



SDG6+5 Review of Routine Monitoring for WASH– A Case Study from South Africa

SUMMARY

Five years after the introduction of the Sustainable Development Goals (SDGs), and with the SDG midterm review approaching in 2022/23 marks a critical point for the WASH sector in Eastern and Southern Africa, with many countries not on-track to achieve the SDG6 targets. UNICEF, as the lead agency of a multi-partner approach across 21 member states in Eastern and Southern Africa identified that this point represents a moment for the WASH sector to take stock of progress towards SDG6, understand the gaps in our current knowledge on levels of access, and take corrective actions to ensure that SDG6 is met in the remaining 10 years to 2030 vision.

As part of this broader SDG6+5 review, UNICEF commissioned ITAD to explore and document the current state of SDG6 monitoring across all countries in Eastern and Southern Africa Region. The methodology included: A rapid assessment summarising the status of WASH monitoring systems in all countries; document five case studies (of which this is a part) to provide a deeper analysis of the monitoring frameworks and systems, identify the enablers and barriers to strong monitoring systems, and to capture key learnings for the sector and region.

South Africa was selected because it is unique in the region having a routine monitoring system that is primarily based on annual national household surveys and complemented by utility reporting; as compared to most countries which are pursuing water and sanitation national Information Management System (IMS) databases. This approach raises several interesting areas of inquiry for further actions.

1 Background and Country Selection

South Africa was selected as one of the countries for documenting the SDG6 monitoring practices because it is unique in the region for having a routine monitoring system that is primarily based on annual national household surveys and complemented by utility reporting to the

department of water and sanitation; as compared to most countries which are pursuing water and sanitation national information management system (IMS) databases.

Following the rapid assessment of routine WASH monitoring systems in 2020, the following areas were identified for further investigation through this case study.

1. Quick Wins for Joint Monitoring Programme

(JMP) Alignment: What would it take for the General Household Survey (GHS) and BlueDrop systems to align with JMP definitions and how could this change happen?

2. Data Gaps; Urban WASH, WASH in schools, WASH in health care facilities and water quality: To what extent are the systems in place and functioning? How is the data brought together and analysed to inform planning?

3. Institutional Arrangements: What systems are in place to bring together the various WASH departments and stakeholders to review SDG6 progress and plans? How is the routine monitoring data from GHS, Integrated Regulatory Information System (IRIS) and BlueDrop used to inform planning?

4. Operation and Maintenance (O&M) systems: How are functionality and O&M managed and responded to given that the surveys only provide an annual snapshot and there is no national infrastructure inventory.

KEY FINDINGS

South Africa, through the initiative of the Department of Water and Sanitation (DWS), has established strong institutional arrangements and systems for working towards achieving the full extent of SDG6. Through a dedicated structure of SDG6 'task teams', available routine monitoring data is reviewed annually with identified gaps targeted for action through the annual revision of the water and sanitation master plan. The DWS have taken strong ownership of their responsibility to lead on monitoring SDG6, including the current process of establishing linkages with Education and Health to begin routine gathering of data on WASH in institutions.

South Africa's routine WASH data comes primarily from the annual general household survey, managed by Statistics South Africa (Stats SA), which is statistically relevant down to the provincial level. Unlike most other

countries in the region, there is not a central WASH infrastructure information management system (IMS). Water service providers (WSP), which are responsible for all geographic areas, have varying forms of localised and non-standard infrastructure databases. Previously, WSPs were independently inspected annually against a range of service and quality criteria through the highly regarded Blue and Green drop performance management systems. While both systems were stopped in 2015 (likely for political reasons), the master plan commits to recommence both systems in the coming years. Water and wastewater quality has continued to be reported as a regulatory requirement through the IRIS system, but is largely lacking for rural areas where there is less funding and access to laboratories.

While the routine monitoring data enables DWS to see general trends and progress, major planning exercises carried out centrally have required more granular data. This has been estimated by scaling up the 2011 census using a population growth model.

As WSPs are responsible for the operation and maintenance of systems in their geographic areas, decentralised infrastructure databases has worked as they are responsible for both the data and the response to that data. A central infrastructure WASH IMS, with routine data on service coverage and levels, would therefore mainly benefit centralised granular planning exercises. The DWS has long-term ambitions to create a national infrastructure WASH IMS.

The GHS enables reporting to the JMP up to a basic level of service, in some cases requiring proxies. There are several 'quick-wins' where current GHS questions could be tweaked to directly align and to add the additional questions needed for the household component of reporting against 'safely managed' services. There is widespread willingness within both the DWS and Stats SA to adapt current tools to align with international SDG/JMP reporting, and an annual process for review.

Currently the water and wastewater quality data is not joined-up with the GHS data, but could be; although rural water quality would remain a gap. The reintroduction of the Blue and Green drop systems provides an

opportunity to gather the service provider data needed for safely managed service reporting (continuity of water services and level of wastewater treatment) and to match this up with the GHS and water quality data for reporting against the safely managed criteria.

The DWS have recently established an 'inter-linkage task team' to reach out to other department to compile data on WASH in institutions. There is currently no system for collecting reliable data on WASH in Schools. The Department of Basic education (DBE) NEIMS database is only updated after improvement works are carried out rather than routinely and indicators only align for JMP basic water.

It may take several years for WASH indicators to be included into the national DHIS2 based HMIS. The current Ideal Clinic and Ideal Hospital initiatives collect sufficient WASH data to enable some level of analysis of JMP progress and could enable the first data report to the JMP. The WASH FIT tool is planned as an interim tool to collect WASH in health care facility data. Indicator alignment will be an area for the inter-linkage task team to explore further with both the DoH and DBE.

KEY OPPORTUNITIES FOR IMPROVED DATA

Annual 'Gap Reports': To bring more attention to data gaps and alignment, task teams could be mandated to ensure that both are also considered within the annual coverage gap reports developed by the SDG6 task teams. Alternatively, this role could be delegated to a cross-cutting task team.

Creating GHS Indicator Alignment: Annex 6 shows the specific changes that would be needed to each question in the GHS in order to align responses with JMP definitions. In most cases only small changes to question wording or response options would be needed, as well as two new questions to cover household safely managed sanitation practises. These changes could be

considered during the June to September review period for inclusion in the 2022 GHS.

Connecting service provider data to report on safely managed sanitation: The reintroduction of the Blue and Green drop systems will provide an opportunity to fully report on safely managed water and sanitation, if data on quality and treatment can be connected with data from the GHS, census or community survey.

Exploring an infrastructure IMS: The reintroduction of the Blue and Green drop systems also provides an opportunity to explore creating a standardised infrastructure database that can be utilised by water service providers and enable a central database of coverage and service levels.

Making the most of existing water quality data: Breaking down existing water quality data between urban and rural could enable the data to be used for reporting to the safely managed level in urban area.

Rural Water Quality data gap: The lack of rural water quality testing leaves a gap in both routine monitoring and reporting to the JMP and means that the extent of safely managed water services in rural areas is unknown. The DWS could consider running a one-off rural rapid assessment of drinking water quality (RADWQ) to act as a baseline.

Explore options for schools: How can schools self-report their WASH status at least annually? To date, South Africa has not been able to report to the JMP on the status of WASH in schools. Can the NEIMS database form the foundation for a routine monitoring system or will routine monitoring of WASH in schools need to be built into a different or new system? This is a question for the inter-linkage task team to explore with the DBE IMS team.

Utilise existing WASH in Health Care Facility data: While not complete, the ideal clinic and hospital programs contain WASH data that could be aligned to JMP indicators to enable South Africa to partially report for the first time to the JMP. The inter-linkage task team could lead on gathering and aligning the data.

Further alignment from the Ideal Clinic system: While waiting for the HMIS to

incorporate WASH indicators, and regardless of whether an interim WASH FIT can go ahead, the ideal clinic data framework could be revised through mainly minor changes to improve JMP data alignment. More broadly, the inter-linkage task team can push for all systems that are collecting data on WASH to be aligned with national and SDG/JMP indicators.

2 Methods and data

2.1 Methods

Five case studies build on a rapid assessment of monitoring systems for SDG6 undertaken in 21 countries across Eastern and Southern Africa in late 2020. From these 21 countries, five case studies were selected based on the lessons they provide on monitoring for The SDG6.

Based on the findings of the rapid assessment, priority topics for further enquiry were mapped out against three broad areas of the monitoring system: i) the strength of the enabling environment for WASH monitoring; ii) the availability of data for monitoring WASH and the alignment with SDG6 indicators; and iii) the details on how WASH monitoring systems are structured and managed at the country level. These areas of enquiry were validated with WASH specialists in the UNICEF Country Office.

2.2 Data Used

An extensive desk review of publicly available WASH data and information was conducted, most systems investigated are available online to some extent and in at least summary format. Six key informant interviews were conducted with several different teams within the Department for Water and Sanitation (DWS) and Statistics South Africa. Findings based on this data were validated in a meeting with UNICEF and key stakeholders and synthesised in this report.

2.3 Limitations

Interviews with representatives from the Department of Health (DoH) or Department of Basic Education (DBE) could not be conducted but were able to gather some information through messages and email exchange. It is possible that there are ongoing or planned initiatives from the DBE that the study team and DWS may not be aware of.

In terms of the landscape of WASH monitoring in South Africa – all interviews were held at the national level. As such, there remains an information gap around how individual water service providers and authorities manage their infrastructure including the extent of decentralised and localised infrastructure or service databases.

2.4 Institutional Arrangements for WASH monitoring

The national statistics office, Statistics South Africa, holds overall responsibility for collecting data and reporting on the sustainable development goals (SDGs). Responsibility for monitoring SDG 6 (SDG6) related to water and sanitation, is held by the department of Water and Sanitation (DWS), who have established a structure of task teams to lead on each of the SDG6 sub-goals as shown in Figure 1. There is currently no formal involvement of the Department of Health (DoH) or the Department of Basic Education (DBE) in the SDG6 structure and hence a lack of data for WASH in both institutions.

Statistics South Africa (Stats SA)

Stats SA is the national statistics office, with overall responsibility for reporting against SDG progress. SDG progress updates are intended to be produced and published every three years with the last report published in 2019 and next due in 2022. An online '[SDG Goal Tracker](#)' portal is available to present the data compiled by Stats SA.

Related to WASH, the Stats SA is responsible for coordinating, funding and implementing large scale surveys including the census, community survey and annual GHS; with the supplementary data required for SDG6 that cannot be measured through household surveys coming from the DWS.

