Ministry of Health

REPUBLIC OF KENYA

MONITORING FRAMEWORK FOR KENYA RURAL SANITATION & HYGIENE

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MONITORING FRAMEWORK FOR KENYA RURAL SANITATION & HYGIENE

2023

MONITORING FRAMEWORK: OVERVIEW

SUMMARY OF CONTENTS OF THREE NATIONAL DOCUMENTS

RURAL SANITATION & HYGIENE PROTOCOL

IMPLEMENTATION GUIDELINES FOR RURAL SANITATION & HYGIENE

MONITORING FRAMEWORK FOR RURAL SANITATION & HYGIENE

Acronyms

ASAL	Arid and Semi-Arid Lands
CBO	Community-Based Organisation
CHA	Community Health Assistant
CHEW	Community Health Extension Worker
CHV	Community Health Volunteer
CLTS	Community-Led Total Sanitation
DHIS	District Health Information System
G1	Grade 1 Open Defecation Free environment
G2	Grade 2 Safe & Sustainable environment
G3	Grade 3 Clean & Healthy environment
HH	Household
JMP	Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
KESHP	Kenya Environmental Sanitation and Hygiene Policy
MoH	Ministry of Health
MoWSI	Ministry of Water, Sanitation and Irrigation
NGO	Non-Governmental Organisation
ODF	Open Defecation Free
PHO	Public Health Officer
RTMIS	Real-Time Monitoring Information System
RuSH	Rural Sanitation and Hygiene
SDG	Sustainable Development Goal
STH	Soil-Transmitted Helminths
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

Foreword

This Monitoring Framework forms part of a three-document guidance package developed by the Ministry of Health to accelerate and improve rural sanitation and hygiene services in Kenya. The Monitoring Framework details how the sanitation and hygiene outcomes required by the Rural Sanitation and Hygiene Protocol should be monitored over time, and how county governments should certify the overall outcome grades defined by the Protocol (G1 Open Defecation Free; G2 Safe and Sustainable; and G3 Clean and Healthy). The framework provides a structured approach to measuring our progress, enhancing our understanding of what works, and holding ourselves accountable for the effective implementation of the protocol.

This Monitoring Framework represents a significant milestone in our ongoing efforts to ensure that every rural community in Kenya has access to dignified sanitation and hygiene services. The implementation of effective sanitation and hygiene practices in rural communities is of paramount importance in promoting public health, improving living conditions, and contributing to the overall well-being of society. With the aim of achieving Open Defecation Free (ODF) environments, safe and sustainable conditions, and clean and healthy status, this revised framework outlines a new approach to monitoring in rural communities. By rigorously tracking household and community outcomes, we will gain valuable insights into what is working and what is not. Moreover, we will be able to identify households at risk, ensuring that their specific needs are addressed promptly and comprehensively.

Our community health volunteers, community monitoring groups, and health professionals who work diligently at the grassroots level play a critical role in collecting data, ensuring its accuracy, and safeguarding the quality of our work. It is through the diligent and accurate assessment of our successes and setbacks that we can fine-tune our strategies and redouble our efforts where needed. By systematically tracking our achievements, learning from the outcomes, and taking action accordingly, we embark on a journey of continuous improvement.

The digital age presents us with tools and technologies that can greatly enhance the efficiency and reliability of our monitoring efforts. The Real-Time Monitoring Information System (RTMIS) and mobile applications will streamline data collection, validation, and reporting, enabling us to make informed decisions and target interventions where they are most needed.

This initiative represents a significant shift in our approach, emphasizing sustainability, efficiency, and community involvement. The sustainability indicators embedded within the framework are a testament to our commitment to the long-term well-being of our communities. They encourage active community involvement, early intervention for

at-risk households, and a forward-looking approach towards achieving the next grade in sanitation and hygiene outcomes. The process outlined in this document is designed to ensure that rural communities not only attain their sanitation and hygiene goals but also maintain them over time. This approach acknowledges the changing landscape of public health and the need for timely, cost-effective, and comprehensive assessments.

The success of this depends on the commitment, cooperation, and hard work of communities, local governments, and all stakeholders involved in the process. We believe that by working together, we can make substantial progress toward our sanitation and hygiene goals, making our communities cleaner, healthier, and more sustainable for generations to come.

Dr. Patrick Amoth, EBS
Ag. DIRECTOR GENERAL FOR HEALTH

Rationale

The Monitoring Framework is an essential tool in ensuring the systematic and timely monitoring of rural sanitation and hygiene activities in Kenya. This framework is designed to track the progress of rural sanitation and hygiene programs, support the achievement of government sector objectives, promote learning about effective practices, and ensure accountability in resource utilization for sanitation and hygiene services. The framework focuses on key outcome indicators, which are directly related to the Rural Sanitation and Hygiene (RuSH) Protocol.

The responsibility for routine monitoring lies with community health volunteers (CHVs), community monitoring groups, community health extension workers (CHEWs), and community health assistants (CHAs). These individuals, who are usually from or near the community, conduct household-level monitoring. The area Public Health Officer (PHO) plays a crucial role in overseeing and supervising data collection and ensuring its entry into the national online database, the Real-Time Monitoring Information System (RTMIS).

Monitoring is not a one-time activity; it should be an ongoing process, with annual updates conducted to maintain data reliability. Checks and balances are established to ensure the accuracy and consistency of the monitoring data, particularly due to the scale and the volunteer-based nature of data collection.

The framework also mandates the monitoring of outcomes from the previous grade, even when progressing to the next level. For example, when working towards G2 or G3 status, it is necessary to continue monitoring the outcome indicators of G1, and the same applies when advancing from G2 to G3 status. The Monitoring Framework incorporates a range of service levels for each criterion within an outcome indicator, which must be assessed to determine the grade. All criteria for a particular outcome indicator must achieve the required service level before the overall grade can be assigned.

Overall, the rationale for this new protocol is to create a more efficient, sustainable, and community-centered approach to grade assessment and certification. It acknowledges the changing landscape of public health and the need to adapt to evolving challenges while maintaining a focus on improving the sanitation and hygiene conditions of rural communities. It also serves as a critical tool for improving public health, achieving sustainable development goals, promoting equity, ensuring accountability, and continuously enhancing our approach. Through rigorous monitoring, we can bring about positive change in the lives of rural communities, ensuring they have access to safe, dignified sanitation and hygiene services, and a brighter, healthier future.

Dr. Maureen Kamene
Ag. HEAD, DIRECTORATE OF PUBLIC HEALTH

Acknowledgement

The Ministry of Health extends its heartfelt appreciation for the collaborative efforts that have led to the creation of the implementation guidelines in Kenya. This endeavor has benefited from the wisdom, dedication, and substantial contributions of numerous individuals and organizations. The Ministry wishes to express deep gratitude to everyone who has played a crucial role in shaping this comprehensive document, which is dedicated to addressing the sanitation and hygiene challenges within our nation. Special recognition is bestowed upon Adam Mohammed, Janet Mule, Ibrahim Basweti, Doyle Leonard, and Emmah Mwende from the WASH Division at the Ministry of Health for their exemplary leadership. We also extend our sincere thanks to UNICEF-Kenya for their financial and technical support throughout this process, skillfully guided by Hodaka Kosugi and Jimmy Eric Kariuki. Our appreciation extends to our counterparts in the Ministry of Water, Sanitation, and Irrigation, particularly Eng. Kimanthi Kyengo and Maureen Kirwa. Our collaboration with development partners and international organizations has been immensely supportive and instrumental in the success of this endeavor. We are immensely grateful to the numerous civil society organizations, research institutions, and community-based groups that actively participated in consultations, shared their valuable insights, and contributed invaluable inputs that enriched these guidelines. The meticulous development of this document was carried out by consultants Andy Robinson, Nancy Balfour, Gerishom Gimaiyo, and Chamia Mutuku. It is the result of extensive consultations with various individuals, sector organizations, and county governments.

Special commendation is due to the Public Health teams from the following counties: Garissa, Homa Bay, Kilifi, Kitui, Kwale, Marsabit, Migori, Nakuru, Narok, Siaya, Turkana, and Wajir, for their significant contributions to this document. We must also acknowledge the substantial contribution of Africa AHEAD in the development of the Household Inventory Monitoring Tool, which served as a source of inspiration for some of the outcome indicators and service level scales included in these guidelines.

Anthony Wainaina
HEAD, DIVISION OF ENVIRONMENTAL HEALTH

Preface

The Rural Sanitation and Hygiene Monitoring Framework for Kenya represents a significant milestone in our ongoing commitment to improving the lives of rural communities throughout the country. Access to clean and safe sanitation and hygiene facilities is not only a fundamental human right but also a critical factor in achieving public health, dignity, and sustainable development. The framework presented here represents a comprehensive revision of the previous grade assessment process, taking into account the evolving landscape of rural sanitation and hygiene. This document has been developed with the utmost consideration for efficiency, sustainability, community empowerment, and accountability. The successful implementation of this protocol will contribute significantly to our shared goals of achieving Open Defecation Free (ODF) environments, safe and sustainable conditions, and clean and healthy status in rural communities.

This framework is the result of extensive collaboration and collective efforts among government authorities, non-governmental organizations, community health volunteers, and various stakeholders at the county, sub-county, and community levels. It reflects the Ministry's shared vision of transforming rural sanitation and hygiene conditions and ensuring that no one is left behind in our pursuit of the United Nations Sustainable Development Goals.

The monitoring framework provides a detailed roadmap for assessing progress toward rural sanitation and hygiene goals, including G1 (Open Defecation Free), G2 (Safe and Sustainable), and G3 (Clean and Healthy) outcomes. The framework outlines the criteria, indicators, and methods to evaluate each outcome, along with practical guidance on data collection, entry, and use.

As we embark on this transformative journey, it is crucial to recognize that this framework is a living document. It will evolve, adapt, and improve over time based on our experiences, lessons learned, and the changing needs of the communities we serve. It is our collective responsibility to ensure that this framework continues to be a catalyst for positive change.

Definitions

Animal management
Safe household management of animals includes: safe disposal of animal excreta, penning and isolation of animals, and safe handling and management of animal products.

Certification (outcomes)
An official process to confirm and certify the rural sanitation and hygiene outcomes previously verified for a particular grade of the Rural Sanitation & Hygiene Protocol.

Child excreta (safe disposal)
The urine and faeces of infants and young children, which should be safely disposed of into improved toilets or covered disposal pits.

Clean homes
Houses that have clean and swept floors, clothes and other items are well stored, with beds or mattresses.

Clean & Healthy environment
All households in the community (or administrative unit) meet the criteria for a G3 Clean & Healthy environment.

Communal areas
Areas within the settlement that are not part of household compounds, and which are accessible to all.

Community
A group of households in a single settlement, or a single neighbourhood. Usually either a village, a sub-village or a neighbourhood in a larger urban or peri-urban settlement.

Critical times (handwashing)
The times for handwashing with soap that are considered most critical to preventing faecal-oral contamination.

Diapers (safe disposal)
The washable cloths or disposable material worn by infants to absorb and retain urine and faeces.

Durable toilets
Toilets with durable slabs and pits that allow sustained use without the need for frequent repair and replacement.

Faecal sludge
Solid and liquid contents of pit latrines or septic tanks (or other excreta containment systems).

Flyproof and clean toilets
Toilets with slabs and superstructures that are free of visible excreta, and prevent flies from entering the excreta containment system.

Food hygiene (safe)
Food, utensils, storage areas, and food preparation and eating areas are kept clean and safe before, during and after eating.

Good nutrition
People receive the macronutrients (carbohydrates, proteins and fats) and micronutrients (minerals and vitamins) required for good health.

Household
Single or polygamous household structure, in which there is a joint provision of food or other essentials. More complex household structures should be recognised in polygamous families.

Household compound
The area around the household residence that is used and managed by the household (either fenced or unfenced)

Handwashing with soap
Act of cleaning one's hands with soap and water to remove any harmful or unwanted substances.

Liquid waste management (safe)
Safe management of the spent or used water from homes and other sources.

Hygiene
Set of practices associated with the preservation of good health and healthy living, including handwashing with soap, safe disposal of children's faeces, and keeping oneself and one's home and surroundings clean.

Malaria-safe
Prevention of malaria through vector control and protection from mosquito bites, including the use of insecticide-treated nets and screens.

Menstrual health
State of complete physical, mental and social well-being in all matters relating to the menstrual process.

Menstrual materials
Menstrual products including disposable and reusable sanitary pads, tampons and menstrual cups, and clean pieces of cotton cloth or cotton wool, that are safe and hygienic for collection and absorption of blood during menstrual periods.

Open Defecation Free (ODF)
Free from indiscriminate defecation or discharge of excreta into open spaces, water bodies or other places.

Open Defecation Free environment
All households in the community (or administrative unit) meet the criteria for a G1 ODF environment.

Personal hygiene
Act of keeping the body clean to remove any harmful or unwanted substances and prevent disease.

