	30:1
Nyamira	26:1	23:1
Nairobi	42:1	33:1
Garissa	43:1	34:1
Elgeiyo-Marakwet	20:1	23:1
Nandi	29:1	25:1
T/Nzoia	50:1	43:1
Kakamega	40:1	35:1
Isiolo	26:1	22:1
Bomet	34:1	29:1
Kericho	29:1	26:1
Nairobi	42:1	33:1
Mandera	77:1	56:1
Wajir	61:1	43:1
Kiambu	25:1	21:1
Nyeri	18:1	13:1
Laikipia	25:1	20:1
Tharaka-Nithi	18:1	17:1
Nyandarua	24:1	19:1
Murang'a	18:1	15:1

Note: sub-county data could not be obtained during this analysis

Annex 16 | Trachoma Impact Surveys 2017-2018

Known disease distribution of Trachoma in Baringo County-2018 Impact

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Tiaty (Former East Pokot)	12.80	1.35	2018	Survey report

Known disease distribution of Trachoma in West Pokot County- 2017 Impact

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Kacheliba	13.80	1.12	2017	Survey report
Kapenguria	5.17	0.65	2017	Survey report
Sigor	10.32	0.18	2017	Survey report
Pokot South	3.90	0.07	2017	Survey report

Known disease distribution of Trachoma in Turkana County-2017 Impact

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Turkana West	17.5	0.95	2017	Survey report
Kakuma Refugee camp	5.20	0.60	2017	Survey report
Loima	11.54	0.62	2017	Survey report
Turkana Central	4.73	0.18	2017	Survey report
Turkana South	6.90	0.26	2017	Survey report
Turkana East	8.59	0.50	2017	Survey report
Turkana North and Kibish	9.31	0.54	2017	Survey report

Known disease distribution of Trachoma in Narok County-2018 Impact 3 & Surveillance

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Emurua Dikirr (Former Trans Mara NE)	1.16	0.08	2018	Survey report
Narok North (Segment 1/NW)	2.62	0.02	2018	Survey report
Narok North (Segment 2/NE)			2018	Survey report
Narok East (Segment 3/Central)	12.60	0.55	2018	Survey report
Narok South (Segment 4/SE)	12.21	0.35	2018	Survey report
Narok West (Segment 5/SW)	19.88	0.47	2018	Survey report

Known disease distribution of Trachoma in Samburu County-2017 Impact 2

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Samburu East	8.03	0.44	2017	Survey report
Samburu North			2017	Survey report
Samburu West			2017	Survey report

Known disease distribution of Trachoma in Marsabit County- 2017 Impact

Sub-County	TF Prevalence (%)	TT Prevalence (%)	Date of data	Source
Laisamis: Former Laisamis and Loiyangalani (Former Marsabit segment)	5.59	0.07	2017	Survey report

Saku (Former Marsabit segment)			2017	Survey report

Annex 17 | NTDs Out-Patient Data for Persons under 5 by County in 2016

County	Schistosomiasis	Eye infections	STH	Leishmaniasis	Trypanosomiasis
Baringo	11	5442	1480	2	0
Bomet	18	5313	11085	0	0
Bungoma	23	3822	3090	0	0
Busia	28	5068	2333	0	0
E/Marakwet	4	4451	2009	0	0
Embu	48	6733	16954	0	1
Garissa	350	2700	7860	0	0
Homa Bay	228	7428	4488	0	11
Isiolo	6	2012	1608	9	0
Kajiado	175	12198	2633	0	72
Kakakmega	126	8913	7422	0	0
Kericho	15	5586	5976	0	0
Kilifi	306	8248	8,329	0	401
Kirinyaga	41	6042	6891	0	0
Kisii	38	3943	3544	0	65
Kisumu	56	5083	1763	1	7
Kitui	277	9891	16164	6	2
Kwale	525	5917	3518	0	19
Laikipia	3	4939	2218	0	0
Lamu	157	1031	1337	0	0

Machakos	118	10464	10788	0	1
Makueni	358	9682	10205	0	12
Mandera	187	5391	7320	0	0
Marsabit	14	4140	3273	0	0
Meru	108	8443	28,840	0	30
Migori	144	3934	3439	0	0
Mombasa	244	4875	2929	0	3
Muranga	40	7837	21,413	0	0
Nairobi	322	30131	12066	0	4
Nakuru	103	14580	8781	1	0
Nandi	0	4807	2756	0	0
Narok	4	5019	3255	0	0
Nyamira	18	3030	7444	0	0
Nyandarua	22	4950	5749	30	0
Nyeri	1	7808	9509	0	1
Samburu	19	4640	987	0	0
Siaya	46	4961	4026	0	0
Taita Taveta	14	2911	407	0	0
Tana River	1148	3046	2400	0	1
Tharaka Nithi	42	3482	9778	0	0
Trans Nzoia	24	2712	1883	0	0
Turkana	63	13628	2899	43	0
Uasin Gishu	36	7682	2606	0	1
Vihiga	10	1890	2138	0	0
Wajir	222	5996	6355	5	0
West Pokot	1	4592	2105	41	0