Normally, Stats SA would be responsible for coordinating the monitoring and reporting of humanitarian emergencies, using existing survey

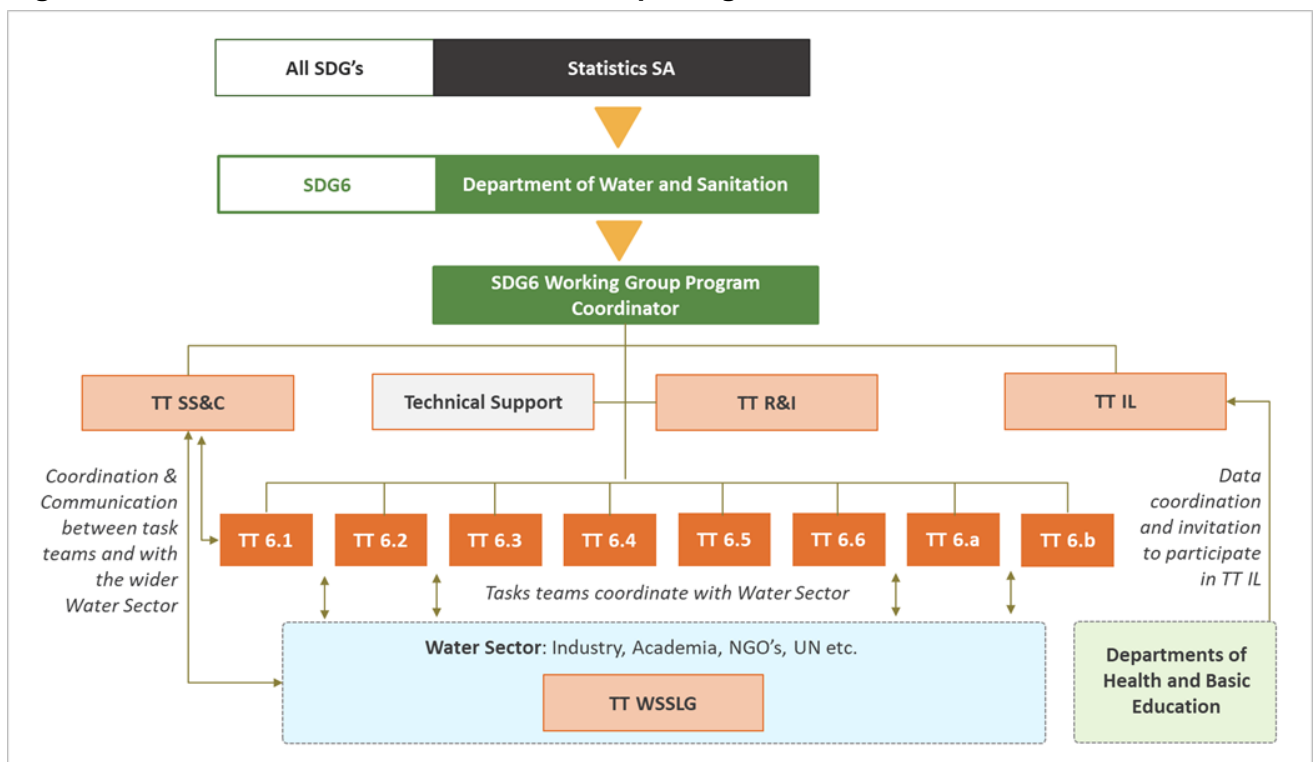
databases as the basis for estimating baseline service level and collecting data from different departments. However, for Covid-19 the DoH was appointed to establish and manage the overall response monitoring.

Department of Water and Sanitation (DWS)

The [DWS](#) holds responsibility for monitoring and reporting to Stats SA on progress towards all aspects of SDG6.

Municipalities are responsible for monitoring the provision of water and sanitation services within their service areas and have an obligation to report into DWS managed national monitoring systems. South Africa is split into municipalities (Figure 3) which cover both urban and rural areas, although often through different water service providers and systems.

Figure 1: DWS led SDG6 coordination and reporting structure



Source: DWS

The DWS also acts as a non-independent regulator for the water and sanitation sector, regulating the public water service authorities (WSA), which oversee the Water service providers (WSPs), which can be public or private. Water boards, a separate group of legal entities, provide bulk water to WSAs.

WASH in Institutions

Responsibility for monitoring WASH in schools falls within the remit of the Department of Basic Education and Higher Education (DBE), and for health care facilities within the remit of the DoH. There is currently no mechanism or system for bringing any such WASH data into either the DWS or Stats SA SDG6 reporting systems.

Structure for monitoring SDG6

The DWS established an SDG working group (SDGWG), with an overall SDG6 coordinator, within the branch of planning and information to coordinate the implementation and monitoring of SDG6.

The SDGWG established 12 task teams (TTs), eight related to the specific SDG6 sub-goals (6.1, 6.2, etc.) with the other four acting in cross-cutting areas (Figure 1). Each task team has specific terms of reference, an overall leader and around 10 to 20 sector experts from within and outside of the DWS. Overall, there are more than 100 people involved in this SDG6 structure. The overall strategic direction and coordination is provided by the SDGWG.

Each sub-goal task team is required to monitor the progress towards the SDG target and lead on completing indicator reports for national and international reporting, including to the JMP for SDG6.1 and SDG6.2. They are expected to meet frequently.

The cross-cutting task teams, as shown in Figure 1, are:

Sector Support and Coordination (TT SS&C):

Aims to communicate progress and information between task teams and coordinate general guidance and capacity building initiatives.

Research and Innovation (TT R&I): Led by the Water Research Council (WRC) to support other task-teams in identifying innovative solutions to help reach targets.

Water and Sanitation Sector Leadership Group (TT WSSLG):

is the highest non-statutory strategic sector partnership forum for the national water sector. It is the overall sector leadership group that brings together stakeholders across the sector, including NGOs, civil society, private sector, academia, donors, bank, the UN and other relevant departments of government. While providing sector oversight, the group is also expected to compile overall sector progress and provide the linkage between the DWS led programmes and processes and the wider WASH sector.

Inter-Linkage (TT IL): Is currently being established and expected to be operational by the end of 2021. It will have the responsibility to reach out to other government departments to coordinate monitoring systems and data related to SDG6. Currently there is no formal system for DWS to provide input into Health and School monitoring systems and data is usually shared with DWS in PowerPoint formats on an ad-hoc basis upon request. As such the DWS does not currently have a clear picture of how WASH is monitored in schools and health facilities, or the level of service currently being provided. While DWS considers that this role should be carried out by Stats SA, this task team has been established to overcome this gap. The funding for this additional task team, around US\$1 million, has been provided by the Water Research Council (WRC).

At the sub-national level through the nine DWS regional offices, the director of planning, monitoring and evaluation is expected to be the

SDG6 focal point which the working group and task teams can coordinate with and are expected to seek input from. In addition, they meet with the SDG WG programme coordinator on a quarterly basis.

Funding: The above dedicated structure and ways of working for SDG6 comes from the routine budget of the DWS, rather than a separate specific project budget.

Structure for SDG Monitoring, Reporting and Use of Data

Task teams are required to collect and report on their SDG goals and indicators, following an annual process established by the SDG working group. Every three years this data will also be used for the SDG reporting cycle process led by Stats SA. The process, which is described in more detail in the table below, uses the monitoring data to inform suggested priority actions, which are then incorporated into the annual revision of the National Water and Sanitation Master Plan (NW&SMP) to enable budget allocations and project planning. The NW&SMP was launched in September 2019.

March annual revision is due in 2021.

Table 1: SDG Monitoring, Reporting and Data Use Process

November	<p>Task teams gather data relating to their goal and indicators.</p> <p>Data reports are submitted to Stats SA and used for international reporting, including the JMP, when needed.</p>
December	<p>Task team leaders submit a 'Target Gap Report' to the working group Program Coordinator that brings together the available data to highlight progress and specifically the remaining gaps to reach SDG goal targets.</p> <p>Task teams start work on identifying priority actions to address the gaps.</p>
January	<p>Task team leaders submit a 'Target Actions Report' which identifies the priority areas, strategies and actions proposed to address the current gaps. Propose actions will align under one of the headings of the NW&SMP volume 3 actions.</p>
February	<p>The proposed targeted actions of the eight SDG sub-goal task teams are consolidated by the Program Coordinator and submitted to the Service Delivery Unit of the NW&SMP.</p>
March	<p>The SDG6 Working Group and the NW&SMP teams come together to discuss the priority interventions and confirm the 'Target Actions' that will be included in the annual revision on the NW&SMP.</p>
April to November	<p>The NW&SMP team will monitor the progress of the specific projects and actions within the master plan. There is not a specific M&E plan.</p> <p>The task team continue to meet and monitor overall sector wide progress.</p>

The inter-linkage task team will be exploring how the WASH needs of health care facilities and schools can also be incorporated into this process, given that the NW&SMP does not have a remit for WASH in institutions; the annual target gap and actions reports could still be useful processes and tools.

2.5 Policies, Strategies and Key Documents

South Africa released the **SDG Baseline report** in 2017 and a **SDG Country Report** in 2019. Both documents were produced by Stats SA using data compiled from the various departments.

The **National Development Plan (NDP) 2030** lays out the key development targets, including safe and reliable water in the household and sanitation for all by 2030. The **Medium-Term Strategic Framework (MTSF) 2019-2024** sets the high-level approaches and targets that are needed to reach the NDP.

Specifically for water and sanitation, the main strategy and planning document is the **National Water and Sanitation Master Plan (NW&SMP)**, launched in 2019. The master plan aims to identify the priority actions needed to reach the NDP and SDG6 targets by 2030 and aligns its

actions and targets with the NDP. Volume three of the NW&SMP lays out the schedule of action, the specific projects that are needed. Currently there are around 2,800 projects in the master plan which will be revised on an annual basis.

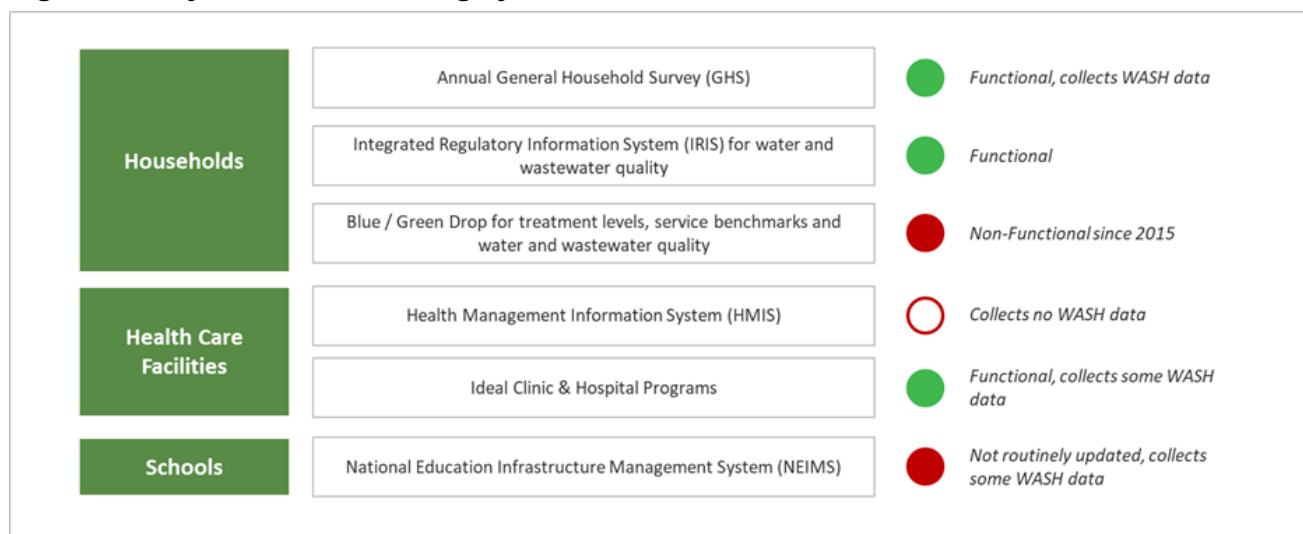
The DWS has an obligation to report nationally against the NW&SMP and MTSF, and internationally to the JMP, UN-WATER GLAAS and the African Ministers' Council on Water (AMCOW) Ngor commitments.