Resilient toilets
Sanitation facilities (and related sanitation services) designed using local materials to resist the main local sustainability challenges.

Safe & Sustainable environment
All households in the community (or administrative unit) meet the criteria for a G2 Safe & Sustainable environment.

Safely managed sanitation services
Use of improved sanitation services, with excreta either safely disposed of on-site, or transported and treated off-site.

Sanitation
Maintenance of hygienic conditions and healthy environments through safe management of human excreta, and safe management of solid and liquid wastes.

Solid waste management (safe)
Management of household and other solid wastes, including their safe collection, transfer, treatment, recycling, resource recovery and disposal.

Vector control
Control of insects or other organisms (e.g. mosquitoes, flies or bilharzia-infected snails) that carry disease from animals to humans or other insects or organisms.

Verification (outcomes)
A local administration process to inspect, assess and verify the rural sanitation and hygiene outcomes agreed for each grade of the Rural Sanitation & Hygiene Protocol.

Water management (safe)
Management of domestic water to prevent contamination through all of the stages from the water source to consumption in the home, including protection, collection, handling, transport, storage, treatment and use.

Table of Contents

Eliminate open defecation, achieve universal access to improved sanitation by

2030

1 Introduction

All rural communities in Kenya have to eliminate open defecation, achieve universal access to improved sanitation, and work towards clean and healthy environments by 2030. Consequently, over the next eight years, county governments and sub-county administrations will have to plan and implement interventions, monitor progress, and certify sanitation and hygiene outcomes, in every rural community in every area of the country.

The size of this challenge requires strengthened policy and monitoring instruments to define more clearly the outcomes to be achieved, and to update the processes and indicators used to monitor and report on progress.

This Monitoring Framework forms part of a three-document guidance package developed by the Ministry of Health, with support from UNICEF, to accelerate and improve rural sanitation and hygiene services in Kenya, including:

1. **Rural Sanitation and Hygiene Protocol** (RuSH Protocol)
2. **Implementation Guidelines for Rural Sanitation and Hygiene** (Implementation Guidelines)
3. **Monitoring Framework for Rural Sanitation and Hygiene** (Monitoring Framework)

The **Rural Sanitation and Hygiene Protocol** (RuSH Protocol) sets out the sanitation and hygiene outcomes that the Government of Kenya would like rural communities (villages, sub-villages and peri-urban areas), local administrations (wards and subcounties) and county governments to achieve by 2030, based on national policies, strategies and plans, and on international commitments like the 2030 sanitation and hygiene target (6.2) included in the Sustainable Development Goals.

The **Implementation Guidelines** inform county governments and local administrations how to achieve the rural sanitation and hygiene outcomes required by the RuSH Protocol, given local contexts and constraints.

The **Monitoring Framework** details how the sanitation and hygiene outcomes required by the RuSH Protocol should be monitored over time, and how county governments should certify the overall outcome grades defined by the RuSH Protocol (G1 Open Defecation Free; G2 Safe and Sustainable; and G3 Clean and Healthy).

The goal of the Monitoring Framework is to ensure more systematic and timely monitoring and reporting of rural sanitation and hygiene activities in Kenya. This monitoring will track progress towards the government's sector objectives; encourage learning on what works and what does not, and provide accountability to ensure effective implementation and good use of scarce capacity and resources in the delivery of equitable and sustainable services.

The main aim of the Rural Sanitation and Hygiene Protocol is that all rural communities achieve

G2 status

by 2030

Individual use of durable toilets with safe containment

Handwashing with soap at critical times

Safe food hygiene

Safe water management

Safe management of animals and animal wastes

2 Rural Sanitation and Hygiene Protocol

The Rural Sanitation and Hygiene Protocol provides a phased approach for the achievement of the rural sanitation and hygiene objectives of the Government of Kenya. The RuSH Protocol is designed to operationalise and strengthen the phased approach originally promoted by the CLTS Protocol, through the inclusion of additional indicators and sustainability criteria.

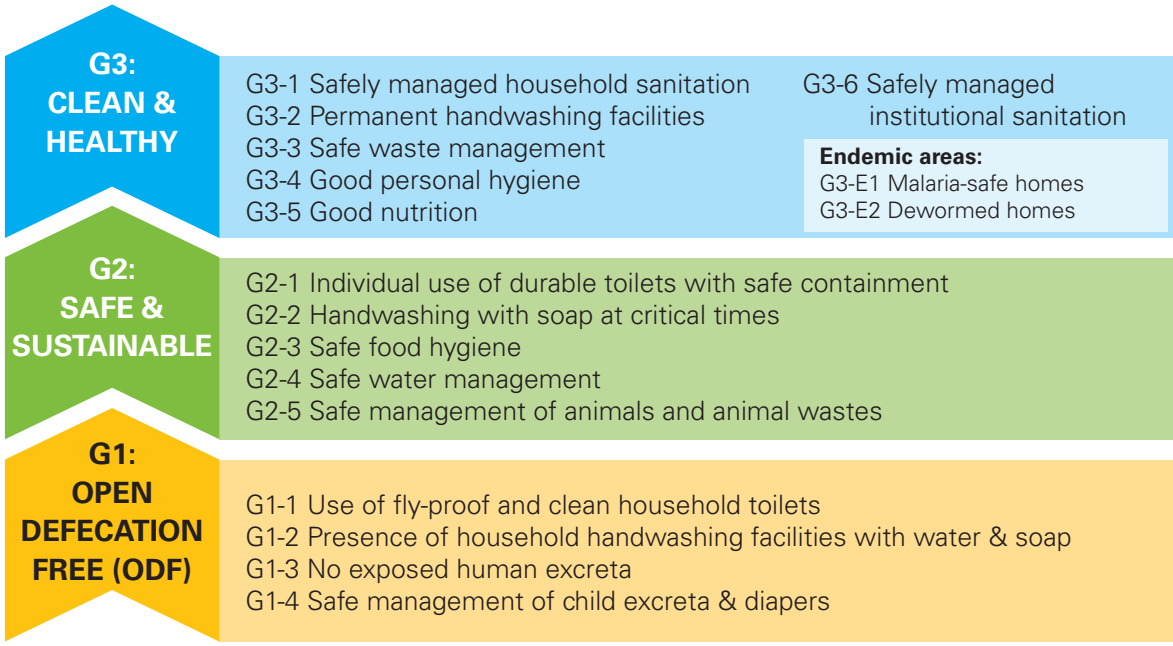
The RuSH Protocol breaks down rural sanitation and hygiene development into three grades. The first two grades (G1 and G2) include the main toilet and handwashing outcomes, with only a few other critical outcomes required to keep the implementation and monitoring processes simple. **The main aim of the Rural Sanitation and Hygiene Protocol is that all rural communities achieve G2 status by 2030**, which should mean that all households have eliminated open defecation, are using durable toilets, washing their hands with soap at critical times, and safely managing their food, water and animal wastes.

The final G3 grade includes several broader hygiene and environmental health outcomes, because these outcomes become critical to public health in rural communities once the main sanitation and hygiene outcomes are achieved (in the G1 and G2 phases).

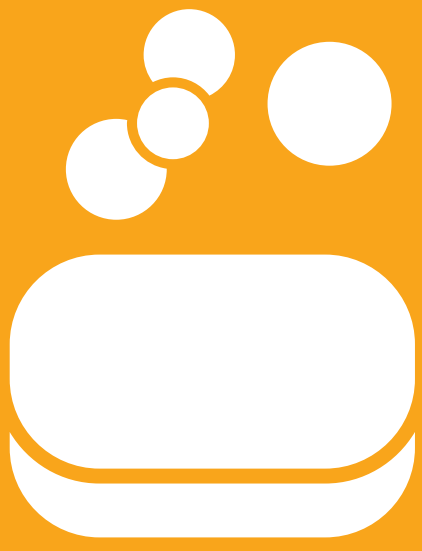
The three grades included in the RuSH Protocol are:

- **G1 ODF:** 4 outcome indicators + 3 sustainability indicators
- **G2 Safe & Sustainable:** 5 outcome indicators + 3 sustainability indicators
- **G3 Clean & Healthy:** 6 outcome indicators + 3 sustainability indicators

Figure 1: Rural Sanitation and Hygiene Protocol



County governments are responsible for the certification of achievement of the three grades of the Rural Sanitation and Hygiene Protocol: G1, G2 and G3. Further detail on the certification process is included below in **Section 4 Grade Certification**.



Toilet & handwashing

indicators should be monitored at all times.

3 Progress monitoring

3.1 What should be monitored?

The main outcomes to be monitored are defined by the RuSH Protocol. Each of the outcomes mentioned in the RuSH Protocol has a related outcome indicator that should be monitored. Some of the outcome indicators have only one monitoring criterion, while others have multiple monitoring criteria that have to be assessed. For each criterion, a range of service levels has been established that can be mapped to the overall G1, G2 or G3 indicator status (depending on the outcome indicator).

The main outcomes to be monitored are (see the **Rural Sanitation and Hygiene Protocol** for more details on these outcome indicators and the monitoring criteria for each indicator):

1. **G1+G2+G3: Household toilets**
2. **G1+G2+G3: Handwashing with soap**
3. **G1: Open defecation**
4. **G1: Disposal of child excreta and diapers**

5. **G2: Food hygiene**
6. **G2: Water management**
7. **G2: Management of animals and animal wastes**

8. **G3: Waste management**
9. **G3: Personal hygiene**
10. **G3: Nutrition**
11. **G3: Institutional toilets**
12. **G3: Malaria-safe homes (in malaria-endemic counties)**
13. **G3: Dewormed homes (in STH-endemic counties)**

Only the outcome indicators relevant to the current phase of implementation need to be monitored. **While working towards G1 ODF status, only the first four indicators need to be regularly monitored**. However, two of the outcomes, household toilets and handwashing with soap, have different outcome indicators at each grade, with progressively higher levels of service required to meet the criteria for the next grade. These critical toilet and handwashing indicators should be monitored at all times, to encourage sustained use and work towards safe management of sanitation and hygiene services, with higher levels of service reported when observed.

Some households, and some communities, may progress faster than others, and achieve G2 levels of service (e.g. in household toilets or handwashing) while the rest of the community (or area) are still working towards G1 ODF status. In these cases, local administrations and implementers should start monitoring the three other G2 outcome indicators (food hygiene, water management and management of animals and animal wastes) to establish the baseline situation for G2 achievement, and to track progress in progressive households and communities that are already working towards G2 status.

The same is true for G3 status. Some households, and some communities, will meet the G2 criteria more quickly than others and should be encouraged to start working towards G3 status. As previously, monitoring of the G3 outcome indicators should begin at this point (where relevant) to establish the baseline situation in these indicators, and track progress towards G3 status.

Full descriptions of the outcome indicators, criteria to be checked for each of the indicators, and the methods recommended to assess these criteria, are included in **Section 5**.

In addition, three sustainability indicators have to be checked at each grade:

S1 Functional community monitoring system (for G1, G2 or G3 outcomes).

S2 Identification and checking of at-risk households.

S3 Action plan for achievement of the next grade (G2 or G3).

Full descriptions of the sustainability indicators, criteria to be checked for these indicators, and the methods recommended to assess the criteria, are included in **Section 5**.

When working towards G2 or G3 status, the community, local administration and implementers should also monitor the outcome indicators from the previous grade or grades, as these outcomes have to be re-verified during the verification and certification processes:

G2-G1 Re-verification of G1 outcomes (as part of G2 verification process)

G3-G2 Re-verification of G2 outcomes (as part of G3 verification process)

G3-G1 Re-verification of G1 outcomes (as part of G3 verification process)

3.2 Where should routine monitoring take place?

There are three main types of indicator:

1. Household outcome indicators.
2. Community outcome indicators.
3. Sustainability indicators.

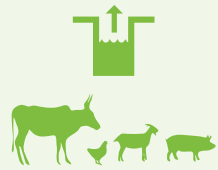
All of the outcome indicators have to be monitored at the household level, either through observation of household outcomes or through asking questions of the household head or main caregiver. In some cases, both are required: a question has to be asked, and a related household outcome has to be observed (to confirm or elaborate the household response).

Some outcome indicators also need to be monitored at the community level, to check that this outcome is also achieved in communal areas (outside household compounds).

The following outcome indicators need to be monitored in communal areas:

1. **G1-3C No exposed human excreta in communal areas.**
2. **G1-4C Safe management of diapers in communal areas.**

3. **G2-1C Low risk of groundwater contamination (by household toilets).**
4. **G2-4C Safe management of communal water sources.**
5. **G2-5C Safe disposal of animal wastes in communal areas.**



6. **G3-1C Safe faecal sludge management in communal areas.**
7. **G3-3.C1 Safe management of liquid wastes in communal areas.**
8. **G3-3.C2 Safe management of solid wastes in communal areas.**
9. **G3-3.C3 Vector control in communal areas.**
10. **G3-6.C1 Safely managed institutional toilets**
11. **G3-6.C2 Permanent institutional handwashing facilities**

Sustainability indicators

Sustainability indicators also need to be monitored at each grade. The sustainability indicators concern community systems and actions, thus monitoring of these indicators requires interactions with the community leadership and the community body with responsibility for sanitation and hygiene services (e.g. community chief, sanitation and hygiene committee, community health volunteers and natural leaders).