Annex 18 | Soil Transmitted Helminths (STH) prevalence

County	Sub County	STH Prevalence	Reference
Nairobi	Nairobi West	11.90%	Mwanthi et al, 2008
	Nairobi East	31.0%	Davis et al, 2014
	Nairobi North	1.70%	Mwanthi et al, 2008
	Westland&	16.30%	Mwanthi et al, 2008
Nyandarua	Nyandarua North	18%	KE!fi, 2013 (unpublished), END Fund
	Nyandarua South	8%	END Fund Data
Nyeri	Nyeri North	0.80%	MOH, 2013 (Unpublished)
	Nyeri South	6.80%	MOH, 2013 (Unpublished)
Kirinyanga	Kirinyanga	10%	K.ihara et a1 2008
Muranga	Muranga North	7.60%	MOH, 2013 (Unpublished)
	Muranga South	5.00%	MOH, 2013 (Unpublished)
Kiambu	Kiambu	5.30%	MOH, 2013 (Unpublished)
	Kikuyu	3.8%	MOH Unpublished data 2013
	Kiambu West	3.80%	MOH, 2013 (Unpublished)
	Lari	5%	MOH 2013, unpublished
	Githunguri	5.30%	MOH 2013, unpublished
	ThikaEast	3.80%	Brooker et al, 2013
	Thika West	0.9%	Brooker et al, 2013
	Ruiru	0.90%	Brooker et al, 2013
	Gatanga	0.90%	Brooker et al, 2013
	Gatundu	3.50%	MOH, 2013 (Unpublished)
Mombasa	Mombasa	29.8%	Mwaniki et al, 1999

	Kilindini	23.50%	Mwandawiro et al, 2013
Kwale	Kwale	27.70%	Mwandawiro et al, 2013
	Kinango	22.00%	Brooker et al, 2012
	Msambweni	27.70%	Mwandawiro et al, 2013
Kiliifi	Kilifi	37.10%	KEMRI,2008
	Kaloleni	35.00%	Ashford et al, 1993
	Malindi	15.20%	Mwandawiro et al, 2013
Tana River	Tana River	17.90%	MOH, 2013 (Unpublished)
	Tana Delta	80.00%	Njaanake et al, 2014
Taita Taveta	Taita	1.70%	Mwandawiro et al, 2013
	Taveta	2.00%	
Lamu	Lamu	3%	Brooker et al, 2012
Marsabit	Marsabit	0.2%	MOH, 2013 (Unpublished)
	Chalbi	0.00%	MOH, 2013 (Unpublished)
	Laisamis	0%	MOH, 2013 (Unpublished)
	Moyale	2.90%	MOH, 2013 (Unpublished)
	Isiolo	2.6%	MOH, 2013 (Unpublished)
	Garbatulla	0%	MOH, 2013 (Unpublished)
Meru	Meru Central	4.50%	KEMRI, 2014 (Unpublished)
	Imenti North	4.5%	KEMRI, 2014 (Unpublished)
	Imenti South	4.5%	K.EMRI, 2014 (Unpublished)
Tharaka Nithi	Meru South	4.5%	KEMRI, 2014 (Unpublished)
	Maara	4.5%	KEMRI, 2014 (Unpublished)
	Igembe	4.5%	KEMRI, 2014 (Unpublished)
	Tigania	4.5%	K.EMRI, 2014 (Unpublished)
	Tharaka	4.5%	K.EMRI, 2014 (Unpublished)

Embu	Embu	0.90%	KEMRI, 2014 (unpublished)
	Mbeere	20%	DVBD Upub1ished data
Kitui	Kitui	15.10%	MOH,1999(unpublished)
	Mutomo	2.30%	K.EMRI 2014 (unpublished)
	Mwingi	12.90%	MOH,1999(unpublished)
	Kyuso	3.70%	MOH,1999(unpublished)
Machakos	Machak.os	7.60%	Owna 1978
	Mwala	10%	DVBD Unpublished data
	Yatta	38.60%	Phoebe,Ng'ang'a&Mutai 2014
	Kangundo	30.00%	Kloos et al 1993
Makueni	Makueni	10.00%	Nguhiu et al2009
	Mbooni	5.20%	K.EMRI, 2014 (Unpublished)
	Kibwezi	1.50%	KEMRI, 2014 (Unpublished)
	Nzaui	2.80%	K.EMRI, 2014 (Unpublished)
	Garissa	1%	WFP data,2008 Unpublished
	Lagdera	0%	WFP data,2008 Unpublished
	Fafi	0%	WFP data,2008 Unpublished
	Ijara	0.40%	WFP Data 2008, unpublished
Garissa			
Wajir	Wajir South	0.00%	WFP Data 2008, unpublished
	WajirNorth	0.00%	WFP Data 2008, unpublished
	WajirEast	0.00%	WFP Data 2008, unpublished
	WajirWest	0.1%	WFP Data 2008, unpublished
Mandera	Mandera Central	0%	WFP Data 2008, unpublished
	Mandera East	0%	WFP Data 2008, unpublished
	Mandera West	0%	WFP Data 2008, unpublished

