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# WATER RESOURCE REGULATION



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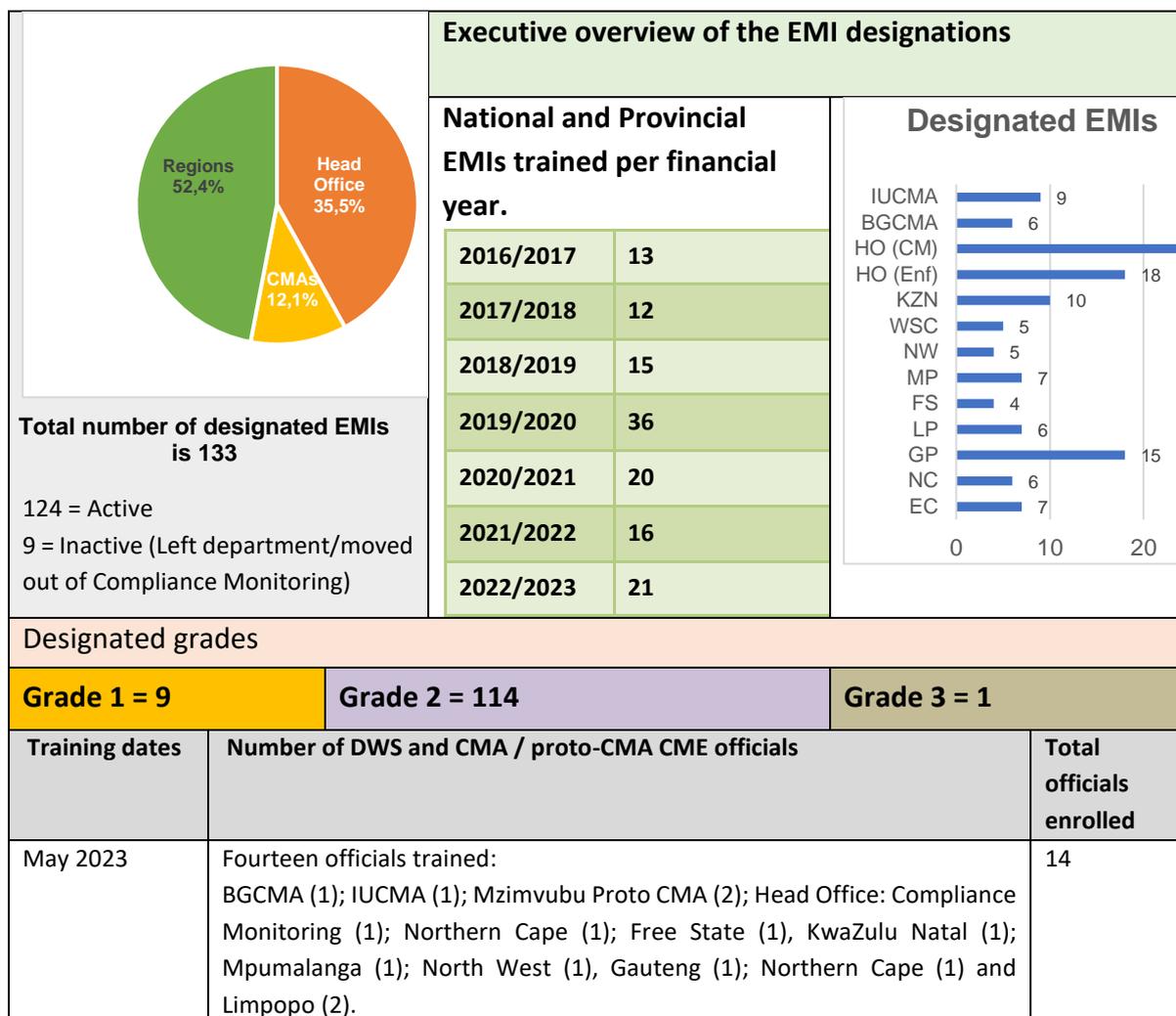
## 10.1 Compliance Monitoring and Enforcement

The Compliance Monitoring function promotes and monitors the status of compliance of water users to standards, with water use authorisation conditions and regulations across the full water value chain of all sectors in a way that triggers appropriate enforcement or other regulatory-enhancing action if needed. The enforcement function ensures that a set of actions (administrative, criminal, and civil) are taken against non-compliance with the provisions of the National Water Act as a Specific Environmental Management Act (SEMA) under the National Environmental Management Act (NEMA, Act no. 107 of 1998).