S1 Functional monitoring system

The first sustainability indicator (S1) requires that a functional and up-to-date monitoring system is in place to check whether outcomes are sustained. In the G1 phase, this means that the community monitoring system identifies households with sustainability problems (e.g. collapsed toilets, full pits) or households without services (e.g. new households that have not yet built a toilet), and checks that everyone else still meets the criteria for the current grade. Monitoring of this sustainability indicator will require that these data are checked, and that the community leadership and sanitation and hygiene committee (or other body) are aware of any households who do not currently meet the outcome criteria.

S2 Monitoring of at-risk households

The second sustainability indicator (S2) requires that any households at risk of sustainability issues have been identified and listed (*see Section 4*), and that separate and more detailed monitoring of the outcomes in these households is undertaken. Monitoring of this sustainability indicator will require that the list of at-risk households is checked to make sure that it is up-to-date, and that spot checks are made on some of these households to ensure that the monitoring data on at-risk households are reliable.

S3 Action plan for progress to next grade

The third and final sustainability indicator (S3) requires that there is an approved action plan by the community and/or the local administration for the achievement of the next grade (and for sustained outcomes in the current grade). The community leadership and sanitation and hygiene committee should be able to demonstrate the activities and changes planned, and explain the steps planned (or already taken) to address any sustainability issues related to current outcomes.

3.3 Who should conduct routine monitoring?

Regular and reliable monitoring of household and community outcomes requires proximity to the community and good knowledge of the sanitation and hygiene practices of each household. For these reasons, household monitoring is usually conducted by people who live in or nearby the community, and can make regular monitoring visits at times that fit with local livelihoods:

- community health volunteers (CHVs)
- other community monitoring groups (e.g. natural leaders, members of sanitation and hygiene or WASH committees); or
- community health extension workers (CHEWs) or community health assistants (CHAs) who visit the community regularly as part of their community health work on behalf of the community health units.

The area Public Health Officer (PHO) supports and supervises those conducting the household monitoring, and ensures that the monitoring data are entered into the national online database (Real-Time Monitoring Information System, RTMIS). *See Section 3.5* below for more information on the different ways in which the monitoring data can be collected and entered into the online RTMIS.

The routine collection of household data at large scale, i.e. in every rural community in every county, is challenging. The current RTMIS reports close to 80,000 rural communities in Kenya, with an average of almost 100 households per community. Furthermore, the majority of the people currently collecting sanitation and hygiene monitoring data are unpaid volunteers, and checks on the sanitation and hygiene monitoring data suggest that the reliability of the data varies considerably.

As a result, the monitoring system needs to have some checks and balances. In every situation where somebody collects and reports monitoring data, someone higher up the monitoring chain should be responsible for checking and approving these monitoring data. In general, community health extension workers (CHEWs), community health assistants (CHAs) and area public health officers (PHOs) are the frontline government workers responsible for aggregating and reviewing the data collected by community-level monitors. The CHEWs and CHAs should check that the data shared by CHVs appear reliable and up-to-date, using regular spot checks to confirm the reliability of the monitoring data. In some cases, the CHEWs and CHAs may collect data themselves during their community activities and house-to-house visits.

Where manual data entry is required into the online RTMIS, the relevant area or sub-county PHO is responsible for the review of data collected directly by CHEWs and CHAs, and for approval of the data collected by community-level monitors and passed on by CHEWs and CHAs after their review. Only data marked as approved (by a PHO) should be reported in the system; other unapproved data should be marked as pending approval until approved by a PHO.

Only paid volunteers[1], government extension workers (CHEWs and CHAs) and PHOs will be allowed to use the RTMIS mobile application to upload monitoring data directly to the online RTMIS. In these cases, the data also need to be approved by a PHO before being reported in the RTMIS system; as with manual entries, other unapproved data should be marked as pending approval until reviewed and approved by a PHO.

An annual monitoring update in each community will provide another check on the reliability of the monitoring data. The annual updates should be conducted under supervision of a CHEW, CHA or PHO to ensure the reliability of the data collected. Where any discrepancies are found in the monitoring data reported in the online RTMIS, additional checks (including the annual update) shall be made to correct and verify the monitoring data.

3.4 How should outcomes be assessed?

For each outcome indicator and related indicator criterion, a range of service levels has been established that can be mapped to the overall outcome grade. The different service levels for each outcome indicator are marked on the relevant monitoring form, and the monitor has to select the appropriate service level for each indicator based on the observed outcomes and/or the responses provided by the household respondent.

The monitor has to assess whether the required service level has been achieved (at each different grade: G1, G2 and G3) for each criterion, and then check whether all of the criteria for a particular outcome indicator have been assessed at the required service level for that grade. The outcome indicator must be confirmed to have reached the required service level in all of the criteria before it can be confirmed as having achieved the grade status – that is, only when all of the criteria are assessed to be at G1, or G2 or G3 service level can the outcome indicator be marked at that grade. And all of the outcome indicators for a particular grade have to be confirmed at the required service level before the overall grade can be marked as achieved (for a particular household).

For instance, there are four criteria for the G1-1 outcome indicator: use of flyproof and clean toilets:

G1-1.1 Presence of a functional toilet with privacy (or shared use of another toilet).

G1-1.2 Toilet use by all household members (shared with less than 10 people).

G1-1.3 Flyproof toilet (tightfitting drop hole cover, VIP latrine with screen vent pipe, pour-flush latrine with water seal pan or SATO pan, or other flyproof latrine).

G1-1.4 Clean toilet (no visible faeces, urine or soiled cleaning materials).

1 Such as Community Health Volunteers that receive a stipend from the county government.

Figure 2: Monitoring against service levels: abbreviated summary[2]

G1-1.1 Presence of a functional toilet with privacy

G1 Functional toilet with privacy observed	X
G0/1 No toilet observed (check shared use)	
G0 Toilet observed but INADEQUATE privacy	
G0 Toilet observed but NOT functional (collapsed, full, abandoned)	

G1-1.4 Clean toilet

G1 Clean: no visible faeces, urine or soiled cleaning materials	X
G1 Clean: minor traces of faeces, soiled materials (easily cleaned)	
G0 Significant traces of faeces or soiled cleaning materials	
G0 Visible faeces, urine and soiled materials, smelly and dirty toilet	

G1-1 Overall grade

	Overall	
G1-1 Household use of flyproof and clean toilets	**G1**	G1
	G0	

Where several criteria exist, all of these criteria have to be assessed to be at the G1 ODF level before this household can be confirmed as having achieved G1 status (as for the toilet outcome indicator above) – if even one criterion scores at G0 level, then the overall grade (for this household) becomes G0. For example, if a functional and flyproof toilet is observed to be in use, but it is not observed to be clean, then this household toilet has not met the criteria set for G1 status and should be graded as G0.

Most of these toilet criteria were previously included in the 2014 CLTS Protocol, but the individual criteria were not monitored separately, with only the number of basic toilets being reported. Under the new RuSH Protocol, more detailed monitoring of outcomes is being encouraged to:

- make easier the assessment of the service level achieved for each outcome;
- encourage more consistent and reliable monitoring (which can be easily checked by others); and
- identify issues that prevent communities from achieving specific outcomes or service levels, and inform appropriate responses from local administrations and implementers.

2 Only two of the four G1-1 indicators are detailed here to shorten the length of the figure.

3.5 When should monitoring take place?

Progress monitoring should be a continuous process. County governments are responsible for sanitation and hygiene services in all rural communities, and need to check the current status of services; whether services have been developed (following interventions to improve services); and whether improved services are sustained over time.

However, county governments have to monitor sanitation and hygiene services in a large number of rural communities: from only 200 villages reported in Mandera up to nearly 5,000 villages in Kitui. Unlike water supply, sanitation monitoring always requires household data. On average, each village in Kenya contains around 100 households, but larger villages have as many as 400 households (3,000 people). As a result, it is not practical to ask community level monitors to collect community-wide monitoring data too frequently, or for them to update monitoring data in the MIS too frequently (as it requires checks and approval by a PHO).

Monitoring frequency should reflect the rate of change in services: when the rate of change is rapid, more frequent monitoring is required; whereas when services and outcomes are changing slowly, periodic monitoring is likely to be sufficient (as any changes are likely to be minor). Additional monitoring may be required to check whether services have been sustained after significant events (e.g. floods, droughts or conflicts).

Baseline data collection

Where household data on the G1 ODF outcomes are not available, a baseline sanitation and hygiene survey should be carried out. The baseline survey should use the same approach and monitoring tools as routine progress monitoring, but should be undertaken carefully and checked thoroughly as it will form the baseline for all future progress assessments.

Ideally, the baseline survey should be supported by a CHA or PHO to check that the monitors (CHVs or other) are properly trained, and have fully understood the process for monitoring new outcomes, generating household identification codes, identifying at-risk households (with support from the community leadership), and recording the data (either on paper forms, or by uploading to the MIS).

The baseline survey should:

1. Report the date of the baseline survey (and the names of the surveyors)
2. Confirm the total number of households in the community
3. Identify and generate a list of at-risk households
4. Establish household identification codes for all households
5. Confirm the grade status of the community (e.g. whether already ODF certified)
6. Assess G1 outcomes for each household
7. Assess higher grade outcomes (G2 or G3) in households that have already achieved any G1 outcomes.
8. Assess community outcomes in communal areas.

The total number of households in the community, including any sub-villages or small settlements that are grouped in this community, should be carefully established with the village leadership and any other key stakeholders (traditional leaders, religious leaders, teachers, WASH committee members, natural leaders etc). Care should be taken that no individuals, households or groups are excluded from the total number of households – in particular, attention should be paid to determine whether there are any seasonal worker households (e.g. fisherman, seasonal farmers or people who work away) or nomadic pastoralist households who are currently away from the village.

Identification of at-risk households

Discussions with the village leadership and key stakeholders should also be used to identify any at-risk households in the community. The main categories of the at-risk households should be established by the county public health office to reflect local contexts and populations. The at-risk households should be listed and marked (in the MIS) during the baseline monitoring, so that progress and results in these at-risk households can be disaggregated (to check whether progress is different in these groups compared to the rest of the community and assess whether there are any particular barriers or constraints to progress), and these at-risk households can be sampled for checking during the grade certification and quality control processes.

The outcomes for the next grade (whichever grade the community is currently trying to achieve) should be assessed for each household. The monitoring forms and indicator reference guide[3] should be used to guide the assessment of outcomes in each household. If the community is already ODF certified, the baseline survey should assess both the G1 and G2 outcomes for each household. Where the G1 outcomes are not sustained, interventions will be required to address sustainability factors and restore the G1 outcomes.

The baseline sanitation and hygiene data should be uploaded to the MIS, and reviewed by a PHO (to confirm that the data appear accurate and representative of the community) before being included in the data shared online.

Frequency of Progress Monitoring

During interventions: *monthly* data collection and regular MIS update.
Outside intervention periods: *quarterly* data collection and MIS update.

What should be monitored each time?

1. Confirm the total number of households in the community
2. Review list of at-risk households (check for new entries, or departures)
3. Establish household identification codes for new households
4. Assess current grade outcomes for each household (G1, G2 or G3).
5. Note any households that have progressed to the next grade (G2 or G3) in some outcomes; or dropped to a lower grade.
6. Assess community outcomes in any communal areas.

3 Summary of the outcome indicators and of the tools to be used to assess each outcome.

Monitors (community health volunteers or others) should confirm the total number of households (and people) at the start of each round of monitoring.

Community populations vary over time – there is in- and out-migration, as newcomers move into the village, and residents migrate to urban areas or other locations; new households emerge as children become adults and establish their households, and there are always some births and deaths. Reliable data on the total number of households is critical to the MIS, which assesses progress towards grade status, and will use these data to inform certification and quality control processes.

Monitors should also check that the list of at-risk households (which identifies any households containing people from marginalised groups, or who are at higher risk of service or sustainability issues) is up to date. Each of these households should be marked as an at-risk household so that the monitoring data for these households can be separately reported (to confirm whether there is any difference between outcomes in this at-risk group when compared to the rest of the population; and to make sure that any issues are spotted and addressed quickly).

Household identification codes should be generated for any new households (who were not included in the last round of monitoring), so that the progress in outcomes in these new households can be tracked over time.

The current outcomes in each household should be assessed. In communities where interventions are taking place, these outcomes may change rapidly and monthly updates are required to capture this progress. In communities with no intervention (i.e. interventions have not started, or have finished) the rate of change should be slower, with the main changes happening when households upgrade, improve or add to their facilities; or when they have sustainability losses (e.g. a decrease in service level, such as a collapsed toilet or handwashing facility). In these communities, quarterly monitoring should be sufficient to capture changes in household and community outcomes.