Siaya	Siaya	17.70%	Brooker et al, 2012
	Bondo	36.80%	Thiongo, Luoba & Ouma 2001
	Rarieda	70.30%	Handzel et al, 2003
Kisumu	Kisumu East	11.30%	Mwandawiro et al, 2013
	Kisumu West	5%	DVBD Unpublished data
	Nyando	53.40%	Mwaniki et al, 1999
HomaBay	Homa Bay	23.20%	Mwandawiro et al, 2013
	Suba	15.70%	Odiere et al, 2012
	Rachuonyo	23.10%	Mwandawiro et al, 2013
Migori	Migori	18.50%	MoH 2014 (unpublished)
	Rongo	47.10%	MoH 2014 (unpublished)
	Kuria West	20.3%	MoH 2014 (unpublished)
	Kuria East	20.30%	Mwandawiro et al, 2013
Kisii	Kisii Central	23.80%	Sang et al, 2014
	Kisii South	11.70%	Sang et al, 2014
	Masaba	30.40%	Mwandawiro et al, 2013
	Gucha	39.60%	Mwandawiro et al, 2013
	Gucha South	39.60%	Mwandawiro et al, 2013
Nyamira	Nyamira	39.60%	Mwandawiro et al, 2013
	Manga	39.60%	Mwandawiro et al, 2013
	Borabu	39.60%	Mwandawiro et al, 2013
Turkana	Turkana Central	0%	Brooker 2008
	Turkana North	0%	Brooker 2008
	Turkana South	0%	Brooker 2008
Pokot	West Pokot	1.30%	MoH 2013 (unpublished)
	Pokot North	0%	Brooker 2008

	Pokot Central	0.00%	Brooker 2008
Samburu	Samburu Central	0.40%	Brooker 2008
Kajiado North	Kajiado North	0%	Brooker 2012
Kakamega	Kakamega Central	30.13%	Mwandawiro et al, 2013
	Kakamega South	10%	DVBD Unpublished data
	Kakamega North	12%	DVBD Unpublished data
	Kakamega East	9%	DVBD Unpublished data
	Lugari	22.74%	Mwandawiro et al, 2013
Vihiga	Vihiga	23%	DVBD Unpublished data
	Emuhaya	43.93%	Mwandawiro et al, 2013
	Hamisi	25%	DVBD Unpublished data
Kakamega	Mumias	15%	DVBD Unpublished data
	Butere	17%	DVBD Unpublished data
Bungoma	Bungoma South	19%	DVBD Unpublished data
	Bungoma North	10%	DVBD Unpublished data
	Bungoma East	43.68%	Mwandawiro et al, 2013
	Bungoma West	12%	DVBD Unpublished data
	Mt. Elgon	17%	DVBD Unpublished data
Busia	Busia	29.30%	Mwandawiro et al, 2013
	Teso North	29.30%	Mwandawiro et al, 2013
	Samia	29.30%	Mwandawiro et al, 2014
	Bunyala	18.30%	Mwandawiro et al, 2014
	Teso South	29.30%	Mwandawiro et al, 2014

Annex 19 | Schistosomiasis Prevalence

County	Sub County	Prevalence of S. Mansoni	Prevalence of S. haematobium	Reference
Nairobi	Nairobi West	5.50%	0%	Ministry of Health, 2013 (unpublished)
	Nairobi East	0.60%	0%	Ministry of Health, 2013 (unpublished)
	Nairobi North	0.0%	0%	Ministry of Health, 2013 (unpublished)
	Westlands	5.5%	0%	Ministry of Health, 2013 (unpublished)
Nyandarua	Nyandarua North	0%	0%	END Fund Data
	Nyandarua South	0%	0%	END Fund Data
Nyeri	Nyeri North	0%	0%	Ministry of Health, 2013 (unpublished)
	Nyeri South	0%	0%	Ministry of Health, 2013 (unpublished)
Kirinyanga	Kirinyanga	50.0%	0%	Kihara et al 2004
Muranga	Muranga North	0.40%	0%	Ministry of Health, 2013 (unpublished)
	Muranga South	0%	0%	Ministry of Health, 2013 (unpublished)
Kiambu	Kiambu	0%	0%	Ministry of Health, 2013 (unpublished)
Kiambu	Kikuyu	0%	0%	Ministry of Health, 2013 (unpublished)
	Kiambu West	0.50%	0%	Ministry of Health, 2013 (unpublished)
	Lari	0%	0%	Ministry of Health, 2013 (unpublished)
	Githunguri	0%	0%	Ministry of Health, 2013 (unpublished)