2.6 Routine monitoring systems for WASH

Figure 2 shows the WASH-related routine monitoring systems that are currently in place in South Africa with an overview of their status. Further information on each individual system follows.

The annual GHS forms the basis of routine monitoring data for WASH. Unlike many other countries in the region, there is no infrastructure database. Performance data from Water Service Authorities (WSAs), including water and wastewater quality and treatment levels, is intended to be captured in the Blue and Green Drop systems, which are not currently operational; although obligatory water and wastewater quality

Figure 2: Key routine monitoring systems



data continues to be provided through the [IRIS](#). There is no national infrastructure database, although individual municipalities should have some form of asset register.

The Health IMS system does not include any WASH indicators, but some data is available through the routine monitoring of the ideal clinic and ideal hospital programmes. The DBE operates a database (National Education Infrastructure Management System – NEIMS) which captures basic information on water and sanitation but is not routinely updated.

Details of each Routine Monitoring Systems

The [General Household Survey \(GHS\)](#), led by Stats SA, has been conducted annually since 2002 and is designed to track the progress of national and sub-national development across all

key development areas, including water, sanitation and hygiene. The household survey includes a section on WASH which captures information on the state of the households' water supply, sanitation and hygiene arrangements.

The GHS samples nearly 20,000 households over the full 12-month period (Figure 4), through a team of more than 300 people working through various questions; currently there are a total of 193 questions.

Table 2: Annual General Household Survey (GHS)

Summary:	Household survey collecting information on household water, sanitation and hygiene, as part of a larger survey to monitor basic needs of households in the country
Frequency:	Annual
Statistical Relevance:	Representative to the provincial/municipal level
Lead:	Department of Water and Sanitation

Figure 3: Administrative structure of South Africa

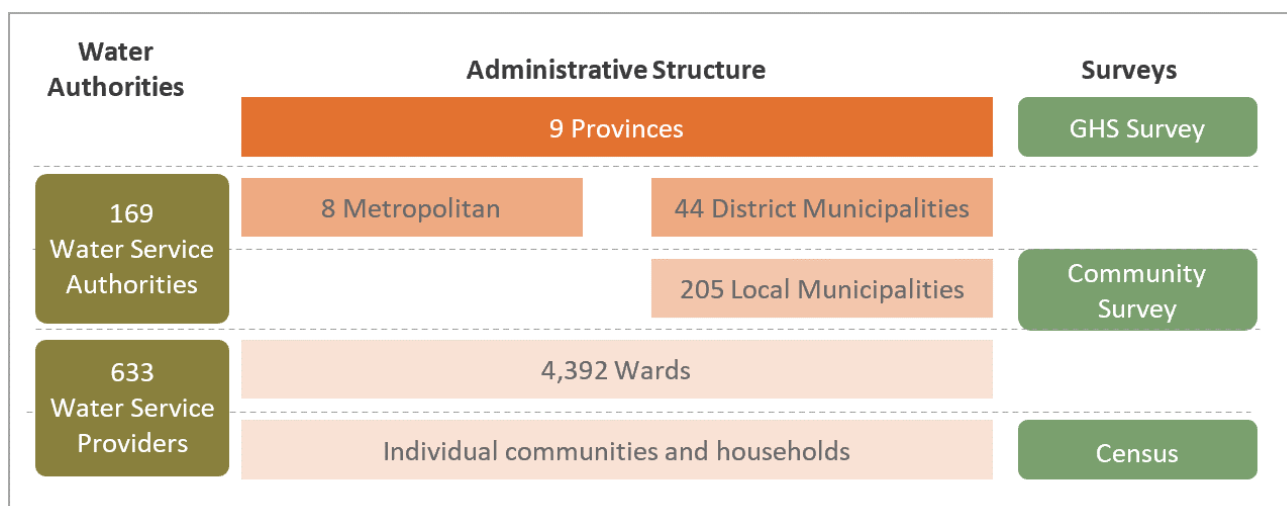
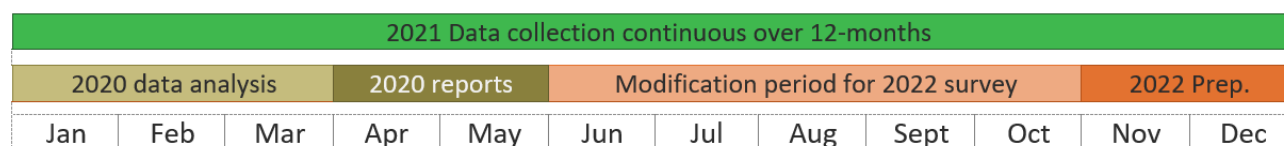


Figure 4: 2021 GHS timeline



The data provides estimates that are statistically relevant at both the national and typically the provincial/metro level, as compared to the non-routine mid-census community survey which is representative down to the lower local municipality level as shown in Figure 3.

While key indicators are included each year, some are one-off or bi-annual in order to balance the overall respondent time burden and competing requests from various development sectors. Therefore, as a general rule, new questions can only be added if others are removed.

Core WASH questions are included to align with the census questions, although the wording and format is slightly different.

Figure 4 shows the annual timeline for the GHS, with an annual modification period for the following year between June and October. The DWS coordinate with Stats SA when changes to the WASH questions are needed.

[The Blue and Green drop certification programmes](#)

were created to drive improvement of water and sanitation service providers and reward strong performance. In operation from 2009 to 2015, the system used dedicated independent and DWS inspectors to score water services authorities, and their individual water service providers and individual water and wastewater systems, against a standardised scorecard and provide a risk rating and overall score. Data was collected on a wide range of performance areas, including the presence of an asset register, water and wastewater quality results and the level of treatment provided; metrics which are needed to be able to report to the JMP level of safely managed for both household water and sanitation. Provider’s ratings and reports were to be made public and WSAs were recognised through annual awards ceremonies, creating competition and driving continuous improvement.

Following the introduction of the Blue and Green drop systems in 2009, there was a significant increase in the amount of water and wastewater

Table 3: Blue Drop and Green Drop Certification Programmes

Summary:	Water service provider independent performance tracking system covering various aspect of utility performance including water and wastewater quality and the level of wastewater treatment
Frequency:	Annual, inactive since 2015, plans to re-start
Coverage:	Intended National, reported at a water and wastewater system level
Lead:	Department of Water and Sanitation

quality tests conducted and a significant increase in the overall performance of WSAs. The system was highly regarded within DWS and by the wider WASH sector. However, bringing transparency to failings within municipal service provision can be politically unpopular and likely contributed to initially reports no longer being made public and then subsequently stopped altogether.

The 2018 National Water and Sanitation Master Plan and 2019-2024 MTSF show that there is commitment to re-establish both the Blue and Green drop performance management systems.

The Municipal Strategic Self-Assessment (MuSSA) (below) fills some of the gaps left by the suspension of the Blue and Green drop performance management systems but lacks the same rigour, is self-assessed and does not have the wider eco-system of competition and reward.

While the Blue and Green drop performance management systems are no longer active, water service providers and WSAs continue to be obligated by legislation to report on both water and wastewater quality. This information is publicly available in the IRIS.

Municipal Strategic Self-Assessment (MuSSA)

The [MuSSA](#) is an annual self-assessment carried out by each of the Water Service Authorities. It includes 18 pillars ranging from customer care to management skills and water service quality. Approximate data is reported on water quality and interruption of services, through it is not sufficiently quantitative to be used for technical reporting that would align with the JMP.

Integrated Regulatory Information System (IRIS)

Water Service Authorities have a regulatory requirement to test and report on their water and wastewater quality. Larger water boards and WSAs typically have their own laboratories and ability to test. Although rural areas still fall under the responsibility of a WSA and WSPs, there is less ability to test, and significant data gaps exist. Existing data in the system is primarily for urban areas, although currently data is not analysed or presented in a way that differentiates urban from rural area results.

Water and wastewater quality was and will also be captured through the Blue and Green drop systems as one of the indicators used for water service providers. [IRIS](#) only captures the minimum regulatory requirement for water and

Figure 5: Sample summary scorecards from the Blue and Green drop systems

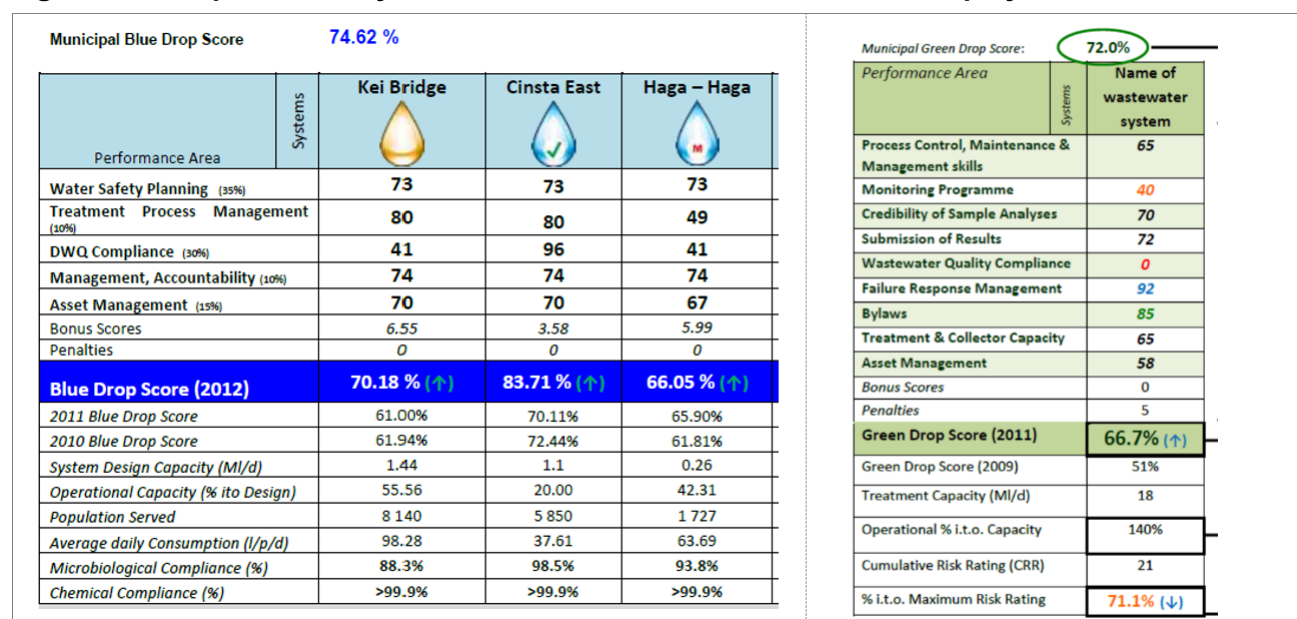


Table 4: Integrated Regulatory Information System

Summary:	Database for water and wastewater quality data submitted by water service authorities as part of core regulatory requirements
Frequency:	Quarterly
Coverage:	Nationwide, gaps in rural areas
Lead:	Department of Water and Sanitation