Annual monitoring review

The county and sub-county public health offices should hold annual monitoring reviews at each administrative level and in each rural community. The annual review should be a more rigorous review of the outcomes in each household that is supervised by a PHO. The aim is to check that the progress monitoring data (reported either monthly or quarterly by the CHVs and other monitors) are reliable, and ensure that any unreliable data are spotted and corrected on at least an annual basis. Where any problems (in data reliability) are found, the county or sub-county health offices should assess the cause of the monitoring problems (e.g. lack of training, lack of capacity, lack of support, lack of motivation etc) and attempt to address the problems.

3.6 How should monitoring data be collected and reported?

Given the range of different people (with different training and experience) involved in the monitoring of household and community outcomes, the same criteria should be used consistently to assess outcome indicators. This Monitoring Framework includes monitoring tools and instructions (*see Section 5*) designed to facilitate monitoring and encourage the use of the same processes and indicator criteria by all monitors.

For each outcome indicator, the service level assessed (for each criterion) should either be marked on a paper form or marked in the RTMIS mobile application. These monitoring data then need to be entered into the online RTMIS for review and use by sub-county, county and national stakeholders. There are several methods available for data entry:

1. Completed paper forms are passed to health extension workers, who review and then pass to a Public Health Officer (PHO) for entry into the online RTMIS.
2. Photos or scans of the completed paper forms are sent electronically (using a messaging or email system) to health extension workers, who review and then pass to a (PHO) for entry into the online RTMIS.
3. Use of the RTMIS mobile application[4] to collect the household (and community) data directly and upload it to the RTMIS database using a data network.

Mobile monitoring (using digital applications on smartphones, with data uploaded through mobile data networks to the online RTMIS) is a rapid and efficient way of collecting and processing the increased amount of household data required by the RuSH Protocol. However, some monitors may not be able to use smartphones for monitoring, either because they are not approved for mobile monitoring (e.g. unpaid CHVs), or because they do not own, or do not want to use, a smartphone for the household and community monitoring. In these cases, physical monitoring forms will be available for paper-based monitoring. As noted above, the completed paper forms should either be passed to a health extension worker (or other health official) for review and data entry, or copied and sent.

3.7 How should monitoring data and reports be used?

Monitoring data are of limited use if they are not reliable, not timely and not relevant. However, the most common problem with large-scale monitoring systems is that the data collected and entered into the systems are not well used. And if the data are not regularly used, then nobody notices whether the data are reliable, timely or relevant.

The monitoring data should be used to assess progress towards G1, G2 and G3 status at community, ward, sub-county and county levels. Where progress is slow, the monitoring data should be used to assess the outcomes (or criteria) that are preventing the achievement of the next grade, and there should be an evaluation of the issues and barriers to the achievement of these outcomes.

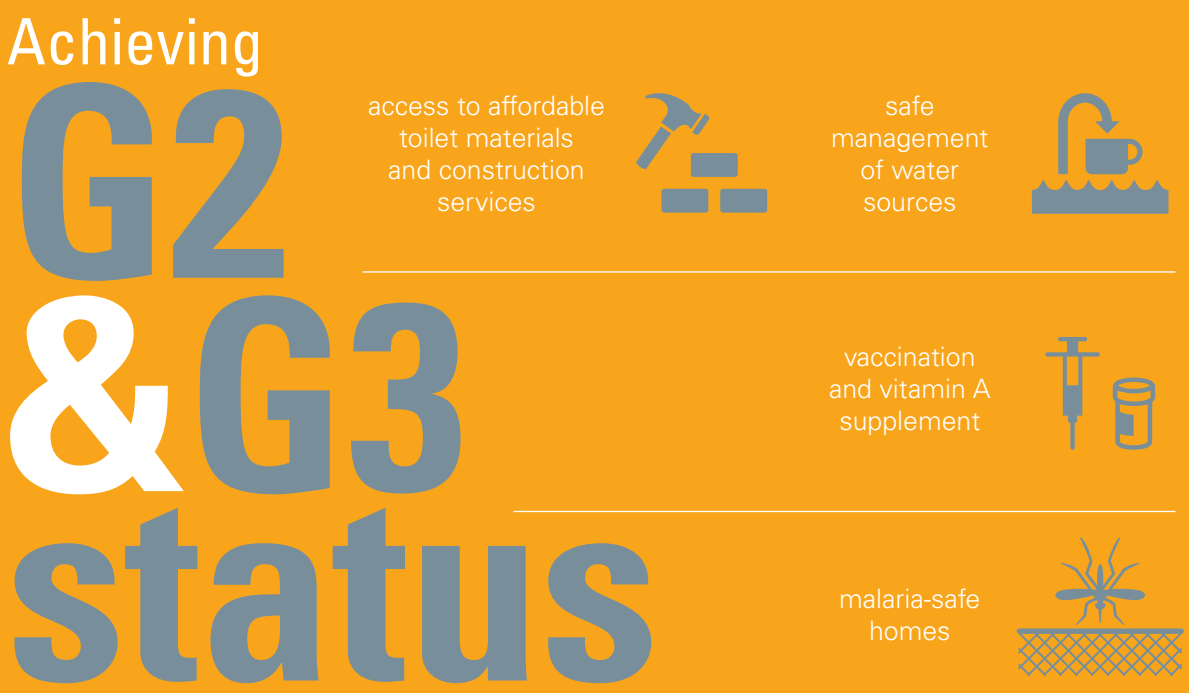
4 An RTMIS mobile application was previously available, and an updated mobile application will be developed to reflect the revised Rural Sanitation & Hygiene Protocol (with support from UNICEF).

In working towards G2 and G3 status, the provision of appropriate services will be critical to the achievement of some of the outcomes. For instance:

- the use of durable toilets requires access to affordable toilet materials and construction services;
- safe management of water sources requires investment in the protection of water points;
- good nutrition requires access to deworming, vaccination and vitamin A supplement programmes; and
- malaria-safe homes require the availability of insecticide-treated bed nets.

Monitoring data should be used to hold service providers to account, and ensure that services are provided to progressive communities that are working towards higher grades in the RuSH Protocol, and that additional support is provided to communities that are struggling to achieve the lower grades.

The sub-county and county health teams should use county sanitation extenders (where available) or other trained PHOs to check on data quality, conduct spot checks, produce quarterly reports summarising progress in rural sanitation and hygiene, and highlight key issues and barriers. These reports should then be presented to decision-makers in county forums and committees to influence county plans, budgets and capacity allocations; and be shared with the National WASH Hub.



4 Grade Assessment

Community achievement of the grades defined by the Rural Sanitation and Hygiene Protocol should be certified by county governments. Achievements by higher administrative structures (wards, subcounties and counties) should be certified, then undergo quality control checks (by independent teams), before the final declaration of grade achievement.

Certification: official confirmation that communities have achieved the grade (G1, G2 or G3) following independent checks of the relevant criteria for each grade.

Four main levels of grade assessment will be required:

1. **Grade Claim.**
2. **Grade Certification** (including re-verification of previous grades).
3. **Quality Control of Grade Certification.**
4. **For administrative structures:** Grade Declaration.

The new grade assessment process no longer includes a Verification step. The intention is to streamline the grade assessment process, making it less costly and less time-consuming. Under the CLTS Protocol, the focus was entirely on ODF achievement, with a comprehensive process developed to declare, verify, certify and check ODF achievement.

Under the new RuSH Protocol, each rural community has to achieve three phased grades: Grade 1 ODF, then Grade 2 Safe & Sustainable status, and finally Grade 3 Clean & Healthy status. Each of these grades will require a certification process, which includes the re-verification of any previously certified grades (e.g. certification of the G2 outcomes also requires re-verification of the G1 outcomes). As a result, the grade assessment process has in-built sustainability checks, and no longer requires three separate checks of ODF status.

In addition, the RuSH Protocol and this Monitoring Framework will strengthen progress monitoring, including the regular reporting of household level data on the G1, G2 and G3 outcomes. The progress monitoring data, which will be available for review in the updated MIS, should allow sub-county and county public health teams to have greater confidence that communities are ready for grade certification, and minimise the instances where communities who claimed to have achieved the required outcomes are found to be not yet ready for certification.

Finally, the original grade assessment process was designed to allow each of the different national and sub-national levels to be involved in the process. Verification was by community peer review (with sub-county supervision); certification was by a county team; and quality control checks were undertaken by a national MoH team. As progress towards the 2030 goals accelerates, and the number of communities that require grade assessments increases, it will be difficult for national and county teams to undertake all of these grade assessment duties in a timely and efficient manner.

The new four-step process encourages grade assessments at lower levels (grade claims by sub-county; grade certification by peer sub-county or other independent team; quality control by a county team; and grade declarations for entire areas by either county or national teams), while recognising that county governments are now responsible for assuring sanitation and hygiene outcomes and services, thus should also be responsible for monitoring and confirmation of outcomes within their jurisdictions.

4.1 Grade Claim

The grade claim is the claim of a particular outcome achievement (e.g. G1, G2 or G3) by the community. In order to reduce the risk of premature or false self-declarations:

1. Grade claims have to be checked and confirmed by a public health officer (PHO).
2. The date of the confirmation of grade claim should be reported in the RTMIS.

When progress monitoring suggests that the next grade in the protocol has been achieved, the community leadership, sanitation and hygiene committee, CHVs and natural leaders should check that all of the outcome indicators have been achieved in all households and all communal areas, and that sustainability indicators have been achieved.

Only when the community is confident that all of the outcome criteria (for that particular grade) have been achieved should the community request that a PHO visits the community to review the situation with community representatives and confirm, or reject, the claimed outcome (at G1, G2 and G3 level).

Each indicator for the relevant grade should be checked, with the outcome only officially claimed once the PHO has confirmed that all households and communal areas in the community (or administrative unit) meet the required service level for the relevant indicators.

The results of the PHO assessment should be presented to the community, either to confirm the Grade Claim, or to highlight and explain the areas that did not meet the required outcome criteria, and encourage the community to work on these areas so that the grade claim can be made at the next attempt.

The community (or local administration) should also be informed of the next steps in the process (e.g. grade certification), or re-application for grade claim.

4.2 Grade Certification

The grade certification process provides a reliable and independent[5] check on the outcomes achieved, including official certification of the achievement of grade status. **Grade certification should take place following claims of any of the three grades**:

- G1 Open Defecation Free (ODF) environment
- G2 Safe & Sustainable environment
- G3 Clean & Hygienic environment.

5 Those participating in the certification of outcomes in a community should not have been directly involved in the implementation or monitoring process, and should be considered independent of the local administration, implementers and community activists responsible for the sanitation and hygiene outcomes.

Following PHO confirmation of claimed G1, G2 or G3 status, a certification process should be conducted. The aim of grade certification is to ensure that the critical outcomes of the G1, G2 and G3 grades are **checked by a team that is largely independent of the sub-county implementation and monitoring teams**.

Certification is required for all grades, including re-verification of previous outcome grades where appropriate (e.g. for G2 and G3 achievement). The certification process should be undertaken by:

1. **Team leader:** a PHO who was neither involved in implementation activities in the communities to be certified, nor involved in the grade declaration process.
2. **Team size:** A group of 3-6 people who were neither involved in implementation activities in the communities to be certified, nor involved in the grade declaration process.
3. **Team composition:** a group that includes people from outside the public health office, and well-respected county stakeholders (to hold the public health office accountable for the certification results).
4. **Trained team:** people who have received training (by an approved trainer[6]) in the certification process.
5. **WASH knowledge:** People who have a minimum level of WASH knowledge and experience (even if they are from outside the WASH sector).

The certification process should be carried out within **two months** of the confirmation of grade claim. The certification team for each sub-county should be proposed by the County Public Health Office, and approved by the County Director of Health.

Grade certification requires a **two-month cycle** whereby all of the communities (or local administrations) with confirmed grade claims of G1, G2 or G3 status in the previous two months are listed, and certification visits are planned. During the certification process, the certification team should plan to visit a minimum of two communities per day.

While community collaboration and consent is required for the certification visits, the exact date of the visits should not be notified to minimise attempts to build new facilities or clean up the environment immediately before the certification visit.

Some households and groups face higher sustainability challenges than others. For this reason, the certification process in each community should ensure that the proportion of new and at-risk households that are inspected is higher than for other households.

6 Approved trainer: a competent person approved by the MoH to train other people in certification of grade achievement according to the Rural Sanitation and Hygiene Protocol.

Sampling for certification process:

a) Identify and list all new[7] and at-risk households[8] in the community by name and location (based on criteria agreed at county or sub-county level)
b) Randomly sample 50% to 100% of the list of new and at-risk households for inspection: with a minimum sample of 20 new and at-risk households[9] (50% in large communities of more than 300 households; 80% in typical communities with 100 households; and 100% in communities with less than 60 households).
c) Randomly sample (through interval sampling) 30%-100% of other households for inspection: with a minimum sample of 30 other households[10] (30% in large communities of more than 300 households; 50% in typical communities with 100 households; 100% in communities with less than 60 households).