The Department of Water and Sanitation (DWS) constantly strives to enhance the Compliance Monitoring and Enforcement (CME) procedures, protocols and instruments for effective functioning within the Environmental Management Network. The development of the DWS CME or Environmental Management Inspector (EMI) Standard Operating Procedure (SOP) Manual has been finalised to harmonise and standardise operating procedures within the water sector that will allow the CME officials and EMIs to perform their duties in an administrative just and legal defensive manner and conform to the chain of custody process and actions at national, regional and Catchment Management Agency (CMA) levels to result in successful court cases.

In support of an enhanced compliance and enforcement capacity, there is ongoing training and designation of officials as Environmental Management Inspectors (EMIs). The current total of EMIs designated by the Minister of Water and Sanitation is one hundred and twenty-four (124) (Figure 10.1). The DWS is part of the blue sector (freshwater) and brown sector (waste) and its performance data is also reported under the Environmental Secretariat and EMI network. It needs to be noted that during this financial year, only 128 DWS and CMA CME officials are performing the CME functions and about 80 officials are within the regions and CMAs to regulate all the water sectors registered on the Water Use Authorisation and Registration Management System (WARMS) of about 55 000 water users as well as identified unlawful activities.

A significant part of the DWS CME Strategy is the commitment to training and capacity building as well as access to information relating to CME. The National Compliance Information Management System (NCIMS) and the Enforcement Case Management System (ECMS) are operational with future integration planned into one Integrated Regulatory Information System (IRIS) together with Wastewater and Drinking Water (Green Drop and Blue Drop Programmes respectively).



*Figure 10.1: The Environmental Management Inspectorate – DWS and its entities component.*

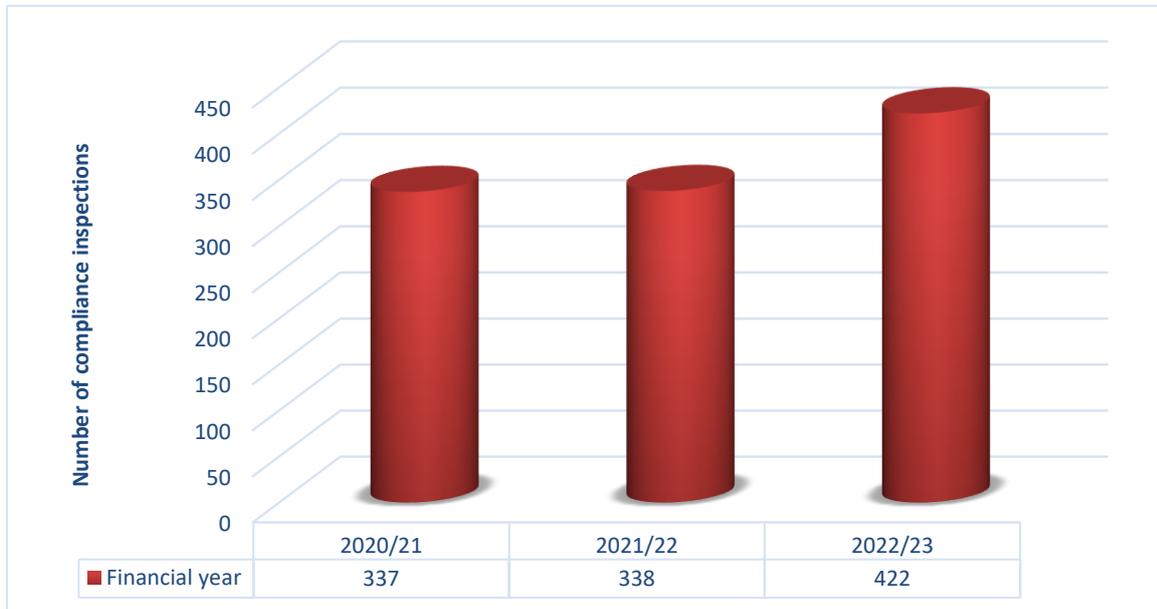
The two established CMAs, namely Breede-Gouritz CMA (BGCMA) and now re-named as Breede-Olifants CMA (BOCMA) and Inkomati-Usuthu CMA (IUCMA) are conducting CME functions in their respective WMAs, and these CME functions were also incorporated into the national Annual CME Report 2022/23 with respect to their CME Annual Performance Plan (APP) targets to give a holistic overview of the water sector performance and status of compliance in South Africa.