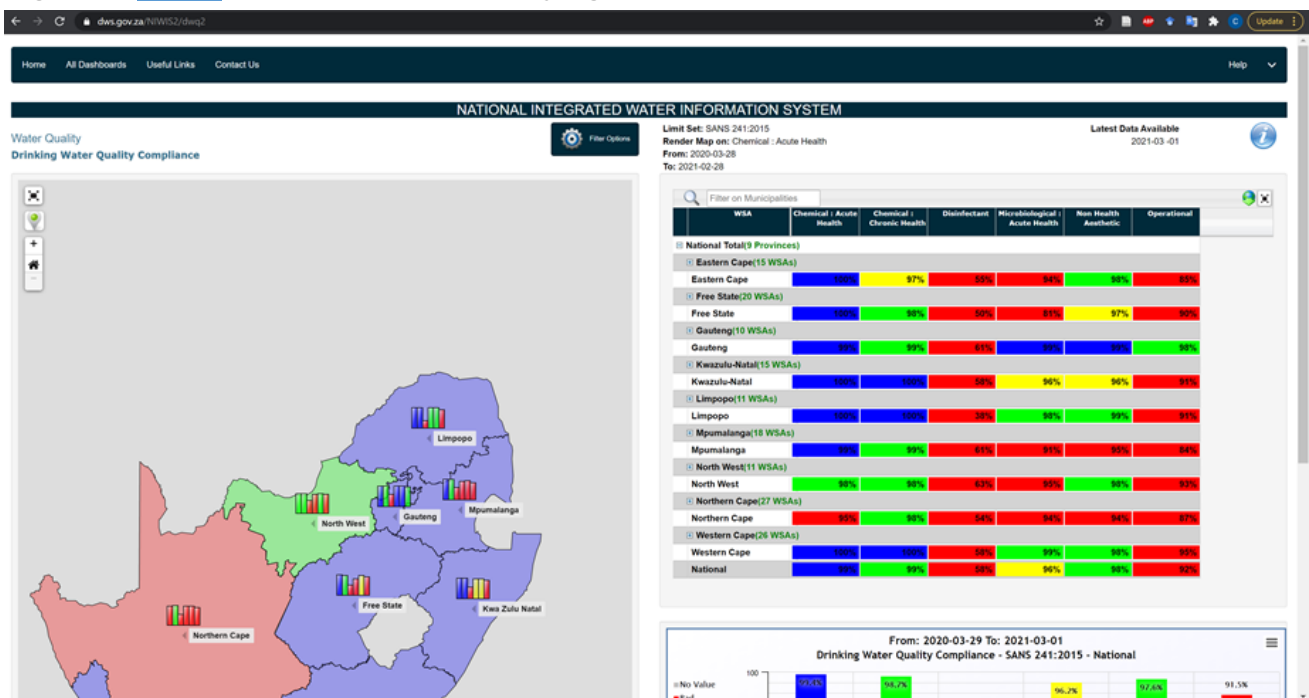
Table 5: Ideal Clinic and Ideal Hospital programmes

Summary:	Self-reported assessment of clinic and hospital service and performance tracking, including metrics for water, sanitation, hygiene, waste management and cleaning
Frequency:	At least annually
Coverage:	55% of facilities reporting
Lead:	Department of Health

wastewater quality reporting. The same water and wastewater quality data can also be found in the National Integrated Water Information System ([NIWIS](#)) portal.

(both at health facilities and at the household level). The process for reviewing and changing the National Indicator Sets (NIDS) used in DHIS2/HMIS system can take several years, with the next bi-annual review scheduled for 2022. It is expected that WASH in health care facility indicators will be added during this review, with

Figure 6: NIWIS online platform, displaying data from IRIS



No Drop

The [no drop system](#) was developed by the DWS to bring attention to and reduce the amount of non-revenue water (NRW). Full roll-out began in 2014/15 to all municipalities, with reporting continuing annually and data (up to 2017) is available online.

Department of Health (DoH) HMIS

South Africa uses DHIS2 as the technology platform for the National Health Management Information System (NHMIS). Currently there are no indicators, and thus no data, within the system for water, sanitation or hygiene infrastructure

data starting to be collected in 2023 or 2024.

The [ideal clinic programme](#) was started in 2013 and has been operating in all provinces since 2015. Current data is based on assessment framework version 18, with version 19 being released in May 2021. All clinics are expected to report at least annually. In 2018/19, 55 per cent (1,920 of 3,467) facilities submitted data. The ideal hospital programme is a more recent initiative and the extent of its current roll-out was not able to be established. For WASH-related indicators the framework is similar but slightly different to the indicators used for clinics.

According to regulations on the norms and standards for health establishments, created in 2018 under the National Health act of 2003, all facilities must have water supply, sewerage disposal, handwashing facilities in every service area, and appropriate waste management.

WASH FIT

As an interim measure to fill the WASH in health care facility data gap, the DoH is currently planning to roll-out the Water and Sanitation for Health Facility Improvement Tool ([WASH-FIT](#)), which is a free tool that runs on the mWater system. Designed by WHO and UNICEF, the tool fully aligns with JMP reporting requirements. The assessment would be implemented by Environmental Health Practitioners (EHP's).

National Education Infrastructure Management System (NEIMS)

The NEIMS is used by the DBE as the database to capture the status of school infrastructure including electricity, water, and sanitation. Data on handwashing facilities is not collected. Schools do not report into the system directly, instead the system is updated after improvement works are made to the school by contractors or service providers. The baseline set of data for all schools was collected between 2009 and 2011. Provincial offices should verify the information received before sending on to the DBE. During the past 12-months, the data was updated for 400 of the 23,276 sites in the system. The system can be used to target schools without facilities for

investment but is not able to identify if existing facilities become non-functional.

All schools are recorded as having an improved water supply, which is categorised by on-site (borehole, municipal tap, rainwater harvesting) or off-site (mobile tanks and communal municipal tap). A quarter of schools are recorded as having an 'unreliable' water source, although it is now clear how this information was submitted.

Likewise, all schools are reported as having some form of improved sanitation facility. Data is not recorded for single-sex facilities, although national standards do specify single-sex facilities and the minimum number of facilities based on the number of students. Around 9 per cent of sites are recorded as having only a normal pit latrine, which does not meet the South Africa minimum standard of a 'Ventilated Improved Pit' (VIP) latrine, but which does meet the JMP criteria for an improved sanitation facility.

There are no specific national standards for handwashing facilities in schools.

There is a willingness from the DBE IMS team to engage with DWS to explore how to align WASH data collection and indicators with SDG JMP definitions and requirements.

Non-Routine Monitoring Systems

Decennial Census

The [national census](#) is conducted every 10 years, with the most recent data being from 2011. A pilot

Table 6: National Education Infrastructure Management System (NEIMS)

Summary:	Infrastructure database of schools including water and sanitation, but not updated routinely
Frequency:	Ad-hoc
Coverage:	All schools in the database, < 2% updated last year
Lead:	Department of Basic Education

of the 2021 questionnaire is currently ongoing with the full 2021 census to follow later this year.

Inter-Census Community Survey

Midway between each census a large-scale [community survey](#) is conducted, surveying around 1.3 million people. Statistically relevant data for WASH is available down to the local municipality level. The most recent community survey was carried out in 2016 and led by Stats SA.

Data Presentation and Navigation

In addition to the above-mentioned data collection systems, there are additional online portals where the above information is stored and presented.

Water Services Information Management System (WSIMS) and National Integrated Water Information System (NIWIS)

There are plans within the master plan (NWSMP) to create a new central IMS system that can pull data from all the above sources into a single online public database. This is planned for the 2021/22 financial year. In addition, the SDG6.1 task team identified the lack of an SDG6 dashboard as a key gap to be addressed in the most recent gap analysis.

Currently, the [NIWIS](#) platform, run by DWS, brings together data from various sources into a central portal including service levels (from NWSKS, below) and water and wastewater quality data (from IRIS) among others.

National Water Services Knowledge System (NWSKS)

Currently, the primary location for DWS water and sanitation service coverage data is the [NWSKS](#). The system pulls data from the 2011 census along with water and wastewater quality from IRIS. The data is adapted bi-annually by the macro-planning team in DWS based on the statistical population update estimates provided by Stats SA. The system does not currently utilise

the GHS or community surveys. Data compiled by the task-teams during annual planning is not captured within the DWS data portals including the NWSKS.

SDG6 Goal Tracker Portal

The SDG [Goal Tracker Portal](#) uses GHS data provided by Stats SA to provide data for SDG6.1 and SDG6.2 up to 2017. It is not clear how the system is able to report on safely managed water services given that water quality testing is not a part of the GHS.

2.7 Localisation and alignment of national WASH targets and data with JMP indicators

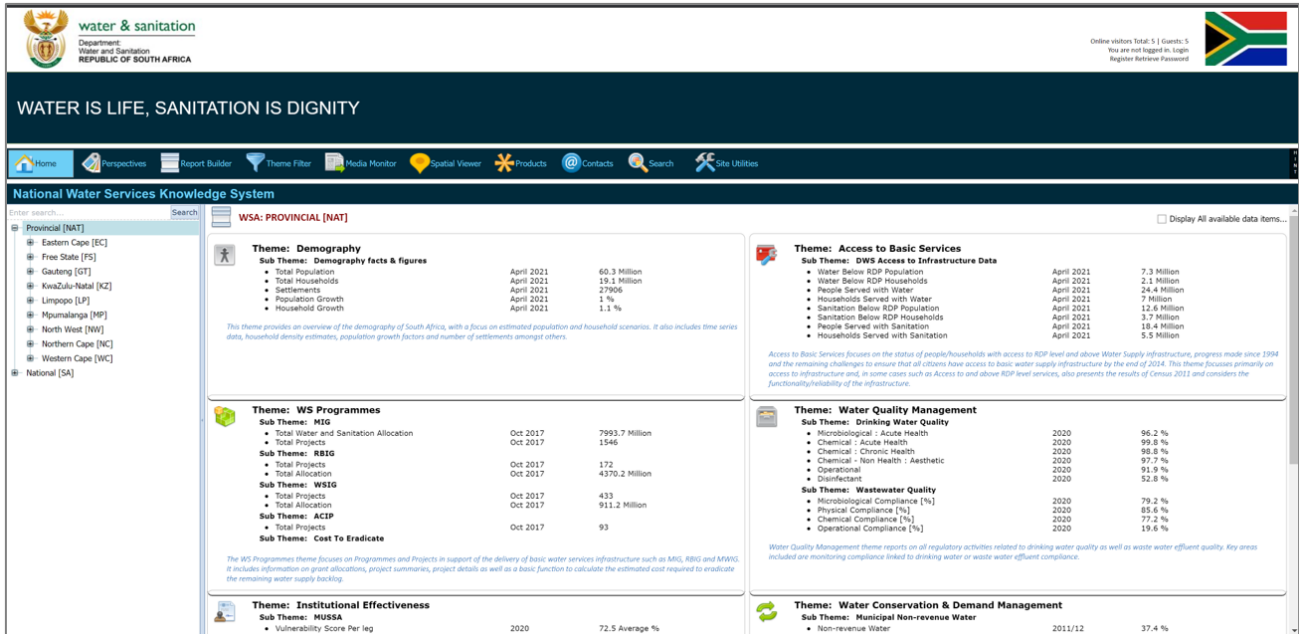
Targets

South Africa has committed to reaching SDG6.1 and SDG6.2 targets of universal coverage by 2030. The National Development Plan (NDP) states that “Before 2030, all South Africans will have affordable, reliable access to sufficient safe water and sanitation”.