At the outset of the certification process, the community leadership and sanitation and hygiene committee should be reminded of the main outcome criteria, and shown the certification tools, then asked to:

1. **Confirm the current number of households** in the community.
2. **Mention any households who do not currently own a functional toilet** (e.g. because they are sharing another toilet, or due to other reasons, such as recent toilet collapses, full pits, or new house construction).
3. **Mention any households that do not currently meet other outcome criteria.**
4. Explain, where necessary, **what is being done to restore sanitation and hygiene outcomes** in the community to the declared grade, or to previously certified grades (e.g. how and when will toilets be replaced, repaired or constructed).

The households mentioned by the community (as being without toilets, or not meeting other outcome criteria) should be included in the list of new and at-risk households, and sampled appropriately during the certification process to check whether or not they are using a functional toilet (e.g. by sharing another toilet while their toilet is replaced, repaired or constructed), practicing open defecation, or meeting the other outcome criteria.

7 New households are households that have formed since the start of the process, or since the previous verification process, i.e. households that have not previously been verified, and who may not have been present during previous sanitation and hygiene interventions.

8 At-risk households should include all households at high risk of unsafe or unhygienic outcomes (with local processes used to identify high-risk groups within the local context), for example: households that share toilets, households with previously collapsed or flooded toilets, households with disabled members; households in chronic poverty; households headed by older people, orphans or widows; landless and tenant households etc.

9 Or all new and at-risk households where they number less than 20.

10 Or all other households, where they number less than 30.

The relevant certification form (either paper format, or using the RTMIS mobile application) should be used to record the outcomes observed, and ensure that the certification result is uploaded into the online RTMIS. The overall grade achievement should only be certified where:

1. All households meet the required service level for all of the relevant indicators.
2. All community outcome indicators are certified to be at the required service level.
3. All sustainability indicators are certified to be at the required service level.

The results of the grade certification should be presented to the community, either to confirm the Grade Certification, or to highlight and explain any areas that did not meet the required outcome criteria, and encourage the community to work on these areas so that the grade certification can be made at the next attempt.

The community should also be informed of the next steps in the process (e.g. grade celebration and work towards the next grade), or re-application for grade certification.

4.3 Grade Re-verification

The sustainability indicators for each grade also require re-verification of the outcomes associated with previous grades. That is:

- G2 achievement requires certification of both the G2 outcome indicators and re-verification of the G1 outcome indicators.
- G3 achievement requires certification of G3 outcome indicators and re-verification of both the G2 and G1 outcome indicators.

During certification processes, the indicators for both the currently claimed grade and any previously certified grades should be checked in each of the households sampled for inspection.

The re-verification process should confirm that:

- households mentioned by the community (based on its monitoring system) are the only ones who do not use a functional toilet (i.e. there are no other households without toilets) or do not meet other outcome criteria;
- households without functional toilets are sharing other toilets that meet the outcome criteria (e.g. shared by less than 10 people);
- households not currently using functional toilets, or not meeting other outcome criteria, amount to less than 5% of the total number of households in the community;
- there is an action plan with a fixed date to restore sanitation and hygiene outcomes to the previously certified grade (i.e. so that all households use functional toilets); and
- all other certification criteria for the previous grades are achieved by all households.

Where additional households are observed without functional toilets, and these households were not included in the monitoring data shared by the community, **the overall outcome should not be certified** (both because the sustainability monitoring is not working well, and because the re-verification criteria cannot be met if some households are not using toilets).

4.4 Quality control of certification process

The quality of the grade certification processes should be checked through further random checks on at least 10% of the certified communities to verify that all of the certification criteria were achieved, and that the certification process was properly implemented.

The National WASH Hub at the Ministry of Health should supervise the process in order to ensure that the quality control checks are not biased. The National WASH Hub is responsible for establishing and training a pool of quality control (QC) officers who can lead quality control checks. The members of the QC officer pool should be senior PHOs with good experience of ODF (and other) certification processes, who have demonstrated reliability and independence in their work, and are willing to undertake QC activities in neighbouring counties.

Each county is responsible for financing and conducting quality control checks on 10% of the certification processes undertaken (as part of a semi-annual process). The QC checks should be planned in coordination with the National WASH Hub, who will ensure that an approved QC officer (from another county) is appointed to lead the QC checks, and conduct checks to ensure that the certified communities are randomly selected, and that the QC checks follow the approved process.

The county QC team should be led by an approved QC officer from another county, supported by county stakeholders (including at least one county PHO) who were not directly involved in the implementation or certification activities in the certified communities selected for quality control checks:

1. **Team leader:** a trained and approved QC officer, who should usually be a senior PHO from a nearby county, selected from the approved national pool of QC officers by the National WASH Hub.
2. **Team composition:** In addition to the team leader, the team should comprise a group of 2-5 county stakeholders that includes at least one well-respected person from outside the public health office (to hold the county public health office accountable for the QC results). None of the team members should have been involved in implementation activities or grade certification in the communities or sub-counties to be checked.
3. **Team training:** All team members should have received training (by an approved trainer) in the certification and quality control process.
4. **WASH experience:** All team members should have a minimum level of WASH knowledge and experience (even if they are from outside the WASH sector).

The quality control process should be undertaken at least twice a year (or more frequently if the number of communities to be checked becomes too many to manage in two six-monthly processes). The QC team leader should be selected by the National WASH Hub, with the remainder of the QC team proposed by the County Public Health Office, and approved by the County Director of Health.

Selection of certified communities for QC checks

All certified communities that have not previously had a quality control check, and any certified communities that were in areas that previously failed a quality control check, should be added to a list from which the 10% QC sample is selected.

The QC sample should comprise a random selection of 10% of the certified communities on this list, plus any specific communities that previously failed a QC check (and have not yet been re-checked). A random number generator should be used to select the QC communities.

The quality control team should use adapted versions of the mobile application certification form to record the results of the QC visits, so that all of the data are available through the MIS (for a fully transparent process). The quality control checks should be similar to the certification process, with sampling of both at-risk and other households, and checking of all outcome indicators and criteria.

Where all of the QC checks are passed (e.g. all communities checked meet the certification criteria), all of the certified communities in the list submitted by the county for the QC check should be marked as "QC passed" in the MIS.

Where quality control checks find that the outcomes do not meet the agreed certification criteria in a particular community or group of communities, the implementing officer should be informed; and a second round of QC checks should be planned.

The quality control checks should recognise that external events (e.g. flooding, heavy rains, migration, conflict, insecurity and other WASH emergencies) can severely affect sanitation and hygiene outcomes. Where external events have resulted in a deterioration in sanitation and hygiene outcomes, the quality control team should:

1. Confirm with the community their plans to restore grade outcomes.
2. Notify the relevant PHOs (at sub-county and county levels) of the problems observed.
3. Request the sub-county and county to provide support to the community.
4. Arrange a follow-up quality control check in the next six-month cycle.

In the interim, all of the communities on the QC list in the areas where the QC checks were failed (e.g. in the same ward, or same sub-county where failures occur in more than one ward) should be marked as "QC failed" in the MIS. These communities should not be counted as certified until a second round of QC checks confirms that they now meet the certification criteria.

The second round QC checks (in areas where initial QC checks were failed) should comprise repeat QC visits to all of the communities that failed checks in the first round of QC checks (e.g. only the sampled communities that were visited and failed to achieve the certification criteria) plus QC visits to an additional set of communities (comprising at least a 10% sample of the other communities certified by the same team) for further quality control checks in that sub-county to confirm the extent of the certification problems.

Where the second round of QC checks finds that all of the communities visited meet the certification criteria (including the communities that previously failed the first round of QC checks), all of the communities on the second round QC list of communities should be marked as "QC passed" in the MIS.

Where a second round of QC checks finds further problems (e.g. communities in this group that have not achieved, or maintained, the certification criteria) all of the communities on the QC list (in the specific area where problems were found) should have their certification removed, and should be required to re-apply for certification once they have addressed the problems. Once re-certified, a further set of QC checks will be required.

The results of all quality control checks should be presented to the community visited, either to confirm the Grade Certification (QC passed status), or to highlight and explain any areas that did not meet the required outcome criteria (QC failed status). The community (or local administration) should also be informed of the next steps in the process (e.g. if local health officials need to be informed of any problems, or if further support is required following external events) and encouraged to work on any problem areas before a second round of QC checks.

National MoH role in the quality control process

The National WASH Hub of the Ministry of Health is responsible for:

1. Establishing a national pool of QC officers (to act as team leaders in quality control teams).
2. Recruiting and training an appropriate number of QC officers for the national pool.
3. Selecting appropriate QC officers to act as team leaders in county QC processes (e.g. selection of an experienced QC officer from a nearby county to minimise travel expenses).

The National WASH Hub team should also be responsible for checking that each county:

1. Undertakes an appropriate number of QC checks (on certified communities).
2. Reports the data appropriately in the MIS (including marking QC passed and QC failed status).
3. Takes appropriate action following the QC checks (i.e. informs implementing officers of any communities where the QC checks indicate that the grade outcomes were not achieved; and undertakes a second round of QC checks in these cases).
4. Takes account of the QC results before declaration of grade status at ward, sub-county or county levels.

The National MoH team should also make spot checks to confirm that the county quality control processes are working well. The number of spot checks to be made should be less than 5% of the total number of quality control checks made at the county level, and the team should aim to visit only around 25% of counties in each calendar year (i.e. all counties will receive at least one round of checks every four years). The only exception should be where the National MoH WASH Hub team is informed of particular problems in the county certification or quality control process, in which case emergency spot checks should be undertaken to confirm whether these claims are justified.

Finance of quality control checks

Each county shall be responsible for financing its own QC checks, including covering reasonable travel and living expenses for the QC officer appointed as QC team leader (selected by the national WASH hub from a nearby county) for the duration of the QC checks. Adequate budget for the QC checks should be allowed in annual plans and budgets.

The National WASH Hub shall be responsible for financing the cost of establishing and training a national pool of QC officers, and for any other costs related to supporting the county QC processes (including spot checks), from its own budget.

4.5 Grade Declaration in Wards, Sub-Counties and Counties

Where entire administrative areas, including Wards, Sub-Counties and Counties, achieve 100% grade achievement, a further process is required before official Grade Declaration.

In Wards and Sub-Counties, the county quality control team should be supported by the National Ministry of Health WASH Hub to check that quality control checks have been made on at least 10% of the certified communities in the declaration area, and that appropriate action and re-certification processes have taken place in any communities where the quality control checks found that the grade outcomes had not been achieved (QC failed in MIS). Spot checks should be made to confirm that re-certification was conducted correctly.

Where the county quality control team (including any national MoH support), agrees that every rural community in the declaration area has been certified to achieve the grade outcomes (QC passed in MIS), the official Ward or Sub-County Grade Declaration can be issued. Where the checks confirm all wards have already been declared at the relevant grade, the Sub-County can be declared to have achieved that grade.

Where the ward or villages are among the last in the sub-county to be certified, and normal quality control checks have not yet taken place, the county quality control team (with national MoH support) should conduct the final quality control checks as part of the grade declaration process. At the end of this process, if all certifications were found to be correct (QC passed in MIS), both the relevant wards and the sub-county can be declared at the relevant grade.

National MoH role in the County Grade Declaration process

When County Governments find that all communities, wards and sub-counties within the county have achieved grade outcomes, the county government should ask the National MoH WASH Hub to undertake the county grade declaration process.

Grade Declaration at county level should be led by the national MoH WASH Hub, with support from at least one other county quality control team (e.g. an adjacent county with good sanitation status), so that the County Grade Declaration process is independent of the teams that implemented, certified or controlled quality within the declaration county.

Grade Declaration at county level is the highest and most important level of achievement. Therefore, the grade declaration team should conduct another round of quality control

checks to confirm that all of the wards and sub-counties have sustained the grade outcomes before declaring that the County has achieved the next grade.

Grade Declaration checks should be undertaken by a team that includes the following members:

1. **Team leader** from the National MoH WASH Hub.
2. **Deputy team leader** from the national QC officer pool (e.g. from a nearby county).
3. **Two or three other team members** either from the National MoH WASH Hub, or from the national QC officer pool.
4. **All team members** shall have appropriate training in grade certification and quality control, and strong WASH experience.