The Department is in the process of implementing the approved organisational structure and NWA delegations, 2023. The relocation of the CME function from Regional Offices to the CMAs necessitates a concerted effort to bolster the CME capacity as well as the criminal enforcement capacity of new officials that will be integrating into the CMAs or National Office from various units encompassed within the Department.

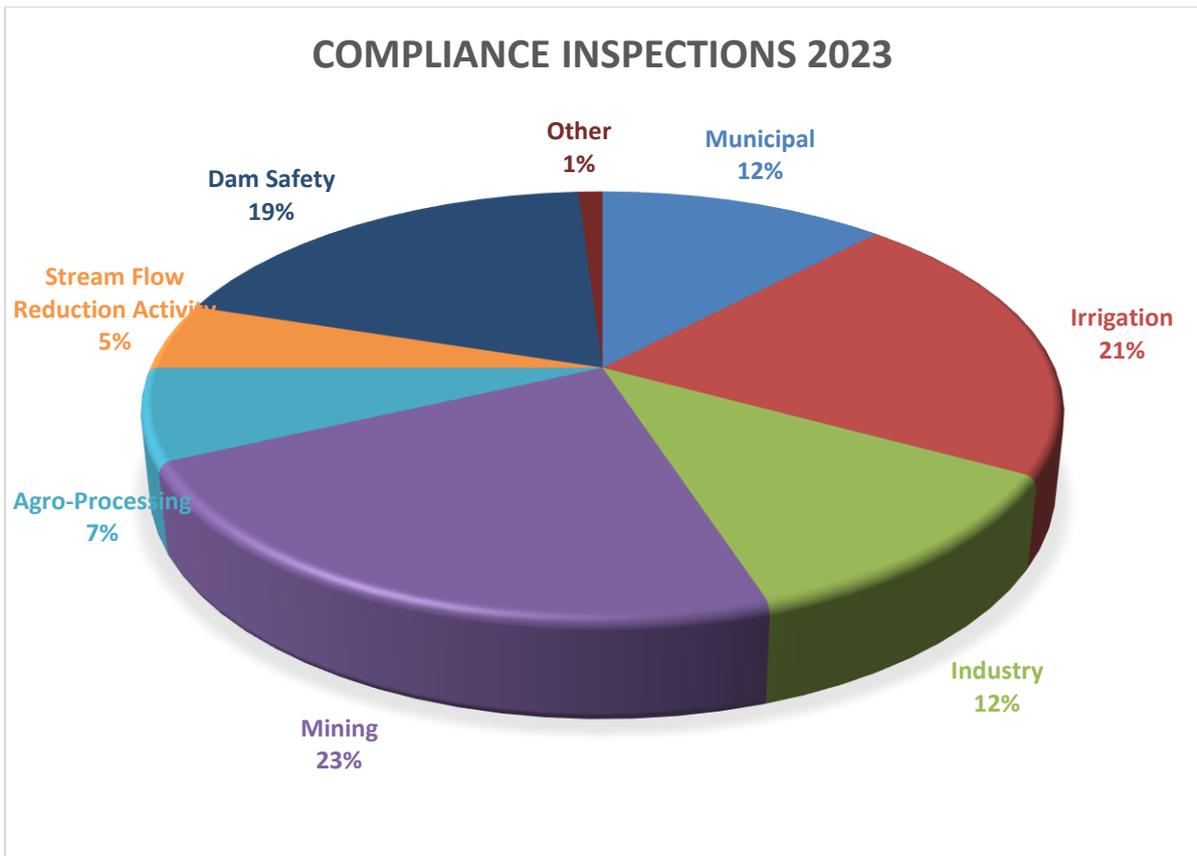
## 10.2 Compliance Monitoring

The Compliance Monitoring team set a target to monitor 379 authorised water users across the various sectors for the FY2022/23. The Compliance Monitoring team achieved 422 (including dam safety) and exceeded the target by 43 due to additional inspections conducted by the Provincial Offices as well as the Western Cape joint operation Blitz.