The national medium term strategic framework (MTSF) 2019-2024 sets out some specific targets to be reached by 2024:

- Eradicate inadequate sanitation in Schools;
- Increase the percentage of people with access to adequate sanitation and hygiene from 83 per cent (baseline) to 90 per cent;
- Increase the reliability of water services from 70 per cent (baseline) to 95 per cent;
- 100 per cent of wastewater treatment works to be operational and functioning.

Figure 7: National Water Services Knowledge System (NWSKS)



The DWS National Water & Sanitation Master Plan incorporates the NDP target:

- (1.3.8) Deliver services to achieve (100 per cent) universal water services provision (Municipal Water Supply Projects);
- (1.3.7) Deliver services to achieve (100 per cent) universal sanitation coverage (Municipal Sanitation Projects).

- Above RDP Sanitation: Access to a flush toilet, chemical toilet, or ventilated pit latrine. Note that a normal non-ventilated pit latrine does not meet RDP standards.

NWSKS Alignment with JMP indicators

Currently the primary DWS database uses census data to report on the number of households that have water and sanitation services below or above a 'reconstruction and development plan' (RDP) level. Developed as part of the 1994 RDP, and prior to the use of JMP definitions for the Millennium Development Goals, basic 'RDP' level definitions were created to define the minimum requirement for a basic water and sanitation service:

- Above RDP Water: A piped municipal supply within 200 metres of the dwelling providing at least 25 litres per person per day;

GHS Alignment with JMP indicators

Water: While the GHS data can be used to report against up to basic level, there are several areas where the data cannot be fully reported as detailed in Table 7. Unimproved water sources may be slightly over-reported as the GHS does not separate improved and unimproved wells and springs; so all wells and springs are reported as unimproved even if protected (which JMP considers improved). It is also possible that limited access is over-reported and basic under-reported because 200 metres is used as the proxy for a less than 30-minute round trip. To report against safely managed, the available when needed questions would need to be expanded to include all water supplies, not only piped water. Finally, water quality data would be needed but requires a separate system to collect that data.

Legend for tables 7 to 11

●	Indicator aligns with JMP SDG6 indicator
◐	Indicator partially aligns with JMP SDG6 indicator
○	Indicator does not align with JMP SDG6 indicator

Figure 8: Key routine monitoring systems and current ability to report against JMP indicators

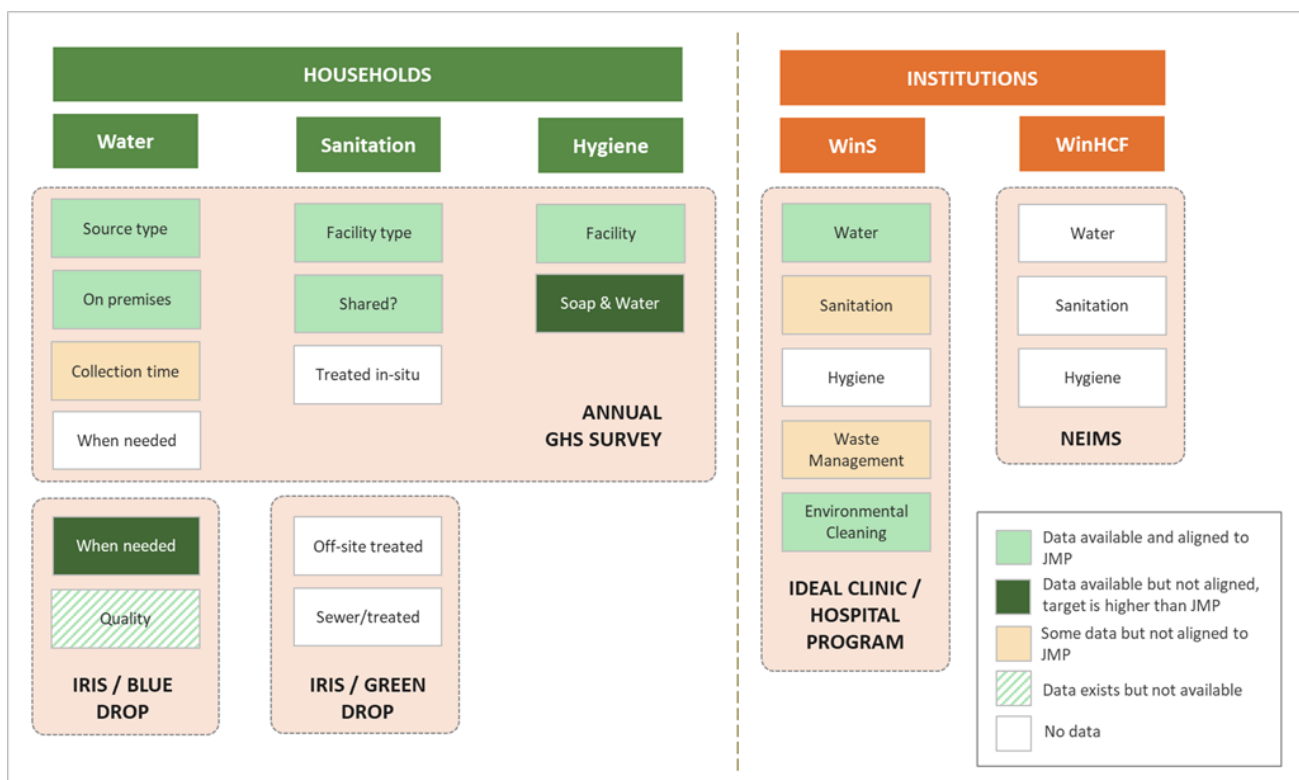


Table 7: Annual GHS Water alignment with JMP

<p>SAFELY MANAGED</p> <p>Drinking water from an improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination</p>	●	Located on Premises	Can be reported based on responses to GHS WAT1 that include 'in dwelling/house' or 'in yard'.
	◐	Available when needed	WAT9, WAT10, WAT11 and WAT12 gather responses on availability but only for water from municipal supplies. The question text would need to refer to all types of water sources. Ways to report against this indicator vary, GHS uses 'less than 15 days interruptions over past 12 months'.
	-	Free from contamination	Not applicable to a quantitative HH survey. Required data for urban and rural from IRIS. Currently data for urban exists, rural is not collected. The WSAs that report into IRIS are mainly from urban areas. Rural water quality remains a gap (<i>a one-off rural water quality assessment survey could provide a JMP baseline while Blue Drop reporting is improved over time</i>).
<p>BASIC</p> <p>Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip including queuing</p>	◐	Improved source	Is almost fully reported. WAT1 includes improved water sources. Wells and Springs that are protected could be included as improved if these are included as reporting options (see Unimproved row below).
	○	Less than 30 minute round trip	WAT2: Distance of less than 200m is currently used as a proxy for less than 30 minutes. As this does not capture the total time including queuing JMP does not include this data in their estimate, instead taking a reference point from the latest DHS survey (2016). JMP suggest that "How long does it take to go there, get water, and come back?" is asked and the answer is recorded in minutes. This would need to be included as a new question in GHS.
<p>LIMITED</p> <p>Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip including queuing</p>			
<p>UNIMPROVED</p> <p>Drinking water from an unprotected dug well or unprotected spring</p>	○	Unprotected source	Can be partially reported. Likely to be over-reporting the extent of Unimproved coverage. Currently assumes that all of WAT1 (12) well, (13) spring, and (14) other, are unimproved. Current figure is 2%. nationally. Question WAT1 would need to split the response options to include protected or unprotected wells or springs.*
<p>SURFACE WATER</p> <p>Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal</p>	●	Surface water source type	Can be fully reported. WAT1 includes (10) flowing water/stream/river and (11) stagnant water/dam/pool.

* South Africa has a higher standard for what is considered an appropriate water source, with all wells and springs not meeting the standard, as compared to JMP which considers protected wells and springs acceptable. This is therefore relatively little to gain from segregating the data, when anyway the aim of the country is to move beyond these sources regardless. The only impact is that as a result international reporting to the JMP will be slightly over-reporting the amount of unimproved sources and slightly under-reporting limited and/or basic sources.

Sanitation:

While the GHS data can be used to report up to Basic level, there are several areas where the data cannot be fully reported as detailed in Table 8. Unimproved would currently be over-reported as DWS classifies all pit latrines not ventilated as

below minimum national standards. To be able to report to safely managed new questions would be needed to address how waste stored temporarily or treated in-situ is dealt with. For toilets connected to a sewer additional data would be needed from the Green Drop system to confirm if there is at least primary treatment.