For each county, the Grade Declaration process should:

1. Confirm that all Sub-Counties have been declared to have achieved the grade (G1, G2 or G3).
2. Where any Sub-Counties have not yet been declared, conduct quality control checks on at least 10% of the certified villages in the relevant sub-counties that have not previously been checked.
3. If the checks find that any villages have not achieved the required grade outcomes, the sub-county (and county) cannot be declared to have achieved the grade. Further work will be required to address any issues found by the quality control checks, and at least six months should pass before the county government makes a second request to the National MoH WASH Hub for county grade declaration.
4. Where all Sub-Counties have passed the quality control checks (QC passed in MIS), the grade declaration team should randomly select three Sub-Counties for Grade Declaration checks. In each of these three selected Sub-Counties, the team should then randomly select three villages for Grade Declaration checks, and conduct quality control checks in the three villages selected (in all three Sub-Counties, for a total of nine village checks).
5. If all nine selected villages pass the Grade Declaration checks (e.g. quality control checks confirm that the grade outcomes have been achieved and sustained), the County can be formally declared to have achieved the grade.
6. Where any of the nine selected villages does not pass the Grade Declaration checks (e.g. because of sustainability problems, or because of issues that have arisen since the original grade certification), further checks should be made within the same sub-county (to assess the extent of the problems), with another three villages selected and checked in every sub-county where a village fails the grade declaration checks. If no further problems are found, the county (and its subcounty and ward levels) will be given three months to rectify the problems, after which the failed villages will be re-checked. If the grade outcomes are confirmed after three months, the County can be formally declared to have achieved the grade.
7. Where one or more of the nine selected villages fails the grade declaration checks, and the follow-up checks (in another three villages in each sub-county with a failed village) find further problems (e.g. other villages that have not achieved and sustained the

required grade outcomes), the county cannot be declared to have achieved the grade. Further work will be required to address the issues found by the grade declaration checks, and at least six months should pass before the county government makes a second request to the National MoH WASH Hub for county grade declaration.

The relevant grade declaration form (either paper format, or using the RTMIS mobile application) should be used to record the outcomes observed, and ensure that the grade declaration result is uploaded into the online RTMIS. The overall grade achievement should only be declared where, in all of the villages checked:

1. All households meet the required service level for all of the relevant indicators.
2. All community outcome indicators are certified to be at the required service level.
3. All sustainability indicators are certified to be at the required service level.

The results of the grade declaration checks should be presented to the community, either to confirm that the village has achieved and sustained the grade outcomes, or to highlight and explain any areas that did not meet the required outcome criteria, and encourage the community to work on these areas so that the county grade declaration can be achieved at the next attempt.

The County Government should also be informed of the next steps in the process (e.g. grade celebration and work towards the next grade), or re-application for grade declaration.

4.6 Celebration of Grade Certification and Grade Declaration

The celebration of grade achievement, such as G1 ODF, after grade certification of a village, or grade declaration in a ward, sub-county or county, is an important part of the process. Communities and other stakeholders greatly value the recognition of their achievements by county officials, elected representatives (i.e. Members of the County Assembly, Members of Parliament) and other higher-level stakeholders (e.g. national officials and development partner representatives).

A variety of different celebrations and incentives should be utilised, in recognition of the different budget and resources available to different county governments and local administrations and their development partners, including:

- Public celebration events with external guests
- Billboards and flags commemorating the achievement
- Media recognition (radio, newspaper, online, TV)
- Distribution of certificates.

Recognition should also be given to the leadership and health staff of locations, wards and subcounties that make the best progress (in any year) towards the achievement of the RuSH Protocol grades. An annual county event should be held, with VIP guests and media coverage, to award champions' certificates to the individuals who have contributed the most towards sanitation and hygiene progress in high achieving locations, wards and sub-counties. County grade declarations should also be celebrated at national level.

4.7 Finance for Grade Certification and Celebration

All of these processes (grade claims, certifications, quality control, grade declarations and grade celebrations) have costs: transport and material costs for community visits, expenses paid to the teams involved in these processes (including accommodation where teams have to stay away from home), and expenses related to the organisation, support and funding of the grade celebrations.

In the long term, county governments should be responsible for the county-level costs, and should include the provision in their health or sanitation budgets for these important processes. In the short term, where health or sanitation budgets do not include any provision for these costs, development partners are asked to allow for these costs within sanitation and hygiene project allocations. These costs should be kept to reasonable levels, with efforts made to ensure that the costs of confirming and celebrating the results do not exceed the total cost of the implementation and support activities that achieved the results.

The National WASH Hub should be responsible for national-level costs, such as those related to establishing and training the national QC officer pool; supervision and checks on county quality control processes; and its involvement in grade declaration processes. In the short-term, where the national budget does not include any provision for these costs, development partners may be asked to cover these costs. Efforts should be made to ensure that the costs of the quality control and county grade declaration processes are kept to reasonable levels (in line with the certification costs).

4.8 Monitoring systems

The Real-Time Monitoring Information System (RTMIS) will be significantly revised and expanded (or replaced) to reflect the new grading system and monitoring indicators in the RuSH Protocol, and better align the national monitoring system with other SDG requirements. The new RTMIS will be designed to accept inputs from both a mobile monitoring application (to be developed) and from manual input into the online RTMIS of the data collected on paper forms.

The MIS should include household identification (HH-ID) codes that allow updated monitoring information to be added to a specific household record and referenced. Household names will also be included in the RTMIS, but will only be visible and used by those working at local level (e.g. community health workers who already know the households) to avoid the use and sharing of personal information by the RTMIS database.

The use of HH-ID codes will allow the baseline data for a particular household to be retained, and for progress against this baseline to be assessed over time. The CHVs should hold a register of the HH-IDs (or be able to access an online register) that enables them to select the correct HH-ID before entering data for each household, to ensure that it updates the correct record.

The use of HH-IDs will allow aggregate data for the whole community, and progress since baseline, to be reliably assessed. This approach should also allow feedback on progress (and areas to work on) to be provided to specific households at the end of the monitoring visit, as it should enable the monitor to access the latest summary of the outcomes for each household (NB the individual household data and personal information should only be available to people who work in that community; all personally identifiable data, other than the HH-ID code, should not be visible to other users, such as higher-level users of the MIS).

The monitors should also be able to access a community level summary of outcomes, including overall grade achievement, through the MIS. This feature will enable monitors (e.g. CHVs and CHAs) to discuss progress with the community leadership and key sanitation and hygiene stakeholders, and identify key areas for further work.

The MIS should provide a detailed dashboard to summarise progress and grade achievement for each ward, sub-county and county. The government and lower-level administration officials will use the dashboard to highlight key successes and failures, determine what is working (or not), trigger follow-ups and support where further work is required, and to provide evidence of progress and performance to higher-level officials.

The revised RTMIS should also include Kenya Health Information System (KHIS) codes to allow key sanitation and hygiene indicators from the RTMIS to be reflected in the KHIS system. At present the only sanitation and hygiene indicators included in the KHIS are i) the number of functional latrines, and ii) the number of handwashing facilities. However, as more household data becomes available within the RTMIS, the KHIS may expand to include other sanitation and hygiene indicators.

Given periodic revisions to the KHIS indicator codes, the Ministry of Health should allow for a periodic process (aligned with the timing of the KHIS code updates) to revise the codes in the RTMIS and ensure that the link between the two databases continues to function well.

Individual household **data** and personal information should only be available to people who work in that community

5 Outcome Indicator Tables

The following tables summarise the outcome indicators, indicator criteria and service levels to be monitored under the RuSH Protocol for Rural Sanitation and Hygiene.

For each outcome indicator (e.g. G1-1.1 Presence of functional household toilet with privacy), the monitor should assess and record the service level either in the mobile monitoring application (for upload to the MIS) or on a paper monitoring form.

5.1 Outcome indicators: G1 Open Defecation Free environment

Table 1: G1 ODF - household outcomes and service levels

Indicator and indicator criteria	Outcome service levels
G1-1 Use of flyproof and clean toilets	
G1-1.1 Presence of functional household toilet with privacy *Assessment: observation of household toilet* *Observe: toilet available in compound* *Observe: toilet is functional* *Observe: toilet provides adequate privacy*	G1 Functional toilet with privacy observed
	G0/1 No toilet observed (check shared use in G1-1.2)
	G0 Toilet observed but INADEQUATE privacy
	G0 Toilet observed but NOT functional (collapsed, full, abandoned)
G1-1.2 Toilet use by all household members *Assessment: observation & household interview* *Q. Do members of your household defecate in the open or use a toilet?* *Q. Are any members of your household unable to use the toilet? Follow-up* *Q. Are they able to use the toilet with assistance?* *Q. If not, what happens to their excreta?* *Q. Do you share this toilet with others who are not members of your household?* *Q. How many people (adults and children) share use of the toilet?*	G1 Use of own toilet by all household members
	G1 Shared use of own toilet with 10-15 (or less) people (including other households)
	G1 Shared use of other household toilet with 10-15 (or less) people
	G0 Shared use of own toilet with more than 10-15 people
	G0 Shared use of other household toilet with more than 10-15 people
	G0 No toilet, practice open defecation

G1-1.3 Flyproof toilet *Assessment: observation of household toilet* *Observe: type of latrine and method of flyproofing*	G1 Pit latrine with tight-fitting squat hole cover (in place)
	G1 VIP latrine with screened vent pipe
	G1 Pour-flush latrine with water seal pan (with water)
	G1 Pour-flush latrine with SATO pan (functional)
	G1 Other flyproof latrine
	G0 Pit latrine where flies can enter pit (missing or inadequate squat hole cover)
	G0 VIP latrine with missing or inadequate insect screen on vent pipe
	G0 Pour-flush latrine with broken water seal pan, or no water in pan
	G0 Pour-flush latrine with non-flyproof SATO pan (no flap)
	G0 Pour-flush latrine with open pipe to pit
	G0 Other non-flyproof latrine
G1-1.4 Clean toilet *Assessment: observation of household toilet* *Observe: cleanliness of toilet pan, floor and walls*	G1 Clean: no visible faeces, urine or soiled cleaning materials
	G1 Clean: minor traces of faeces, traces of soiled materials (easily cleaned)
	G0 Significant traces of faeces or soiled cleaning materials
	G0 Visible faeces, urine and soiled materials, smelly and dirty toilet
G1-2 Presence of handwashing facility with water and soap	
G1-2.1 Presence of household handwashing facility *Assessment: observation of handwashing facility* *Q. Where do you and other members of your household most often wash your hands?* *Observe: location of handwashing facility*	G1 Observed by toilet and in kitchen
	G1 Observed by toilet
	G1 Observed in home (portable basin, jug, container)
	G0 No handwashing facility observed
G1-2.2 Water available at handwashing facility *Assessment: observation of handwashing facility* *Observe: availability of water*	G1 Water available at handwashing facility
	G0 No water available at handwashing facility

G1-2.3 Soap available at handwashing facility *Assessment: observation of handwashing facility* *Observe: availability of soap (or other cleanser)* *Q. Do you have soap or detergent in your household for washing hands?*	G1 Solid, liquid or powder soap available at handwashing facility
	G0 Soap in house, but not available at handwashing facility
	G0 Only ash, mud or sand available at handwashing facility
	G0 No soap or other hand cleanser available
G1-3 No exposed human excreta	
G1-3.1 No exposed human excreta in household compound *Assessment: observation of household compound* *Observe: no visible human faeces in the compound, house, toilet or in any other household buildings or facilities*	G1 No visible OD (child or adult) or exposed human excreta in household compound
	G0 Child or adult excreta observed in household compound
G1-4 Safe management of child excreta and diapers	
G1-4.1 Safe management of child excreta in household compound *Assessment: household interview (main caregiver)* *Q. The last time [name of youngest child] passed stools/defecated, where did they defecate?* *Q. How were the child faeces collected and disposed?* *Q. Where was the collection tool (e.g. potty) cleaned?*	G1 Child uses toilet without assistance
	G1 Child uses toilet with assistance
	G1 Child uses potty with faeces put or rinsed into toilet
	G1 Child faeces put or rinsed into toilet (safely managed)
	G1 Child faeces buried (safely managed)
	G0 Child faeces disposed with solid waste
	G0 Child faeces unsafely disposed or left in open/field/drain
	G0 Soiled potty or other collection tool unsafely washed in compound or at water point
G1-4.2 Safe management of diapers in household compound *Assessment: observation & household interview* *Where washable diapers or cloths used:* *Q. How were the child faeces disposed?* *Q. Where was the washable diaper or cloth cleaned?* *Where disposable diapers used:* *Q. How was the disposable diaper disposed?* *Observe: presence of used diapers in household compound*	G1 Washable cloths or diapers emptied to a safe place and washed in safe place
	G1 Disposable diapers put into covered waste pit
	G1 Disposable diapers buried in household compound
	G1 Disposable diapers collected for disposal at a safely managed communal disposal site
	G0 Used diapers unsafely disposed or unsafely emptied and washed
	G0 Used diapers visible in household compound

Table 2: G1 ODF - community outcomes and service levels

Indicator and indicator criteria	Outcome service levels
G1-3 No exposed human excreta: community outcome	
G1-3C No exposed human excreta in communal areas *Assessment: observation of communal areas* *Observe: no visible human faeces in communal areas*	G1 Communal areas free of OD (child or adult) and exposed human excreta
	G0 Child or adult excreta observed in communal areas
G1-4 Safe management of child excreta and diapers: community outcome	
G1-4C Safe management of diapers in communal areas *Assessment: observation of communal areas* *Observe: presence of used diapers in communal areas*	G1 Communal areas free of used diapers
	G0 Used diapers visible in communal areas
G1-S Sustainability indicators	
G1-S1 Functional G1 ODF monitoring system *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G1 Community monitoring system (G1 outcomes) is functional and up-to-date
	G0 Community monitoring system (G1 outcomes) is not reliable
	G0 Community monitoring system (G1 outcomes) is not functioning
G1-S2 Monitoring of at-risk households *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G1 At-risk households: identified, listed and disaggregated G1 data available
	G0 At-risk households: not identified or not listed or no disaggregated data available
G1-S3 Action plan for G2 status *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G1 Approved action plan (to achieve G2): available and in use
	G0 Action plan: not available, not approved or not in use

The following G1 monitoring tools are included in Annex 1:

1. G1 Monitoring Form 01: Household OD & HW (Open defecation and handwashing)
2. G1 Monitoring Form 02: Household Toilet use
3. G1 Monitoring Form 01: Household OD & HW – Instructions and household questions
4. G1 Monitoring Form 02: Household Toilet Use – Instructions and household questions
5. G1 Monitoring Form 03: Community outcomes
6. G1 Monitoring Form 03: Community outcomes – Instructions and household questions
7. G1 Monitoring Form 01: Black and white version
8. G1 Monitoring Form 02: Black and white version

9. G1 Monitoring Form 03: Black and white version
10. G1 Certification Form.

The G1 outcomes have been split between two monitoring forms (01 Household OD & HW and 02 Household Toilet Use). The first form is designed to record the non-toilet outcomes (open defecation, child excreta and diapers and handwashing with soap) in 10 households. The second form is designed to record the toilet outcomes in 10 households, including all of the G1, G2 and G3 toilet outcomes to capture progress beyond G1 toilet use service levels in any households that progress further.