The number of water users monitored has been on an increase for the past three financial years since taking a sharp decline in 2020 due to the Covid-19 pandemic that forced regions to conduct desktop compliance inspections (Figure 10.2). Although there has been an improvement in the FY2022/23, the average number of water users monitored in the past three years is 365 out of 55 000 registered water users, which represents 0.6% of the registered water users that were monitored. The primary contributor to this problem is the uneven annual allocation of compliance monitoring officials in the provincial offices. From the compliance inspections conducted during the financial year FY2022/23, the mining sector received more attention, followed by the irrigation sector (Figure 10.3).



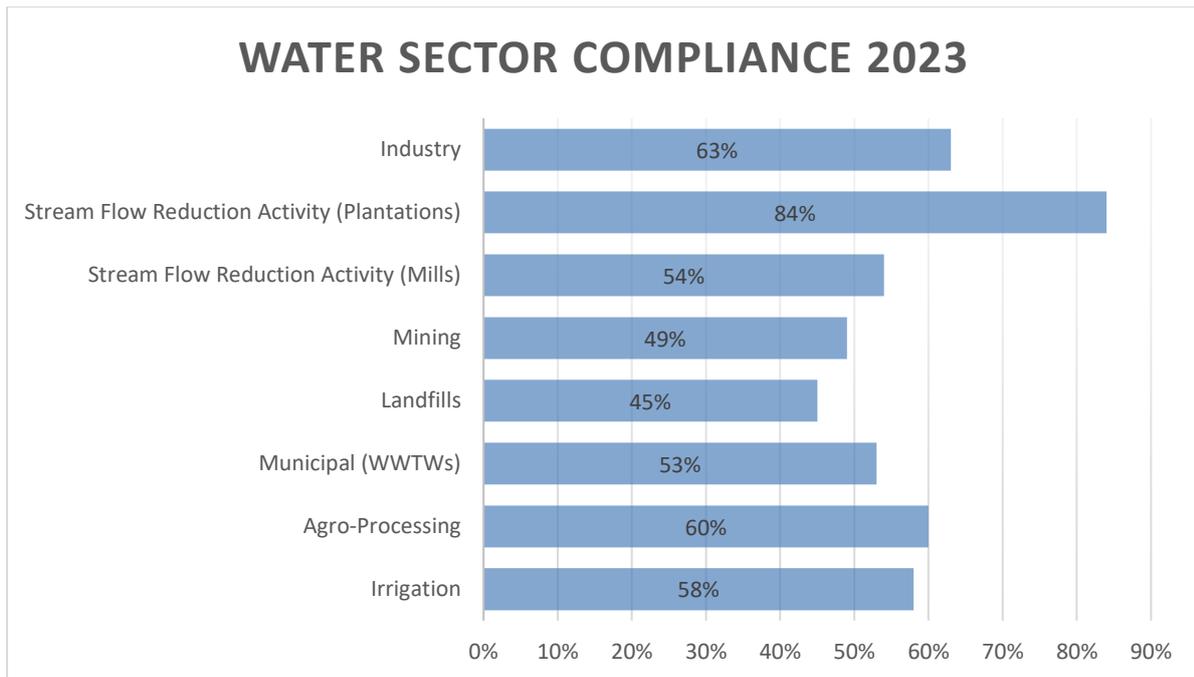
*Figure 10.2: Overview of Compliance Inspections from FY2020/21 - FY2022/23.*



*Figure 10.3: Compliance inspections conducted per water sector for the FY2022/23.*

In the Medium-Term Strategic Framework (MTSF) and Outcome 10 performance agreement, an impact indicator is used to determine the level of performance of the water users and sectors. The purpose of the impact indicator is to add value to the statistics of users monitored by indicating the status of compliance against the conditions of the authorisation. A scorecard has been developed and is used to accurately and consistently measure or score performance, and forms part of the portfolio of evidence together with the inspection report.