Table 8: Annual GHS Sanitation alignment with JMP

<p>SAFELY MANAGED</p> <p>Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site</p>	○	Treated and disposed in situ	This is not currently included in the GHS. New questions would need to be added. The JMP suggested core questions that would need to be added are: (i) Has your (toilet type) ever been emptied? (ii) The last time it was emptied, where were the contents emptied to?
	◐	Stored temporarily and then emptied and transported to treatment off-site	SAN1 includes toilet types that require storage and emptying. Whether pits/tanks/buckets are actually emptied and where it goes would require two new questions to be added to the GHS as detailed above.
	●	Transported through a sewer with wastewater and then treated off-site	SAN1 includes if the toilet is connected to a sewer. Whether it is then treated offsite requires data from Green Drop. If all sewers connect to at least basic treatment it can be assumed that all sewer connections are safely managed.
<p>BASIC</p> <p>Use of improved facilities which are not shared with other households</p>	◐	Improved	SAN1 includes options for improved latrines. It is likely that a significant proportion of non-VIP latrines meet the JMP criteria for 'improved'. Response options would need to be expanded to include without VIP which either with slab or without slab/open pit. (see unimproved row below).
	●	Shared	Can be fully reported. SAN3 asks if the toilet facility is shared with other households.
<p>LIMITED</p> <p>Use of improved facilities shared between two or more households</p>			
<p>UNIMPROVED</p> <p>Use of pit latrines without a slab or platform, hanging latrines or bucket latrines</p>	○	Unimproved pit latrine	SAN1 splits pit latrines by with or without VIP. DWS considers all non-VIP latrines as unimproved; currently 15% nationally. It is likely that a significant proportion of these would meet the JMP criteria for 'improved'. Response options would need to be expanded to include without VIP which either with slab or without slab/open pit.
<p>OPEN DEFECATION</p> <p>Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste</p>	●	Open defecation	Can be fully reported. SAN1 includes an option for (10) open defecation

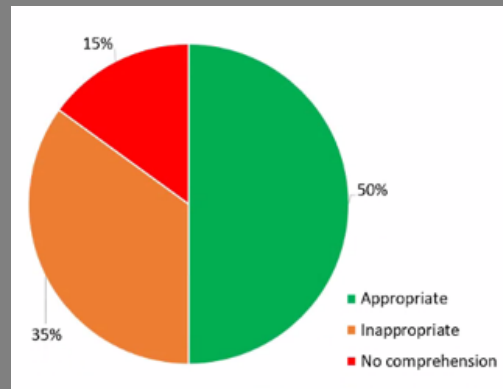
Table 9: Annual GHS Hygiene alignment with JMP

<p>BASIC</p> <p>Availability of a handwashing facility on premises with soap and water</p>	<p>① Soap observation</p>	<p>SAN7 asks if household members clean their hands with water and soap after using the toilet. This is a higher standard, although self-reported. JMP collects data on the observation of water and soap. GHS surveyors would need to ask to observe the presence of water and soap to be able to report against JMP indicators.</p>
	<p>① Water observation</p>	
<p>LIMITED</p> <p>Availability of a handwashing facility on premises without soap and water</p>	<p>① Handwashing facility observation</p>	<p>SAN6 asks if there is a facility (self-reported). This is used by DWS. JMP does not use this data, possibly because it is self-reported rather than from observation, therefore JMP used DHS 2016 instead as the latest available data. GHS surveyors would need to ask to observe a handwashing facility to be able to report against JMP indicators.</p>
<p>NO FACILITY</p> <p>No handwashing facility on premises</p>		

Hygiene: As detailed in Table 9 there is currently limited alignment between the GHS and JMP indicators. Currently the GHS uses self-reporting rather than observation as suggested by JMP. Additional observational questions for a facility, soap and water would be needed for GHS to be able to be used to report against the JMP indicators.

A recent study in South Africa (Box 1) brings attention to the importance of not only aligning indicators but also on ensuring that questions are worded and framed in a way that solicits correct and accurate responses.

Census Access to Piped Water question: only 50 per cent of people were found to correctly report their situation. Inappropriate answers were highest in informal and rural areas; the most unserved areas. It was found that technical language such as 'household', 'dwelling' and 'household use' were not understood by at least 80 per cent of people in the study. For example, the 'main source' of water could be reported as 'river/stream' for a tap on premises because this is the original 'main source' of the water.



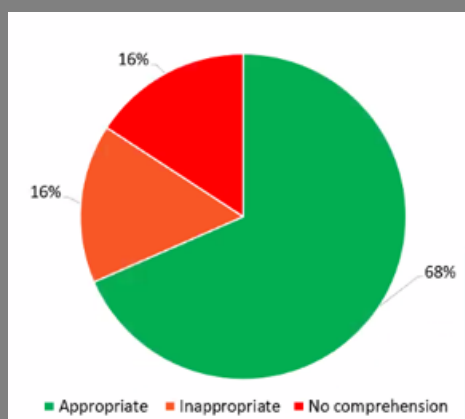
GHS Sanitation question: For the main sanitation question in the GHS the incorrect reporting rate was 32 per cent, with the primary reason due to incorrect classification of facility type. More than half of respondents did not understand what the type 'with/without vent pipe' meant. There was also a low correct understanding of the term 'chemical

BOX 1.

SOUTH AFRICA SURVEY QUESTION REVIEW IDENTIFIES KEY DATA ISSUES

The Water Research Council (WRC) was commissioned by the DWS to explore to what extent households survey responses are accurately representing their situation. A total of 102 in-depth qualitative interviews took place across three rural areas. Some notable highlights include:

toilet'; a toilet cleaned with chemicals, all modern toilets, toilets that clean germs, etc.



To test and identify how correct reporting could be improved, cognitive action research was employed through a series of iterative steps where the original questions and response options were revised while keeping the underlying indicators the same. As a result, The WRC have proposed several options for improving the GHS and census questions and put forwards options for studies that could potentially lead to changing past data estimates based on the identified rates of incorrect reporting.

This study raises important questions for other countries.

Blue and Green Drop Alignment with JMP indicators

Water service authorities and providers are expected to keep records of the number of households receiving their services, including whether direct to the household or through a communal tap. When operational, BlueDrop will collect data on water service disruptions that can be used to determine if water is available when needed.


Water quality data continues to be collected and reported as part of regulatory requirements. This data could be combined with data from surveys to provide estimates for safely managed services. A key barrier at present is that the Blue drop (and currently IRIS) do not separate service metrics and water quality data by urban and rural, as they are instead presented per WSA or water system.

When in operation, Green drop collected information on the type of treatment. This data could be combined with households' survey data to provide an estimate for safely managed sanitation for households with a sewer connection.

Table 10: Blue drop alignment with JMP

SAFELY MANAGED Drinking water from an improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination	①	Located on Premises	Should be included as part of the water service provider database.
	①	Available when needed	Service continuity metrics were a part of the Blue drop system.
	①	Free from contamination	Water quality data continues to be reported but primarily for WSAs serving urban area. No or limited data for rural areas.
BASIC Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip including queuing	①	Improved source	Service providers should include the number of households served by their piped systems.

Table 11: Green drop alignment with JMP

<p>SAFELY MANAGED</p> <p>Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site</p>		<p><i>Transported through a sewer with wastewater and then treated off-site</i></p>	<p>The type, level, functionality and performance of wastewater treatment sites was collected by the Green drop system</p>
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Ideal Clinic/Hospital Alignment with JMP indicators

The ideal clinic data could enable reporting on water in health care facilities up to the basic level and sanitation to a limited level. Some new questions would need to be added to the Ideal clinic assessment tool to enable reporting on sanitation to a basic level (Table 13). No data is currently asked related to the JMP hygiene indicator, and environmental cleaning could be reported to basic level. The waste management questions would need to be slightly adapted to enable reporting to basic level and would currently be limited to reporting up to the limited level.

Data indicators within the NEIMS align with JMP Basic for water and JMP limited for sanitation, while there are no indicators for hygiene facilities.

However, as the system is only updated after improvements are made the data set cannot be used to report against JMP indicators.

National Education Infrastructure Management System alignment with JMP indicators

Table 12: WASH in Schools

	Indicator Alignment	Usable Data?	Data Source and Comments
<p>WATER</p> <p>Basic: Drinking water from an improved source is available at the school</p>	JMP Basic	No	Existing data from the NEIMS could be aligned with JMP definitions to report up to JMP Basic level. However, the data is not updated frequently and would not meet the requirements for JMP reporting.
<p>SANITATION</p> <p>Basic: Improved facilities, which are single-sex and usable at the school</p>	JMP Limited	No	The presence of an improved facility is know, but there is no data on whether the facilities are sex-segregated.
<p>HYGIENE</p> <p>Basic: Handwashing facilities, which have water and soap available</p>	No Data	No	NEMIS has no data for hygiene facilities.

Table 13: WASH in Health Care Facilities based on the ideal clinic and hospital tools

	Indicator Alignment	Data Source and Comments
<p>WATER</p> <p>Water is available from an improved source on the premises</p>	JMP Basic	Could report to basic level based on the existing survey question
<p>SANITATION</p> <p>Improved sanitation facilities are usable with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.</p>	JMP Limited	<p>Could possibly report to limited level. By reporting that sanitary facilities are available and all toilets are functional, there must be at least 1 latrine. SA only permits improved toilets, so it could be assumed that all are improved. To be clear the survey would need to ask:</p> <p># of facilities</p> <p>Type of facilities (improved/unimproved)</p> <p>In order to report to basic, new questions would need to be added to the survey:</p> <p>At least one dedicated toilet for staff</p> <p>At least one sex-separated toilet with menstrual hygiene facilities</p> <p>at least one toilet accessible for people with limited mobility.</p>
<p>HYGIENE</p> <p>Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within 5 metres of toilets.</p>	No Data	<p>Questions needed to reported to limited level:</p> <p>water available at handwashing facilities</p> <p>soap available at handwashing facilities</p> <p>To report to basic level additional questions needed:</p> <p>Handwashing facilities are available at the points of care</p> <p>Handwashing facilities are available within 5-meters of toilets</p>
<p>WASTE MANAGEMENT</p> <p>Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.</p>	JMP Limited or not able to report	<p>Sharps disposed of appropriately suggests separately and health care waste is managed appropriately suggested also separated, therefore suggesting three bin segregation. To reach basic these questions would need to be clarified:</p> <p>Sharps are disposed of appropriately 'including in a separate bin'</p> <p>Healthcare waste is managed appropriately 'including in a separate bin'</p> <p>And a further question added:</p> <p>Infectious waste is treated and disposed of safely</p>
<p>ENVIRONMENTAL CLEANING</p> <p>Basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training.</p>	JMP Basic	<p>All cleaners have been trained on cleaning procedures should be sufficient to report to basic level and it covers both training and the presence of procedures (basic protocols). It could be made more explicit by adding a further question:</p> <p>Basic protocols for cleaning are available</p>

3 Key Findings

Strong institutional arrangements and commitment to achieve and report against SDG6

South Africa, through the initiative of the DWS, has established strong institutional arrangements and systems for working towards achieving SDG6, realised through the DWS SDG6 structure of task teams. This ongoing structure and incorporated annual reporting and planning will continue to drive attention to SDG6 data, gaps and priority areas. The DWS have taken strong ownership of their responsibility to lead on monitoring SDG6, including the current process of establishing linkages with DBE and DoH to start to routinely gather data on WASH in institutions.

The annual task team gap reports have some gaps

The current annual gap reports developed by the task teams focus on gaps in services required to reach the SDG6 targets. Only the SDG6.1 water task team also considers routine monitoring and data gaps, calling for a dedicated SDG6 data portal, highlighting the rural water quality data gap, and the need to formalise other departments' data collection for WASH in institutions.

Routine data has not been widely used

While the routine monitoring data provided by the GHS enables DWS to see general trends and progress, to date all major planning exercises carried out centrally by DWS have required the more granular data that currently only the census can provide. This is due to the planning process requiring specific local identification of where service gaps are to enable specific project-based budgeting. As a result, the most recent national planning exercises have been using 2011 data adapted based on population projections only.

Aligning the level of data needed with the level of data collected

As above, granular local level planning requires granular local level data and there is a misalignment between what is available from the GHS and the type of information needed for detailed planning, resulting in 'old' non-routine data being used. A functional infrastructure IMS would bring alignment and provide the level of granular data that has been needed.

The lack of a typical national infrastructure IMS system mainly affects national planning

The DWS has long-term ambitions to create a national infrastructure asset database IMS. Water service authorities and providers are responsible for the operation and maintenance of systems in their geographic areas and to varying degrees maintain their own non-standardised systems for managing operations and responding to non-functionality. The main impact of a lack of national IMS has therefore not been on functionality but the lack of recent granular level data that can be used by DWS for granular level planning.