The monitoring forms will be available in 3 different formats:

1. **Mobile monitoring application:** the forms will be built into the app, with each outcome (and related instructions) appearing on the screen. The monitor enters each outcome or response for the current household, and the data are stored on the smartphone or tablet for future uploading to the online RTMIS.
2. **Colour monitoring forms:** where mobile monitoring is not possible, pre-printed colour and double-sided forms should be provided to the monitoring teams (either in paper form, or in pre-printed registers). The colour coding is designed to highlight the different service levels, and make it easier to confirm whether outcomes have met the criteria for the G1, G2 or G3 service levels.
3. **Black and white monitoring forms:** where colour printing is not possible, or colour forms have run out, a black and white version of the forms is provided for local printing and use. In the black and white forms, the colour coding is replaced by marking each box with the relevant grade level (G1, G2 or G3).

Instructions are provided for use of each monitoring form (NB these instructions should also be relevant for use of the mobile monitoring application), including:

1. **Household outcomes:** household outcome data should be collected from every household in the community (in order to assess overall G1, G2 or G3 status). Where one monitoring visit only covers some households, the names of the households should be clearly marked to ensure that these monitoring data can be aggregated with data from other visits to provide a complete picture of household outcomes.
2. **Community outcomes:** assessment of community outcomes will require monitoring visits to a variety of communal areas or facilities. All relevant communal areas or facilities (e.g. main open defecation sites, public spaces, communal water points, fields within the community settlement), should be visited and assessed by the monitoring team, with separate monitoring data recorded for each communal area or facility.
3. **Sustainability indicators:** assessment of the sustainability indicators should be through a focus group discussion with community leaders, sanitation and hygiene committee members, CHVs and natural leaders.
4. **Observation questions:** the outcomes observed should be monitored and recorded at each household visited. The observation questions specify the outcomes to be observed, which then have to be classified using the service level options on the monitoring forms.

5. **Household survey questions:** should be asked of an appropriate household respondent (usually the household head, the main caregiver or, where neither of these is available, an adult over 18 years old). Response options are provided (in the instructions) for each household survey question – the response options should be used to determine the outcome service level for that indicator criterion. Survey question responses will be recorded when using the mobile monitoring app, but will not be recorded when using the paper forms (due to insufficient space).

5.2 Outcome indicators: G2 Safe & Sustainable environment

Table 3: G2 Safe & Sustainable: household outcomes

Indicator and indicator criteria	Outcome service levels
G2-1 Individual use of durable toilets with safe containment	
G2-1.1 Individual use of toilet *Assessment: household interview* *Q. What is the total number of people (adults and children) in the household?* *For each household member:* *Q. The last time [name] defecated, did they defecate in the open or use the toilet?* *Q. Do any members of the household require assistance to use the toilet? What sort of assistance?* *Q. Do any members of the household use the toilet sometimes, and defecate in the open at* other times?	G2 All household members use the toilet at all times
	G2 All household members use the toilet, some with assistance, at all times
	G0 One household member sometimes defecates in the open
	G0 One household member always defecates in the open
	G0 More than one household member sometimes defecates in the open
	G0 More than one household member always defecates in the open
	G0 All household members defecate in the open
G2-1.2 Durable toilet slab *Assessment: observation of interior of household toilet* *Observe: toilet slab or floor materials*	G2 Tiled concrete slab
	G2 Concrete slab
	G2 Structural plastic slab
	G2 Other durable slab materials
	G2 Resilient slab (using local materials that are resistant to local sustainability factors)
	G1 Not durable, cement-covered wooden slab
	G1 Not durable, mud-covered wooden slab
	G1 Not durable, wooden slab
	G1 Not durable slab materials
	G0 Partial slab (openings to pit or containment, excreta not fully contained)
	G0 No slab (open pit or containment, excreta not contained)

G2-1.3 Durable toilet pit *Assessment: observation & household interview* *Observe: toilet pit, tank or other excreta containment system* *Where pit lining and soil type cannot be observed:* *Q. Were any materials used to support the sides of the pit?* *Q. Does the soil collapse without support?* *Q. Has the toilet pit collapsed in the last 12 months?* *Observe: does the toilet pit appear durable in local conditions?*	G2 Pit lined with earth blocks, concrete blocks or bricks
	G2 Pit lined with concrete rings
	G2 Pit lined with resilient local materials
	G2 Pit unlined (soil is stable)
	G1 Lined with inadequate local materials (soil is unstable)
	G1 Unlined pit (soil is unstable)
	G0 Not durable pit (collapsed or abandoned pit, or regular collapse)
	G0 No pit (excreta discharges into the open)
G2-1.4 Safe containment *Assessment: observation & household interview* *Observe: any evidence of surface outflows from pit (e.g. increased vegetation growth around pit)* *Q. Are surface outflows from the pit ever visible?* *Q. How often are surface outflows from the pit visible?* *[G2 Never; G1 Only once, Rarely; G0 Regularly, Continuously]* *Q. Has the toilet pit ever filled up?* *Q. What happened when the toilet pit filled up?* *[G2 Covered and dug new pit; connected twin pit; added second pit; G? emptied; G1 continued to use; shared another toilet; G0 OD]* *Septic tank Q: where does the septic tank outlet discharge?* *[G2 Soakpit or leach field or sewer; G0 Open, drain, water]*	G2 Safe containment with no surface outflows (not yet full)
	G2 Safe containment with no surface outflows (replaced when full)
	G2 Safe containment: twin alternating pit with storage more than 2 years before emptying
	G2 Safe containment: septic tank with outlet connected to soakpit
	G1 Unsafe latrine pit (occasional surface outflows)
	G1 Unsafe twin pit (storage less than 2 years before emptying)
	G0 Unsafe latrine pit (regular or continuous surface outflows)
	G0 Unsafe septic tank (outlet discharges to the open)

G2-2 Handwashing with soap at critical times	
G2-2.1 Handwashing with soap: at critical toilet times *Assessment: household interview* *Q. What do you usually use to wash your hands?* *[G1: soap and water; liquid or powder soap and water]* *Q. When do you usually wash your hands?* *Prompt: please mention all times when it is important to wash your hands*	G2 Handwashing with soap: after toilet use or anal cleansing
	G1 No mention of handwashing with soap at critical toilet times
	G0 No handwashing facility, no water or no soap
G2-2.2 Handwashing with soap: at critical food times *Assessment: household interview (see G2-2.1)*	G2 Handwashing with soap: before eating, food preparation and feeding children
	G1 No mention of handwashing with soap at critical food times
	G0 No handwashing facility, no water or no soap
G2-2.3 Handwashing with soap: at critical infant times *Assessment: household interview (see G2-2.1)*	G2 Handwashing with soap: after cleaning or handling infant faeces; after washing or disposal of a used diaper
	G1 No mention of handwashing with soap at critical infant times
	G0 No handwashing facility, no water or no soap
G2-2.4 Handwashing with soap: at critical animal times *Assessment: household interview (see G2-2.1)*	G2 Handwashing with soap: after contact with animals, animal products or animal wastes (in milking households: before and after milking animals)
	G1 No mention of handwashing with soap at critical animal times
	G0 No handwashing facility, no water or no soap
G2-3 Safe food hygiene	
G2-3.1 Clean and safely stored food *Assessment: observation of food storage* *Observe: cleanliness of raw food, produce and cooked food* *Observe: storage of raw food, produce and cooked food*	G2 Clean and safely stored food
	G1 Food not adequately washed, or not safely stored
	G0 Food not clean and not safely stored

G2-3.2 Clean and safely stored kitchen utensils *Assessment: observation of kitchen utensils* *Observe: cleanliness of kitchen utensils* *Observe: storage of kitchen utensils*	G2 Clean and safely stored kitchen utensils
	G1 Kitchen utensils not adequately washed, or not safely stored
	G0 Kitchen utensils not clean and not safely stored (e.g. on ground, outside)
G2-3.3 Clean and safely stored milk containers *** In households that collect milk from livestock *** *Assessment: observation of milk containers* *Observe: cleanliness of milk containers* *Observe: storage of milk containers*	G2 Clean and safely stored milk containers
	G1 Milk containers not adequately washed, or not safely stored
	G0 Milk containers not clean and not safely stored (e.g. on ground, outside)
G2-4 Safe water management	
G2-4.1 Safe management of household drinking water *Assessment: observation and household interview* *Observe: containers used to collect drinking water* *Observe: drinking water storage* *Observe: method of using drinking water* *Q. Is the water supplied by your main source usually of acceptable quality?* *Q. What do you usually do to the water to make it safer to drink? [Boil, Add chlorine, Strain through cloth, Use water filter, Solar disinfection, Settlement, Other, Not required]*	G2 Drinking water: safely collected, stored, and used; and adequate quality
	G1 Drinking water not well managed (either not safely collected, or not adequate quality, or not safely stored, or not safely used)
	G0 Drinking water unsafely managed (unsafe collection, inadequate quality, unsafe storage, and unsafe use)
G2-4.2 Safe management of household water sources *Assessment: observation of household water sources* *Observe: cleanliness of water points in household compound* *Observe: protection of water points in household compound* *Observe: drainage of water points in household compound*	G2 Household water points are clean, protected and well drained
	G1 Household water points are either dirty, unprotected or badly drained
	G0 Household water points are unsafely managed (dirty, unprotected and badly drained)

G2-5 Safe management of animals and animal wastes	
G2-5.1 No animal wastes in or around the house *Assessment: observation in and around the house* *Observe: presence of animal wastes (except in sites where manure is stored)*	G2 No animal wastes visible in or around the house
	G1 Small amounts of animal wastes present (inadequate collection and management)
	G0 Large quantity of animal wastes present
G2-5.2 Safe management of animal wastes in the household compound *Assessment: observation of animal waste management* *Observe: location of animal waste management facility* *Observe: storage and management of animal wastes*	G2 Safe management of animal wastes in household compound
	G1 Inadequate management of animal wastes (storage or management is unsafe)
	G0 Unsafe management of animal wastes close to house (unsafe location, storage and management)
G2-5.3 Safe separation of animals from under-5 children *Assessment: observation of animals in the household compound*	G2 Safe separation: animals penned or confined away from under-5 children
	G1 Inadequate separation: animals penned or confined close to the house
	G0 Unsafe separation: animals not penned or confined, and allowed close to or in the house

Table 4: G2 Safe & Sustainable: community outcomes

Indicator and indicator criteria	Outcome service levels
G2-1C Household toilets with safe containment: community outcome	
G2-1C Low risk of groundwater contamination Assessment: community-level assessment Use SFD Groundwater Pollution Risk Estimation Tool https://sfd.susana.org/risk-groundwater	G2 Low risk: no groundwater sources
	G2 Low risk: groundwater sources not used for drinking water
	G2 Low risk: less than 25% groundwater use with protected drinking water supply
	G2 Low risk: fine soils, 5-10m deep groundwater, separated and protected water supply
	G1 High risk: shallow groundwater, coarse/ fractured soils, drinking water from groundwater sources
	G1 High risk: shallow, nearby and unprotected groundwater supply, high use for drinking water

G2-4 Safe water management: community outcome	
G2-4C Safe management of communal water sources *Assessment: observation of communal water sources* *Observe: cleanliness of communal water points* *Observe: protection of communal water points* *Observe: drainage of communal water points*	G2 Communal water points are clean, protected and well drained
	G1 Communal water points are either dirty, unprotected or badly drained
	G0 Communal water points are unsafely managed (dirty, unprotected and badly drained)
G2-S Sustainability indicators	
G2-S1 Functional G2 monitoring system *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G2 Community monitoring system (G2 outcomes) is functional and up-to-date
	G0 Community monitoring system (G2 outcomes) is not reliable
	G0 Community monitoring system (G2 outcomes) is not functioning
G2-S2 Monitoring of at-risk households *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G1 At-risk households: identified, listed and disaggregated G2 data available
	G0 At-risk households: not identified or not listed or no disaggregated data available
G2-S3 Action plan for G3 status *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G1 Approved action plan (to achieve G3): available and in use
	G0 Action plan: not available, not approved or not in use
G2-G1 Sustainability indicator: Re-verification of G1 outcomes	
G1-1 100% household use of flyproof and clean toilets	G1 ODF: Use of flyproof and clean toilets
G1-2 100% handwashing facilities with water and soap	G1 ODF: Presence of handwashing facilities with water and soap
G1-3 No exposed human excreta	G1 ODF: No visible OD (child or adult) in household compounds or communal areas
G1-4 100% safe management of child excreta and diapers	G1 ODF: Safe management of child excreta and diapers

The following G2 monitoring tools are included in Annex 2:

1. G2 Monitoring Form: Household Outcomes
2. G2 Monitoring Form: Household Outcomes – Instructions and household questions
3. G2 Monitoring Form: Community Outcomes
4. G2 Monitoring Form: Community Outcomes – Instructions and household questions
5. G2 Certification Form.