	Thika East	0%	0%	Brooker et al, 2013
	Thika West	0%	0%	Brooker et al, 2013
	Ruiru	0%	0%	Brooker et al, 2013
	Gatanga	0%	0%	Brooker et al, 2013
	Gatundu	0%	0%	Brooker et al, 2013
Mombasa	Mombasa	0%	0%	Brooker et al, 2013
	Kilindini	0%	0%	Brooker et al, 2013
Kwale	Kwale		24.80%,	KEMRI, 2013, Mwandawiro et al, 2013
	Kinango	0%	24.80%	Brooker et al, 2013
	Msambweni	0%	10.80%	Mwandawiro et al, 2013
Kilifi	Kilifi	0%	9.45%	Mwandawiro et al, 2013
	Kaloleni	0%	15.00%	Ashford, 1993
	Malindi	0%	9.50%	Mwandawiro et al, 2013
Tana River	Tana River	0%	17.00%	Brooker et al, 2009
	Tana Delta	-0%	94.30%	Njaanake et al, 2014
Lamu	Lamu	0%	10%	Unpublished DVBD data
Taita Taveta	Taita	0%	0%	Mwandawiro et al, 2013
	Taveta	0%	10%	Doenoffet al, 1993
Marsabit	Marsabit	0%	0%	DVBD Unpublished data, 2013
	Chalbi	0%	0%	DVBD Unpublished data, 2013
	Laisamis	0%	0%	DVBD Unpublished data, 2013
	Moyale	0%	0%	DVBD Unpublished data, 2013

	Isiolo	0%	0%	DVBD Unpublished data, 2013
	Garbatulla	0%	0%	DVBD Unpublished data, 2013
Meru	Meru Central	0%	0%	KEMRI, 2014 (unpublished)
	Imenti North	0%	0%	KEMRI, 2014 (unpublished)
	Imenti South	0%	0%	KEMRI, 2014 (unpublished)
Tharaka Nithi	Meru South	0%	0%	KEMRI, 2014 (unpublished)
	Maara	0%	0%	KEMRI, 2014 (unpublished)
	Igembe	0%	0%	KEMRI, 2014 (unpublished)
	Tigania	0%	0%	KEMRI, 2014 (unpublished)
	Tharaka	0%	0%	KEMRI, 2014 (unpublished)
Embu	Embu	0.00%	0%	KEMRI, 2014 (unpublished)
	Mbeere	4%	0%	Unpublished data (2006)
K.itui	Kitui	3.80%	0%	KEMRI, 2014 (unpublished)
	Mutomo	0.00%	0%	KEMRI, 2014 (unpublished)
	Mwingi	3.8	0%	KEMRI 2014 (unpublished)
	Kyuso	0.00%	0%	KEMRI, 2014 (unpublished)
Machakos	Machakos	6.00%	14.40%	KEMRI, 2013 (unpublished); Ouma et ai. 1978
	Mwala	4.40%	-	KEMRI, 2014 (unpublished)
	Yatta	0.50%	0%	KEMRI, 2014 (unpublished)
	Kangundo	7.00%	0%	KEMRI, 2014 (unpublished)
Makueni	Makueni	2.80%	0%	KEMRI, 2014 (unpublished)
	Mbooni	10.80%	0%	KEMRI, 2014 (unpublished)
	Kibwezi	5.90%	0%	KEMRI, 2014 (unpublished)
	Nzau	12.00%	0%	KEMRI, 2014 (unpublished)

Garissa	Garissa	0%	5%	WFP MOH Data unpublished
	Lagdera	0%	0%	WFP MOH Data unpublished
	Fafi	0%	0%	WFP MOH Data unpublished
	Ijara	0%	24.20%	WFP & MOH (unpublished)
Wajir	Wajir South	0%	5.90%	WFP & MOH 2008 (unpublished)
	Wajir North	0%	10%	WFP & MOH 2008 (unpublished)
	Wajir East	0%	5.00%	WFP & MOH 2008 (unpublished)
	Wajir West	0%	0%	WFP & MOH 2008 (unpublished)
Mandera	Mandera Central	0%	0%	WFP & MOH 2008 (unpublished)
	Mandera East	0%	0%	WFP & MOH 2008 (unpublished)
	Mandera West	0%	0%	WFP & MOH 2008 (unpublished)
Siaya	Siaya	2.70%	0%	Brooker et al, 2012
	Bondo	31.60%	0%	Thiongo, Luoba & Ouma, 2001
	Rarieda	17.40%	0%	Mwinzi et al, 2012
Kisumu	Kisumu East	5.70%	0%	Mwandawiro et al, 2013
	Kisumu West	5%	0%	DVBD Unpublished data
	Nyando	10%	0%	DVBD Unpublished data
Homa Bay	Homa Bay	1.20%	5.70%	Sang et al, 2014
	Suba	19.40%	0.60%	Sang et al, 2014
	Rachuonyo	6.10%	22.40%	Sang et al, 2015
Migori	Migori	30.90%	14.90%	MOH, 2014 (Unpublished)
	Rongo	18.00%	3.40%	MOH, 2014 (Unpublished)