Blue/Green drop could bring in actionable routine monitoring data

The reintroduction of the Blue and Green drop performance management systems brings an opportunity to explore creating a national IMS, as all systems and areas fall under the responsibility of a water service authority. While individual households will not be surveyed, using the right indicators could enable estimates for service levels and coverage to be compiled nationally, providing a more routine and up-to-date data source than the census.

There is widespread willingness to adapt current tools to align with SDG/JMP

Stats SA consider SDG/JMP as international reporting and therefore questions relating to these indicators fall within 'category A', prioritising them

for inclusion in the general household survey and census. Stats SA are open to make changes to the GHS for 2022, based on guidance from DWS. The DBE also expressed an openness and willingness to adapt indicators and systems based on guidance from DWS.

Several Key Data Gaps Remain

While there are several potential 'quick-wins' where questions and indicators can be tweaked to align with JMP/SDG6, some key data gaps remain:

1. **Rural Water Quality:** As highlighted by the SDG6.1 task team and programme coordinator, rural water quality is a persistent data gap. While rural water service authorities are obliged to report water quality for regulatory purposes, most testing is conducted in urban areas only where there is sufficient funding and testing facilities available. Where data is collected it is not currently reported in a way that separates whether it is from an urban or rural source, making it difficult to use for JMP estimates even in urban areas.

2. **Safely Managed Sanitation:** The GHS provides information on the state of sanitation at the household level. To report if the household has safely managed sanitation requires knowing if the sewage or sludge that is taken offsite is treated to at least a primary level, which cannot be determined through the household survey but requires complementary service provider data.

Moving from RDP to JMP/SDG

While the RDP ran from 1994 to 2014, the reference to above and below RDP levels continues to be used. While there has been a national adoption of SDG targets, data and reports have not yet fully moved on from RDP to JMP definitions. In the annual general household survey, access to a water point continues to be asked in terms of if it is within 200 metres (in line with old RDP minimum standards) rather than

asked in terms of time, in line with the JMP indicator. Ventilated pit latrines remain the minimum national standard for sanitation, meaning that databases and reports need to be able to report both the proportion meeting minimum national standards as well a separate figure for the number meeting basic JMP standards, which considers normal non ventilated pit latrines to be acceptable.

WASH in Households data could be more aligned to JMP

Both household water and sanitation routine data from the GHS can be used to report on progress up to JMP basic level if some proxies and assumptions are used to translate data where the indicators do not fully align; such as from RDP to JMP/SDG (above). This translation will lead to some degree of under (more conservative) reporting. Reporting to safely managed household water and sanitation would require some minor changes to the survey questions and filling the rural water quality and safely managed sanitation data gaps (see above). While questions are currently asked on household hygiene, and to a higher standard, there is likely not sufficient alignment to be able to report in terms of the JMP definitions.

No up-to-date WASH in Schools data

There is currently no system for collecting reliable data on WASH in Schools. While there is some alignment between the NEIMS and JMP indicators, data in the system is only updated after improvement works are carried out. Options for routine updates will be a topic for the new inter-linkage task team to explore further with DBE.

Limited WASH in Health Care Facilities data

It may take several years for WASH indicators to be included into the national DHIS2 based HMIS. The current Ideal Clinic and Ideal Hospital initiatives collect sufficient WASH data to enable some level of analysis of JMP progress and to

enable the first data report to the JMP. Water and environmental cleaning could be reported up to the basic level, sanitation and waste could report up to the limited level, requiring new questions to gather 'basic level' indicators, and there is no data on hygiene. The WASH FIT tool is planned as an interim tool to collect WASH in HCF data. Alignment will be a key topic for the new inter-linkage task team to explore further with the DoH.

Several Quick Wins have been identified

Where aligning with SDG/JMP indicators would only require minor changes to existing systems. Further details are in section 3.1 below.

3.1 Opportunities for improving WASH monitoring in South Africa

✦ = Potential Quick Wins

✦ Using the annual Gap Reports to highlight data alignment and coverage gaps

The task teams could be mandated to ensure that routine monitoring and data gaps are considered within the annual gap reports. This could be in the form of a matrix that lists the SDG6 indicators and references the current data source, alignment with JMP/SDG indicator definition and highlights any coverage gaps. Alternatively, this role could be delegated to a cross-cutting task team such as the SS&C. These options could be considered by the SDG6 programme coordinator.

✦ Creating GHS Indicator Alignment

Annex 6 shows the changes that would be needed to each question in the GHS to be able to align responses with JMP definitions. In most cases only minor changes to question wording or response options would be needed, as well as two new questions to cover household safely managed sanitation practises. These changes could be considered during the June to September review period for inclusion in 2022 GHS and simultaneously with changes suggested

by the WRC (box 1). The SDG6.1 and SDG6.2 task team leads would coordinate this Stats SA.

Connecting service provider data to report on safely managed sanitation

The reintroduction of the Green drop system will provide an opportunity to fully report on safely managed sanitation, by combining data on treatment with household data from the GHS, census or community survey. The challenge will be finding the right way to connect both data sources. This could be addressed by the DWS macro planning team or considered during the development of the SDG6 central data and dashboard system.

✦ Making the most of existing water quality data

The existing water quality data in IRIS (also presented in NIWIS) is linked to specific service providers and systems, enabling comparison and targeted response. To be able to use the data for JMP aligned reporting IRIS could request data which is broken down by which systems serve rural, urban or mixed areas. While there are gaps in rural water quality testing, this would enable a strong set of urban data that could be reported to the JMP to track SDG safely managed water progress.

✦ Consider a one-off rural water quality rapid assessment to create a baseline

The lack of rural water quality testing leaves a gap in both routine monitoring and reporting to the JMP and means that the extent of safely managed water services in rural areas is unknown. If budget can be made available, DWS should consider running a one-off rural rapid assessment of drinking water quality (RADWQ). In some areas this could be done using existing municipal laboratories and a system of cold-storage transport. In other areas, portable testing kits or methods may be needed. In other countries there are often companies, or organisations, that

can be contracted for such work. A one-off assessment may be the easiest way to establish a national safely managed water baseline and enable reporting to the JMP. This can be considered by the SDG6.1 task team.

Explore options for routine updating of the WASH in schools' infrastructure database

To date, South Africa has not been able to report to the JMP on the status of WASH in schools. How can schools self-report their WASH status at least annually? Can the NEIMS database form the foundation for a routine monitoring system or is a new system required? This is a question for the inter-linkage task team to explore with the DBE IMS team.

🔄 Utilise existing WASH in Health Care Facility data

While not complete, the ideal clinic and hospital systems contain WASH data that could be aligned to JMP indicators to enable South Africa to partially report for the first time to the JMP. The inter-linkage task team could lead on gathering and aligning the data.

🔄 Aim for further WASH data alignment from the Ideal Clinic system

While waiting for the HMIS to incorporate WASH indicators, and regardless of whether an interim WASH FIT can go ahead, it could make sense to revise the ideal clinic data framework to make the most of small changes that could improve JMP data alignment. More broadly, the inter-linkage task team can push for all systems that are collecting data on WASH to be aligned with national and SDG/JMP indicators.

3.2 Learning points for WASH monitoring in Eastern and Southern Africa

Task teams are a promising way to bring together different teams and departments

The SDG6 structure of task teams, initiated by the DWS, has institutionalised the SDG6 goals within and across the DWS. The structure has formalised and created a system for annual review, gap analysis and planning; with findings being used to inform the annual revision of the 'master plan for water and sanitation'. Continued success of the task teams will require the continued drive of the SDG6 programme coordinator to ensure that task teams are accountable to their ToRs. With task team members participating alongside their core roles, the value and importance of the task teams and SDG6 more broadly will need to continue to be given high visibility and acknowledgment.

The South Africa DWS task team model could be a model for other countries to study and consider for their contexts.

Indicator Alignment reviews can identify potential quick wins

The indicator alignment review has identified several monitoring areas where simple changes to existing tools could make a significant difference to the ability to report in-line with SDG/JMP indicator definitions. UNICEF could facilitate a similar review in other countries through a collaborative approach with government and sector stakeholders.

A survey-based approach rather than an IMS approach

South Africa is unique in the region for utilising a routine household survey to be complemented by service provider (utility) data, rather than pursuing a national infrastructure based IMS. The approach provides statistically relevant and solid data each year, and relevant down to the sub-national provincial level and can be used to report to the JMP. National planning exercises, that have required more granular data, have relied on the now outdated 2011 census, applying a population growth model.

Unlike in several other countries in the region where the primary driver for a national WASH IMS is a tool to manage operation and maintenance, this has not been a key factor in South Africa. The decentralised water service authorities, and the subsequent service providers, take responsibility for urban and rural system maintenance and have their own systems for tracking infrastructure and responding to faults. The variance of these systems could be explored further, including the potential benefits of a standardised tool as part of the revitalisation of the Blue and Green Drop systems.

The main limitation of this system is the reliance on sometimes old census data to inform granular level national planning exercises. A national infrastructure IMS would be a significant undertaking and would require working with the various water service authorities and providers. The question is whether the data from such a system would be frequently updated and sufficiently accurate to be a better tool for planning as compared to the surveys. A key risk could be that the service provider led IMS systems will have most data gaps in the most

remote or underserved areas, leading to these areas being missed during planning. With most DWS infrastructure projects being large, planned several years in advance and being multi-year initiatives, it could be considered that routine (at least annual) data is not as critical for planning and that the five-year cycle of census and community surveys is sufficient.

The WRC findings highlight the need to validate surveys

The WRC study (box 1) highlights the importance of testing survey questions and validating correct understanding and responses. This includes if surveys are directly using the 'JMP core questions', which should still be tested and refined to the context while retaining the underlying indicator and reporting options.

Other countries could benefit from conducting a similar methodology to the WRC study to validate their survey responses and accuracy of JMP/SDG progress reporting.