5.3 Outcome indicators: G3 Clean & Healthy environment

Table 5: G3 Clean & Healthy: household outcomes

Indicator and indicator criteria	Outcome service levels
G3-1 Use of safely managed household sanitation services	
G3-1.1 Safe management of household faecal sludge *Assessment: interviews (household, service provider, local authority)* *Q. Has the toilet pit or containment ever been emptied?* *Q. The last time the pit or containment was emptied, who emptied it?* *Q. Where was the faecal sludge from the pit or containment disposed (or transported to)?* *Q. Did anyone enter the pit during emptying?* *Q. Did you store or use any of the faecal sludge?* *Q. Where did you store the faecal sludge?* *Q. How long did you store the faecal sludge before use?* *Q. After storage, how did you use the faecal sludge?*	G3 Safe excreta containment with no emptying
	G3 Safe on-site management with burial (to covered pit in the household compound)
	G3 Safe on-site management with alternating pits (stored for 2 years before emptying & use)
	G3 Safe off-site disposal (emptied and transported to safe disposal site)
	G3 Safe off-site treatment (emptied and transported to approved treatment site)
	G1 Unsafe on-site management (emptied to open pit in compound)
	G1 Faecal sludge stored for less than 2 years before use
	G0 Faecal sludge transported to unsafe disposal site, or unapproved treatment site
	G0 Faecal sludge unsafely disposed to fields (more than 500m away from village)
	G0 Faecal sludge unsafely disposed to open, drain or water body (less than 500m away)
G3-2 Permanent handwashing facilities	
G3-2.1 Permanent handwashing station *Assessment: observation of handwashing station* *Observe: type and location of handwashing station*	G3 Tap from piped water supply with basin (or other water collection device)
	G3 Manufactured handwashing station with adequate water storage
	G1 Homemade tippy tap
	G1 Jerrycan or other closed container
	G1 Portable basin or other open container
	G1 Other temporary handwashing facility
	G0 No handwashing facility

G3-2.2 Hands-free operation of handwashing station *Assessment: observation of handwashing station* *Observe: mechanism to trigger water flow*	G3 Tap with piped water supply
	G3 Tap from water storage
	G3 Other hands-free operation (e.g. foot pedal)
	G1 Manual operation of water flow
	G0 Unwashed hands enter the water storage/container
G3-2.3 Drainage of wastewater from handwashing station *Assessment: observation of handwashing station* *Observe: drainage of washing water from handwashing station*	G3 Washing water is collected and drained to safe disposal point
	G1 Washing water is collected, but there is no fixed drainage or disposal point
	G0 No collection, drainage or disposal of washing water
G3-3 Safe waste management	
G3-3.1 Safe management of liquid wastes & stormwater *Assessment: observation of household compound* *Observe: drainage and wastewater disposal facilities* *Observe: erosion of building and facilities*	G3 Safe LIQUID waste management: soakpit, drainage, no erosion and no visible wastewater
	G2 Unsafe management: erosion, or wastewater, or inadequate soakpit
	G1 Visible wastewater, erosion, and no soakpits or drainage
G3-3.2 Safe management of solid wastes *Assessment: observation of household compound* *Observe: presence of solid wastes* *Observe: solid waste management facility*	G3 Safe SOLID waste management: clean compound with well-managed solid waste facility
	G2 Unsafe management: inadequate management and some solid waste visible
	G1 Unsafe solid waste: no management and lots of solid waste visible
G3-3.3 Good vector control in household compound *Assessment: observation of household compound* *Observe: standing water & larval breeding sites*	G3 Good vector control: no standing water and no untreated larval breeding sites
	G2 Inadequate vector control: some standing water or some untreated larval breeding sites
	G1 Lack of vector control: larval breeding sites in compound not controlled or treated

G3-4 Good personal hygiene	
G3-4.1 Clean face and hands *Assessment: observation* *Observe: cleanliness of faces and hands of all under-5 children* *Observe: cleanliness of face and hands of main caregiver*	G3 All under-5 children and caregiver have clean hands and faces
	G2 Inadequate personal hygiene: some with dirty hands or dirty faces
	G1 No personal hygiene: all with dirty hands and dirty faces
G3-4.2 Good menstrual health *Assessment: observation and household interview* *Observe: availability of menstrual hygiene materials* *Observe: privacy of washing place (or toilet)* *Observe: disposal point for used menstrual hygiene materials*	G3 Good menstrual health: good materials, private washing place and safe disposal facility
	G2 Inadequate menstrual health: inadequate materials, washing place or disposal facility
	G1 No menstrual health: no materials and no washing place
G3-5 Good nutrition	
G3-5.1 Fully immunized children *Assessment: observation of vaccination records*	G3 All under 5 children are fully immunized (all relevant vaccinations received)
	G2 Not fully immunized: some or all under-5 children not vaccinated
G3-5.2 Vitamin A supplements *Assessment: observation of supplement records*	G3 All under-5 children received Vitamin A supplements in the last 6 months
	G2 Some under-5 children have not received Vitamin A supplement (in last 6 months)
G3-5.3 Exclusive breastfeeding *Assessment: interview with mother* *Q. How are you feeding your baby? [Exclusive breastfeeding; breastfeeding and milk substitutes; milk substitutes; other]* *Q. Has your baby been given anything other than breast milk since it was born? [Milk substitute; water or sugar water; other fluids; food]*	G3 Exclusive breastfeeding: under 6-month children are only fed on breast milk
	G2 Under 6-month children have received water or other food on a few occasions
	G1 Under 6-month children regularly receive water or other food

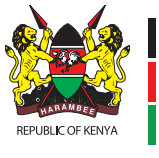
G3-5.4 Nutritious diet *Assessment: observation & household interview* *Observe: what food types/groups are present in the home* Q. Which of these foods have been fed to under-2 children in the last 7 days? *[Breast milk; dairy; grains/roots/tubers; pulses/nuts; meat/offal/fish; eggs; Vitamin-A rich fruit/vegetables; other fruit/vegetables]*	G3 All 6 month to 2 year old children eat from 5 or more food groups
	G2 Inadequate diet: some or all children (6-months to under-2) eat from 3-4 food groups
	G1 Low nutrition diet: some or all children (6-months to under-2) eat from 1-2 food groups
G3-E Endemic outcomes	
G3-E1 Malaria-safe home (in Malaria endemic counties) *Assessment: observation of home* *Observe: presence of insecticide-treated bed nets* *Observe: insect screen on windows, doors or other openings*	G3 All household members sleep under insecticide-treated bednets (or all openings protected)
	G2 Inadequate protection: some beds without nets, or some house openings unprotected
G3-E2 Dewormed home (in STH endemic counties) *Assessment: observation of deworming records*	G3 All children and at-risk adults dewormed in last 12 months
	G2 Not dewormed: some children or at-risk adults not dewormed in last 12 months

Table 6 G3 Clean & Healthy: community outcomes

Indicator and indicator criteria	Outcome service levels
G3-1 Use of safely managed household sanitation services: community outcomes	
G3-1C Safe management of faecal sludge in communal areas *Assessment: observation and interviews (household, service provider and local authority)* *Observe: evidence of unsafe faecal sludge disposal in communal areas* *Q. Where is faecal sludge disposed (in communal areas)?* *Q. Is faecal sludge buried in a safely managed disposal site?* *Q. Is faecal sludge treated in an approved treatment site?*	G3 Safely managed: communal disposal of faecal sludge is safely managed
	G1 Unsafely managed: disposal sites are open or not safely managed (more than 500m away)
	G0 Unsafely managed: faecal sludge disposed to open, drains or water bodies (within 500m)

G3-6 Safely managed institutional sanitation services	
G3-6.C1 Safely managed and usable institutional toilets *Assessment: observation & interviews* *Observe: all institutional toilets* *Flyproof and clean toilets* *Durable toilets with safe containment* *Safe faecal sludge management* *Q. What happens to full pits or full containment systems?* *Q. Where is faecal sludge disposed?* *Q. Is faecal sludge buried in a safely managed disposal site?* *Q. Is faecal sludge treated in an approved treatment site?*	G3 Toilet presence: functional toilet observed in all institutions
	G3 Flyproof toilets: all institutions have flyproof toilets
	G3 Clean toilets: all institutions have clean and smell-free toilets
	G3 Durable toilet slabs: all institutions have toilets with durable slabs
	G3 Durable toilet pits: all institutions have toilets with durable pits
	G3 Safe containment: all institutional toilets have safe containment
	G3 Faecal sludge: safely emptied and disposal from all institutional toilets
G3-6.C2 Permanent institutional handwashing services *Assessment: observation of institutional handwashing* *Observe: all institutional handwashing facilities* *Observe: type of facilities, hands-free operation, drainage, presence of water and soap*	G3 Permanent institutional handwashing services: with hands-free operation, adequate drainage, and presence of water and soap
	G2 Inadequate institutional handwashing services: some institutions with inadequate services
	G0 Some institutions with no handwashing facilities
G3-3 Safe waste management: community outcome	
G3-3.C1 Safe management of liquid wastes and stormwater in communal areas *Assessment: observation of communal areas*	G3 Safe liquid waste management: no building erosion and no wastewater in communal areas
	G2 Unsafe management: visible erosion, wastewater and inadequate drainage
G3-3.C2 Safe management of solid wastes in communal areas *Assessment: observation of communal areas*	G3 Communal areas free of solid wastes with well-managed solid waste services
	G2 Unsafe management: visible solid wastes and inadequate solid waste services
G3-3.C3 Good vector control in communal areas *Assessment: observation of communal areas*	G3 Good vector control: no untreated larval breeding sites in communal areas
	G2 Inadequate vector control: larval breeding sites not controlled in communal areas

G3-S Sustainability indicators	
G3-S1C Functional G3 monitoring system *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G3 Community monitoring system (G3 outcomes) is functional and up-to-date
	G2 Community monitoring system (G3 outcomes) is not reliable
	G1 Community monitoring system (G3 outcomes) is not functioning
G3-S2C Monitoring of at-risk households *Assessment: focus group discussion with key sanitation stakeholders (local leaders, committee, CHVs)*	G3 At-risk households: identified, listed and disaggregated G3 data available
	G2 At-risk households: not identified or not listed or no disaggregated data available
G3-G1 Sustainability indicator: Re-verification of G1 outcomes	
G3-G1 Re-verification of G1 outcomes *Assessment: G1 certification process*	G1 ODF: Use of flyproof and clean toilets
	G1 ODF: Presence of handwashing facilities with water and soap
	G1 ODF: No visible OD (child or adult) in household compound
	G1 ODF: Safe management of child excreta and diapers
G3-G2 Sustainability indicator: Re-verification of G2 outcomes	
G3-G2 Re-verification of G2 outcomes *Assessment: G2 certification process*	G2 Safe & Sustainable: Individual use of durable toilets with safe containment
	G2 Safe & Sustainable: Handwashing with soap at critical times
	G2 Safe & Sustainable: Safe household food hygiene
	G2 Safe & Sustainable: Safe household water management
	G2 Safe & Sustainable: Safe management of animals and animal wastes



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