	Kuria West	20.23%	0%	Mwandawiro, 2013
	Kuria East	20.23%	0%	Mwandawiro, 2013
Kisii	Kisii Central	2.40%	0.00%	Sang et al, 2014
	Kisii South	0.2%	-	Mwandawiro et al, 2013
	Masaba	0.20%	0%	Mwandawiro et al, 2013
	Gucha	1.50%	0%	Mwandawiro et al, 2014
	Gucha South	0.30%	0%	Sang et al, 2014
Nyamira	Nyamira	0.3	0%	Sang et al, 2014
	Manga	0.3	0%	Sang et al, 2014
	Borabu	3.70%	0%	Sang et al, 2014
Turkana	Turkana Central	0%	0%	Brooker et al2012
	Turkana North	0%	0%	Brooker et a12012
	Turkana South	0%	0%	Brooker et a12012
Pokot	West Polrot	0.30%	0%	MOH, 2013 (Unpublished)
	Pokot North	0%	0%	Brooker 2008
	Pokot Central	0.0%	0%	MOH, 2013 (Unpublished)
Samburu	Samburu Central	0%	0%	MOH, 2013 (Unpublished)
	Samburu East	0%	0%	MOH, 2013 (Unpublished)
	Samburu North	0%	0%	MOH, 2013 (Unpublished)
Trans Nzoia	Trans Nzoia West	0.0%	0%	MOH, 2013 (Unpublished)
	Trans Nzoia East	0.0%	0%	MOH, 2013 (Unpublished)
	Kwanza	0%	0%	MOH, 2013 (Unpublished)
Baringo	Baringo Central	3.30%	0%	MOH, 2013 (Unpublished)
	Baringo North	1.40%	0%	MOH, 2013 (Unpublished)
	East Polrot	0.0%	0%	MOH, 2013 (Unpublished)

	Koibatek	0%	0%	Brooker et al, 2012
Uasin Gishu	Eldoret West	0.0%	0%	K.EMRI, 2014 (unpublished)
	Eldoret East	0.20%	0%	MOH, 2013 (Unpublished)
	Wareng	0%	0%	MOH, 2013 (Unpublished)
Elgeyo Marakwet	Marakwet	0.0%	0%	MOH, 2013 (Unpublished)
	Keiyo	0.0%	0%	MOH, 2013 (Unpublished)
Nandi	Nandi North	0.0%	0%	Clarke et al 2004, NTD mapping data unpublished
	Nandi Central	0.0%	0%	Clarke et al 2004, NTD U mapping data 2013 unpublished
	Nandi East	0.0%	0%	Clarke et a1 2004, NTDU mapping data unpublished
	Nandi South	0%	0%	Brooker et at. 2009
	Tinderet	0%	0%	Brooker et al, 2009
Laikipia	Laikipia North	0%	0%	Brooker et al, 2009
	Laikipia East	0%	0%	Brooker et al, 2009
	Laikipia West	0%	0%	Brooker et al, 2009
Nakuru	Nakuru	0.00%	0%	MOH, 2013 (Unpublished)
	Nakuru North	0.00%	0%	MOH, 2013 (Unpublished)
	Naivasha	5.60%	0%	MOH, 2013 (Unpublished)
	Molo	0.00%	0%	MOH, 2013 (Unpublished)
Narok	Narok North	0%	0%	MOH, 2013 (Unpublished)
	Narok South	0%	0%	MOH, 2013 (Unpublished)
	Trans Mara	1.20%	0%	Mwandawiro et at. 2013
Kajiado	Kajiado Central	0%	0%	MOH, 2013 (Unpublished)
	Loitoktok	0%	0%	MOH 2013 (Unpublished)

	Kajiado North	0.10%	0%	MOH, 2013 (Unpublished)
Kericho	Kericho	0%%	0%	Mwandawiro et al. 2013
	Kipkelion	0%	0%	Mwandawiro et al
	Buret	0%	0%	Mwandawiro et al
Bomet	Sotik	0%	0%	Mwandawiro et al
	Bomet	0%	0%	Mwandawiro et al. 2013
Kakamega	Kakamega Central	0%	0%	Mwandawiro et al, 2013
	Kakamega South	0%	0%	Desk Review
	Kakamega North	0%	0%	Desk Review
	Kakamega East	0%	0%	Desk Review
	Lugari	0.01%	0%	Mwandawiro et al. 2013
	Mumias	0%	0%	Desk review
	Butere	0%	0%	Desk review
Vihiga	Vihiga	0%	0%	Desk Review
	Emuhaya	0%	0%	Mwandawiro et al. 2013
	Hamisi	0%	0%	Desk review
Bungoma	Bungoma South	0%	0%	Desk review
	Bungoma North	0%	0%	Desk review
	Bungoma East	0%	0%	Mwandawiro et al. 2013
	Bungoma West	0%	0%	Desk review & DVBD unpublished data
	Mt. Elgon	0%	0%	Desk review & DVBD unpublished data 2009
Busia	Busia	0.65%	0%	Mwandawiro et al. 2013
	Teso North	5%	0%	Mwandawiro et al. 2013
	Samia	10%	0%	DVBD Unpublished data

	Bunyala	29.51%	0%	Mwandawiro et al, 2013
	Teso South	10.00%	0%	Mwandawiro et al, 2013

Source: National Strategic Plan for Control of Neglected Tropical Diseases 2016-2020