Annex 1 – Details of routine WASH monitoring systems

Routine Monitoring Systems	GHS	Blue&Green Drop	IRIS
Lead organisation	Stats SA	DWS	DWS
Scope of System (Water/Sanitation/Hygiene)	Water, Sanitation & Hygiene	Water and Sanitation	Water and Wastew quality
Type of system	Annual Survey	Certification database	Regulation IMS dat
Indicator(s) used	See Annex 6	Not currently active, new indicators to be considered.	See figure x
Alignment with SDG6	Alignment with SDG Basic for water and sanitation by applying a proxy data conversion method Limited alignment with SDG hygiene indicators	-	Aligns with SDG bu does not separate and urban data.
National coverage	National, statistically relevant to the provincial level	National, but ceased operations in 2015, planned to restart	National, but lackin in rural areas
Rural/Urban	Both	Both, but gaps in urban water and wastewater quality	Both, but gaps in r water and wastewa quality
Frequency of data collection	Annual	Annual (but not active since 2015)	Quarterly
Data collection process	Stats SA manages the enumerators. DWS can influence the questions included.	Previously, independent DWS Inspectors	WSA and WSPs se report to DWS
Data accessibility and use	Open access. Data (in at least summary form) is available to the public. Survey reports are available on the Stats SA website.	From 2013-2015, data was not accessible. System is currently not functional. Unclear if the re-instated system will be publicly available. Previously the data was considered sensitive by some politicians.	Open access. Data least summary form available to the put Data available on t online IRIS platform housed within the I site.
WinHCF	No, Households only	No	No
WinS	No, Households only	No	No

Annex 2 – National WASH targets and indicators

SDG	Water	Sanitation	Hygiene
National SDGs Targets and Indicators			
Indicator	South Africa has committed to reach the full extent of the SDG6.1 and 6.2 indicators by 2030.		
Target			
Reporting data			
Source(s) of data	GHS, Census, Community Survey, IRIS and Blue Drop System	GHS, Census, Community Survey, IRIS and Green Drop System	GHS, Census, Community Survey and GHS survey
Indicator included in data	For GHS see annex 6. For IRIS see annex 1.	For GHS see annex 6. For IRIS see annex 1.	For GHS see annex 6
Alignment			
Is target aligned with available data	No, currently data on safely managed is not available	No, current data on safely managed is not available	
Tracking progress			
Baseline established	2017 SDG baseline report. Baseline for Basic level water.	2017 SDG baseline report. Baseline for Basic level sanitation.	2017 SDG baseline report. Baseline for basic hygiene from DHS survey.
Frequency of progress reporting	Annual		
Most recent update to progress reporting	2019 SDG progress report and 2020 data available		

Annex 3 – Details of key informants

Name	Organisation	Role
Mark Banister	DWS	Chief Engineer - Water Services & Local Water Management & SDG6 Working Group Program Coordinator
Dennis Behrmann	DWS	Project Manager SDG6.1 task team
Iris Mathye	DWS	SDG6.2 task team lead
Bheki Mbentse	DWS	Urban and Rural Water Management SDG6.B task team
Ncapayi Noxolo	DWS	Water Services Manager
Niel Roux	Stats SA	Director, Service Delivery Statistics
Melanie Wilkenson	UNICEF	WASH Consultant
Belinda Makhafola	DoH	Deputy Director, Environmental Health
Ramasedi Mafoko	DBE	Director for School Infrastructure

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Annex 5 – Ideal Clinic WASH Indicators

From version 19, issued April 2020 and updated May 2021

Sub-compt		Weight / Importance given
8.	Facility refers environmental health related risks to environmental health services	I
10.	Poster on hand hygiene is displayed above the hand wash basin in every consulting room	I
10.	Awareness day on hand hygiene is held annually	I
10.	Sharps are disposed of appropriately	E
18.	All cleaners have been trained on cleaning procedures	E
18.	Cleaning schedules are available for all areas in the facility	I
18.	Disinfectant, cleaning materials and equipment are available	E
18.	Hand hygiene and sanitary facilities are available	E
18.	Standard operating procedure for managing general and health care risk waste is available	I
18.	Healthcare waste is managed appropriately	E
18.	Storage area for healthcare waste is appropriate	E
18.	All toilets are clean, intact and functional	E
18.	A signed waste removal service level agreement	E
23.175	Facility has a functional piped water supply	E
23.	Facility has access to emergency water supply when needed	E
23.	Sewerage system is functional	E

Weight/importance given in the ideal clinic framework

V = Vital, extremely important

E = Essential, very necessary

I = Important, significant element

Annex 6 – Examples of changes that would be required to the GHS to enable full alignment with JMP indicators

The below table was provided as feedback to DWS and Stats SA following the first key informant interview and discussed during the following interview.

CURRENT GHS 2019 QUESTIONS		REVISED QUESTIONS FOR JMP REPORTING changes in red		Comments
Question	Response Options	Question	Response Options	
WATER				
WAT9: Has this household municipal water supply been interrupted at any time during the last 12 months?	01 YES 02 NO	WAT9: Has this household municipal water supply been interrupted at any time during the last 12 months?	01 YES 02 NO	Removing 'municipal' will provide 'available when needed' information for all types of improved water sources in order to be able to report against the 'safely managed' criteria. It could be only removed from the one question that is used to report against 'available when needed' (maybe WAT12?).
WAT10: Thinking about the interruptions in your municipal water supply over the last 12 months, was any specific interruption longer than two days?	01 YES 02 NO 03 DO NOT KNOW	WAT10: Thinking about the interruptions in your municipal water supply over the last 12 months, was any specific interruption longer than two days?	01 YES 02 NO 03 DO NOT KNOW	
WAT11: If a municipal water supply interruption over the last 12 months lasted for longer than two days, what alternative drinking water source did the household use during interruption?	01 Borehole 02 Spring 03 Well 04 Rain water tank 05 Dam/pool/stagnant water 06 River/stream 07 Water vendor 08 Water tanker 09 Saved / Stored water 10 NONE 11 DO NOT KNOW 12 OTHER	WAT11: If a municipal water supply interruption over the last 12 months lasted for longer than two days, what alternative drinking water source did the household use during interruption?	01 Borehole 02 Spring 03 Well 04 Rain water tank 05 Dam/pool/stagnant water 06 River/stream 07 Water vendor 08 Water tanker 09 Saved / Stored water 10 NONE 11 DO NOT KNOW 12 OTHER	
WAT12: If you add all the days that your municipal	01 YES 02 NO 03 DO NOT KNOW	WAT12: If you add all the days that your municipal	01 YES 02 NO 03 DO NOT KNOW	

water supply was interrupted over the last 12

months, was it more than 15 days in total?

WAT1: What is the household's main source of drinking water?

- 01 Piped (tap) water in dwelling/house
- 02 Piped (tap) water in yard
- 03 Borehole in yard
- 04 Rain-water tank in yard
- 05 Neighbour's tap
- 06 Public/communal tap
- 07 Water-carrier/tanker
- 08 Water vendor (charge involved)
- 09 Borehole outside yard
- 10 Flowing water/stream/river
- 11 Stagnant water/dam/pool
- 12 Well
- 13 Spring
- 14 OTHER

No current question

No current question

water supply was interrupted over the last 12

months, was it more than 15 days in total?

WAT1: What is the household's main source of drinking water?

- 01 Piped (tap) water in dwelling/house
- 02 Piped (tap) water in yard
- 03 Borehole in yard
- 04 Rain-water tank in yard
- 05 Neighbour's tap
- 06 Public/communal tap
- 07 Water-carrier/tanker
- 08 Water vendor (charge involved)
- 09 Borehole outside yard
- 10 Flowing water/stream/river
- 11 Stagnant water/dam/pool
- 12 Well Protected
- 13 Well Unprotected
- 14 Spring Protected
- 15 Spring Unprotected
- 16 OTHER

NEW: How long does it take to go there, get water, and come back?

- 01 Member do not collect
- 02 Number of minutes
- 03 Don't know

Splitting wells and springs into protected and unprotected in order that protected sources can be reported as 'improved' rather than all unimproved, which should increase the overall percentage with 'basic' access.

Unprotected spring lacks a spring box.

Unprotected well lacks either a lining/casing, wall above ground, apron, or cover.

DWS/Stats SA comments:

Most wells are probably protected (so the percentage with basic access would increase a bit). This only represents 1.4% nationally.

To align with JMP definition of Basic water, needing less than 30-minute round trip.

DWS/Stats SA comments:

The 200m question is currently used as a proxy for 30-minutes. The distance measure is more useful for infrastructure planning. 200m has been used as a metric for a long time,

keeping it will enable comparison over time.
Therefore, this question could be added but with the 200m question (WAT2) also remaining.

SANITATION

<i>No current question</i>	<i>No current question</i>	NEW: Has your (pit latrine or septic tank) ever been emptied?	01 Yes emptied 02 Never emptied 03 Don't know	These questions would need to be added to be able to report against the JMP safely managed criteria of (i) treated and disposed in-situ, and (ii) stored temporarily and taken and treated offsite.
<i>No current question</i>	<i>No current question</i>	NEW: The last time it was emptied, where were the contents emptied to? <i>Was it removed by a service provider?</i>	Removed by service provider: 01 to a treatment plant 02 buried in a covered pit 03 don't know where Emptied by household: 04 buried in a covered pit 05 to uncovered pit, open ground, water body, or other 06 Other 07 Don't know	DWS/Stats SA comments: There is interest to add these questions as they relate to international reporting (category A questions), but remain wary of the time that extra questions take.
SAN1: What type of toilet facility is used by this household?	01 Flush toilet connected to a public sewerage system 02 Flush toilet connected to a septic or conservancy tank 03 Pour bucket-flush toilet connected to a septic tank (or septage pit) 04 Chemical /portable toilet 05 Pit latrine/toilet with ventilation pipe 06 Pit latrine/toilet without ventilation pipe	SAN1: What type of toilet facility is used by this household?	01 Flush toilet connected to a public sewerage system 02 Flush toilet connected to a septic or conservancy tank 03 Pour bucket-flush toilet connected to a septic tank (or septage pit) 04 Chemical /portable toilet 05 Pit latrine/toilet with ventilation pipe 06 Pit latrine/toilet with slab and without ventilation pipe	Non-VIP latrines can be split into with and without a slab. Those with can still be classed as 'Basic' by JMP, while DWS can continue to use the higher standard of VIP latrines as basic. (Pit latrine without slab/open pit: is a dry sanitation system that uses a pit in the ground for excreta collection and does not have a squatting slab, platform or seat. An open pit is a rudimentary hole in the ground where excreta is collected.)

07 Bucket toilet (collected by municipality)
 08 Bucket toilet (emptied by household)
 09 Ecological Sanitation Systems (e.g. composting toilet)
 10 Open defecation (e.g no facilities, field , bush)
 11 OTHER

07 Pit latrine/toilet either without slab, or an open pit
 08 Bucket toilet (collected by municipality)
 09 Bucket toilet (emptied by household)
 10 Ecological Sanitation Systems (e.g. composting toilet)
 11 Open defecation (e.g no facilities, field , bush)
 12 OTHER

HYGIENE

SAN6: Does your household have hand washing facilities (e.g basin, bowl, or functioning tippy tap)?

01 Yes
 02 No
 03 Do not know

~~SAN6: Does your household have hand washing facilities (e.g basin, bowl, or functioning tippy tap)?~~

~~01 Yes
 02 No
 03 Do not know~~

GHS surveyors would need to ask to observe a handwashing facility to be able to fully report against JMP indicators.

Can you please show me where members of your household most often wash their hands?

Fixed facility observed (sink/tap)
 01 in dwelling
 02 in yard/plot
 Mobile object observed
 03 (bucket/jug/kettle)
 04 No handwashing place in dwelling/yard/plot
 05 No permission to see
 06 Other

No current question

No current question

NEW: Observe availability of water at the place for handwashing. Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water.

01 Water is available
 02 Water is not available

GHS surveyors would need to ask to observe the presence of water and soap to be able to report against JMP indicators.

No current question

No current question

NEW: Observe
availability of soap or
detergent at the place for
handwashing

01 Soap or detergent
available
02 Soap or detergent
not available

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