Annex 20 | NTD indicators in the Breaking Transmission Strategy

1. Number of IUs implementing Trachoma Baseline Surveys,
2. Number of IUs implementing Trachoma Impact Assessment
3. Number of IUs implementing Trachoma Surveillance Surveys
4. Number of papers published
5. Proportion of findings translated into policy documents
6. Number of staff members deployed to the NTD program on annual contract
7. Number of patients received Lymphoedema care interventions
8. Number of patients received Trachomatous Trichiasis surgery interventions
9. Number of National NTD Steering Committee meetings held
10. Number of National NTD Expert Committee meetings held
11. Number of National NTD Secretariat (Implementation Team)
12. Number of stakeholders attending the Annual NTD Forum
13. Number of County NTD Steering Committee meetings held
14. Number of IUs implementing LF pre-Transmission Assessment Surveys (pre-TAS)
15. Number of IUs implementing LF Transmission Assessment Surveys (TAS)
16. Number of IUs implementing STH and SCH mapping/baseline surveys
17. Number of IUs implementing STH and SCH midterm Surveys
18. Geographical coverage for all four PC-NTDs
19. Epidemiological coverage for LF in IDA implementing IUs and Trachoma in all IUs
20. Epidemiological coverage for LF in DA implementing IUs
21. Therapeutic coverage for STH and SCH
22. Proportion of households with access to safe water
23. Proportion of households with access to toilets

24. Number of NTD-WASH advocacy meetings held at national level
25. Proportion of NTD training and advocacy activities in which BCC mainstreamed
26. Proportion of households aware of BCC mainstreaming in school curricula
27. Number of NTD-BCC advocacy meetings held
28. Number of patients received Hydrocele surgery interventions

Note: These Indicators were set by Ministry of Health in the Breaking Transmission Strategy 2019-2-23

Annex 21 | Key WASH Partners - Environmental Sanitation and Hygiene (ESH) National Active ICC participants

WASH Partner	Organization Type	Counties (Geographic Location)
United Nations Children's Fund (UNICEF)	INGO (UN)	W/Pokot, Baringo, Turkana, Siaya, Kitui, Garissa, Samburu, Migori, Marsabit, Isiolo
Global Sanitation Fund (GSF)-Water Sanitation: Water Supply & Sanitation Collaborative Council (WSSCC), through AMREF Health Africa	INGO	Nakuru, Muranga, Kwale, Wajir, Uasin-gishu, Kisii, Busia, Migori, Embu, Tharaka-Nithi and Narok
Kenya Water for Health (KWAHO)	NGO	Kwale, Laikipia, Muranga, Kiambu, Homabay, Migori, Kisumu
World Vision International (WVI),	INGO	Turkana, West Pokot, Baringo, Wajir, Tana River Kilifi, Marsabit, Garissa,
Kenya Integrated Water, Sanitation & Hygiene (KIWASH)	NGO	Counties: Kitui, Makueni, Nairobi, Kakamega, Busia, Siaya, Kisumu, Nyamira, Migori
Plan International/ Plan Kenya (PLAN)	NGO	Kwale, Homabay, Siaya, Nairobi, Machakos, Tharaka-Nithi, Kisumu, Migori
Kenya Red Cross	NGO	47 Counties
Netherlands Development Organisation (SNv)	NGO	Counties: E/Marakwet, Homabay, Kisumu, Kericho, Kilifi,

Water & Sanitation for the urban Poor (WSUP)	NGO	Nairobi, Naivasha, Mombasa, Nakuru, Kisumu, Kilifi (Malindi)
SANERGY	NGO	Nairobi
Population Services Kenya (PSI)	NGO	National (household water treatment)
World Health Organisation (WHO)	DP (UN)	Household Water Treatemnt
The World Bank	DP	National
Kenya WASH Alliance	NGO	National, Nairobi, Kajiado, Kitui
FINISH INK Programme, through AMREF Kenya (Private Public Partnership Model)	NGO	Embu, Meru, Tharaka-Nithi, Isiolo, Kwale, Kilifi, Busia
Salvation Army Kenya East Terrortory WASH project (SA-WASH P)	NGO	Kirinyaga, Meru, Tharaka, Yatta, Thika, Mwingi, Mwala, Kangundo, Machakos, Kathiani, Kilome, Wajir, Mandera, Daadab
Sustainable Aid In Africa International (SANA)	NGO	Migori, suba, Homabay, Kisumu, Rachuonyo, Bondo, Siaya, Kericho, Koibatek, Gucha, Kisii central
Chujio Ceramics – (HWTSS, Innovations) for safe water	NGO	National
Water.org (affordable financing for WASH, such as small loans)	NGO	National
PATH Kenya	NGO	National
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)-Sopport Ministry of Water	DP	National
Football for Water, In partnership with UNICEF-School WASH	NGO	Kisumu, Trans-nzoia, Migori, Mombasa, Kilifi,
World Concern	NGO	Wajir, Garissa, Narok,
Catholic Diocese of Garrissa (Caritas Garissa)	NGO	Wajir

Catholic Diocese of Maralal	NGO	Samburu
Caritas Switzerland	NGO	Mwingi, Kajiado, Garissa, Kitui,Wajir, West pokot, Isiolo, Mandera Marsabit
Catholic Diocese of Marsabit	NGO	Marsabit
Catholic Diocese of Ngong (Caritas Ngong)	NGO	Kajiado, Narok, Transmara
Catholic Overseas Development Agency	NGO	Nirobi, Marsabit, Isiolo, Samburu
Catholic Relief Services	NGO	Northern Kenya
International Committee of the Red Cross/ Red Cross kenya	NGO	Isiolo, Moyale, Marsabit, Nationawide (Nairobi)
Samburu, Tharaka		
Maji na Ufanisi (MnU)	NGO	Nairobi slums, Bangladesh slum mombasa, marsabit, garissa, west pokot, taita taveta
Network for Water and Sanitation International (Netwas)	NGO	47 Counties
Oxfam GB	NGO	Daadab, Wajir, Turkana, Turkana North & West
Unilever Kenya, Sanitation & Hygiene Program in Schools	NGO	Nairobi, Kitui , National
Practical Action (PA)		Turkana, Mandera, Nairobi, Kisumu, Kajiado

P/S: This List changes every time an ICC is Held. The main Sponsors for the ICCs we have held since 2012 had been, The World Bank, UNICEF, AMREF, and WSUP

Note: The partners participate in the County WASH forums if they are invited

Annex 22 | Open Defecation-Free Progress as at March 2019

		Triggered		Claimed		Verified		Certified		Remaining	
County	Vijiji	No.	%	No.	%	No.	%	No.	%	No.	%

Baringo	2529	170	7	55	32	37	67	17	46	2474	98
Bomet	1580	81	5	12	15	8	67	6	75	1568	99
Bungoma	2223	429	19	188	44	177	94	38	21	2035	92
Busia	1483	1483	100	1483	100	1483	100	1483	100	0	0
Elgeyo Marakwet	1032	235	23	98	42	39	40	2	5	934	91
Embu	1332	262	20	161	61	161	100	161	100	1171	88
Garissa	751	611	81	217	36	172	79	136	79	534	71
Homa Bay	3103	1,144	37	531	46	296	56	93	31	2572	83
Isiolo	266	266	100	266	100	266	100	266	100	0	0
Kajiado	1182	344	29	159	46	52	33	33	63	1023	87
Kakamega	3028	1390	46	1014	73	940	93	614	65	2014	67
Kericho	1763	429	24	163	38	10	6	0	0	1600	91
Kiambu	1331	20	2	2	10	2	100	2	100	1329	100
Kilifi	2136	1039	49	180	17	123	68	111	90	1956	92
Kirinyaga	450	54	12	19	35	8	42	5	63	431	96
Kisii	3609	1026	28	350	34	309	88	277	90	3259	90
Kisumu	2066	1198	58	821	69	557	68	458	82	1245	60
Kitui	4931	4931	100	4931	100	4931	100	4931	100	0	0
Kwale	1163	402	35	140	35	111	79	76	68	1023	88
Laikipia	340	52	15	3	6	0	0	0	0	337	99
Lamu	241	0	0	0	0	0	0	0	0	241	100
Machakos	2335	336	14	55	16	35	64	7	20	2280	98
Makueni	3536	667	19	342	51	290	85	243	84	3194	90
Mandera	196	92	47	7	8	4	57	0	0	189	96
Marsabit	665	122	18	53	43	42	79	17	40	612	92

Sightsavers

Meru	2489	409	16	180	44	107	59	47	44	2309	93
Migori	2820	2328	83	1511	65	1333	88	1077	81	1309	46
Mombasa	409	6	1	1	17	1	100	0	0	408	100
Muranga	2140	380	18	155	41	64	41	40	63	1985	93
Nairobi	137	26	19	2	8	0	0	0	0	135	99
Nakuru	1977	1180	60	558	47	397	71	355	890	1419	72
Nandi	1875	40	2	4	10	0	0	0	0	1871	100
Narok	2012	394	20	124	31	99	80	92	93	1888	94
Nyamira	1068	99	9	25	25	23	92	22	96	1043	98
Nyandarua	727	11	2	0	0	0	0	0	0	727	100
Nyeri	1530	579	38	459	79	303	66	4	1	1071	70
Samburu	498	160	32	26	16	19	73	5	26	472	95
Siaya	2245	2245	100	2245	100	2245	100	2245	100	0	0
Taita Taveta	424	158	37	75	47	54	72	52	96	349	82
Tana River	557	70	13	3	4	3	100	3	100	554	99
Tharaka Nithi	1600	335	21	165	49	162	98	162	100	1435	90
TransNzoia	1313	935	71	6	1	5	83	2	40	1307	100
Turkana	1974	639	32	94	15	81	86	75	93	1880	95
UasinGishu	1330	147	11	114	78	102	89	102	100	1216	91
Vihiga	1079	860	80	388	45	74	19	0	0	691	64
Wajir	127	99	78	3	3	0	0	0	0	124	98
West Pokot	2373	522	22	164	31	73	45	56	77	2209	93
Total	73975	28405	38	17552	62	15198	87	13315	88	56423	76

Annex 23: List of WASH Partners in Kenya, NGO, FBOs & CBOs

1. Umande Trust
2. Kwale County Natural Resources Network
3. Mrima Borehole Water Project
4. Caritas - Kitui
5. KITUI DEVELOPMENT CENTER
6. Aga khan Foundation
7. KICORNET
8. Maji Zima Ltd
9. Panama Shimoni Water Users Association
10. Kituo cha Sheria-Kitui Branch
11. Institute of Environment & Water Management
12. Conservtz
13. Art youth reseach center
14. Caritas Mombasa
15. Young Professionals for Development
16. Water and Sanitation for the Urban Poor (WSUP)
17. Sahelian Solutions Foundation (SASOL)
18. Girl Watch Project
19. Mount Kenya Ewaso Water Partnership
20. ATUMIA MA THOME
21. CABDA
22. Western Water And Sanitation Forum
23. CESPAD
24. World Neighbors
25. Feed the Children Kajiado
26. Maji na Ufanisi
27. KYFA
28. Samaritan Purse

29. Mbuguni WRUA
30. Mwakamba Development group
31. Sawashi
32. Singira Water Project
33. Reprodrive
34. Eldoret Initiative on Conflict Resolution
35. Kipusi Community Based Organisation
36. Iten Integrated Environmental Conservation
37. KWAHO
38. Rural Initiatives for Sustainable Development
39. Neighbours Initiative Alliance, Kajiado
40. Josa Modambogho Water Project
41. Kenya Sustainable Health Aid
42. Kwale Handpump Services Ltd
43. Wote Youth Development Projects
44. Green Life Africa
45. Caritus - Malindi
46. Civic Enlightment Network (C-NET)
47. Pastoralist Girls Initiative
48. STIPA
49. Unified Community Approaches For Integral Development (UCAID)
50. Twenembee Networking Organisation
51. Kenya Red Cross Society
52. Maramtu B Water and Enviroment CBO Mado
53. Garisa Mediation Council
54. Alfurqan Charitable Society
55. Chuodho Women Group
56. Mapato Water Users Association
57. Caritas Kenya - Nairobi
58. Amani Drive Investment Ltd.

59. KEWASNET
60. Creata
61. Licodep Likoni Community Development Program
62. Wildlife Clubs of Kenya
63. Living Water Services Center
64. Osienala
65. Kenya Red Cross - Kitui Branch
66. Institute of Participatory Development
67. Caritas - Eldoret
68. Afya Halisi
69. Amref Kajiado Branch
70. SWAP
71. Maji Na Ufanisi
72. Kuap Pandipieri
73. Sustainable Aid in Africa InterNational
74. Care InterNational
75. BUCODEV
76. ARDA
77. AIC Cheptebo Rural Development Center
78. Lake Region Development Program
79. Caritus Meru
80. Shimba Hills Community Forest Association
81. Peace and Development Network 119.
82. Community Initiatives Concern 120.
83. USAID KIWASH MIGORI 121.
84. Mwachiga Water Resources User 122.
85. Genesis of Development Foundation 123.
86. Kabito Family Helper Project 124.
87. CCN Kenya- Kitui Branch 125.
88. Caritas Muranga 126.

89. AMREF KENYA 127.
90. Equitorial Community Development 128.
91. Feed the Children 129.
92. Brotherhood Development Agency 130.
93. RCE Northrift 131.
94. Vision SelfHelp Programme NGO 132.
95. Anglican Development Services 133.
96. World Vision Office
97. Kenya Red Cross Society
98. OXFAM
99. Water Mission
100. Kenya Red Cross Society
101. Tushauriane OVC Sultan Hamud
102. St. Camillus Dala Kiye
103. Ngusishi Water User Association

104. Kipevu Water Project
105. South Coast Forest Owners Association
106. Asante Capital EPZ
107. Aga Khan University
108. Centre for Water Governance
109. Action Aid
110. Ngarendare Wrua
111. Asante Capital EPZ
112. Timau wrua
113. Lower Tana Delta Conservation Trust
114. Ontulili Water Resource Association
115. Kilole Water Project
116. Good Life Trust
117. Mtsangatifu Borehole Water Supply Improvement Project
118. Msimamo
119. Mwabuga Breastfeeding
120. Kaya Teleza
121. Minyani SHG
122. Plan InterNational
123. Approach Center for Community Development
124. Stamili Water Point
125. Ubweche Group
126. Mabokoni Water Project
127. Jipe Moyo
128. Ridhiwani mosque project
129. Nuru Mosque Water project
130. Neema Support Group
131. KWAHO
132. World Vision Katito AP
133. Practical Action

134. Kenya Red Cross Makueni Branch
135. Plan InterNational
136. Servanthood in Community Development Agency
137. Better Tomorrow Community Agencies
138. Pamoja Child Foundation
139. INADES- Formation Kenya
140. Focus Sustainability Developed Program
141. Ministry of Water and Irrigation- Machakos Sub County
142. Under the Same Sky
143. Tupendane Kilifi
144. Fly over Mtopanga
145. Vision Coast
146. New Vision Town
147. Nuru SHG
148. Umoja Kilifi
149. Migombani Women Group
150. Likoni Annointed
151. Living Water Services Kenya

Annex 24 | List of Contributors for this Landscape Analysis

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20.	Joan Kimotho	Sightsavers
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