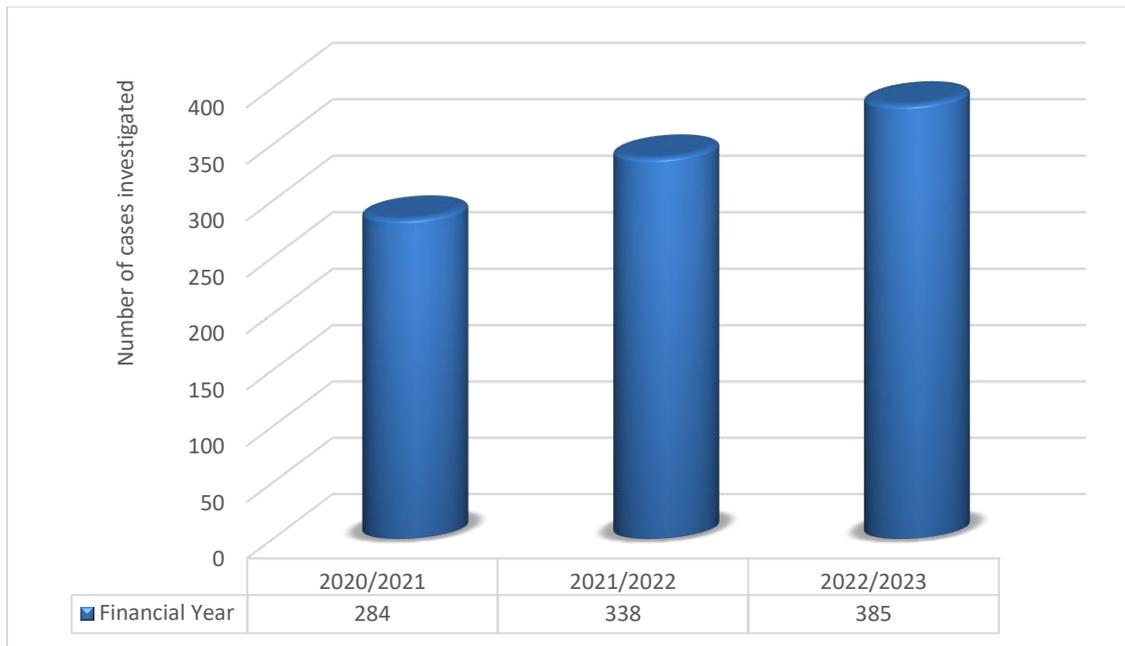
The target set for the level of compliance with water user authorisations obligations per sector is 65%. The 422 users monitored achieved a combined average performance level of 58%, with the mining sector (49%) and landfills (45%) having the worst scores (Figure 10.4). To improve this more emphasis needs to be placed on follow-up inspections to ensure findings are implemented and to follow through with enforcement actions and consequences where required.



*Figure 10.4: Overview of compliance performance of the water sectors for 2022/23.*

### 10.3 Enforcement For DWS

During the FY2022/23, a total of 460 cases were reported for non-compliance. Out of these reported cases, 385 were investigated, demonstrating a commendable achievement of 84% compared to the committed target of 80% (Figure 10.5). This also represents a significant increase of 14% in the number of cases investigated when compared to the previous financial period (Table 10-1). The significant rise in the number of cases examined can be attributed to an increase in reported incidents of pollution and unlawful water uses.



*Figure 10.5: Overview of Enforcement cases investigated during from FY2020/21 - FY2022/23.*

*Table 10-1: Reported non-compliance cases investigated for DWS.*

Sub-Programme		Enforcement			
Performance Programme Indicator (PPI) no	Performance indicator	Planned target FY2022/23	Actual achievement FY2022/23	Deviation from planned target to actual achievement for FY2022/23	Comment on deviations
5.1.6	Percentage of reported non-compliant cases investigated	80%	84% (386 out of 460)	Over by 4%	The target was exceeded as a result of high number of pollution related cases reported which required urgent investigations to be conducted.

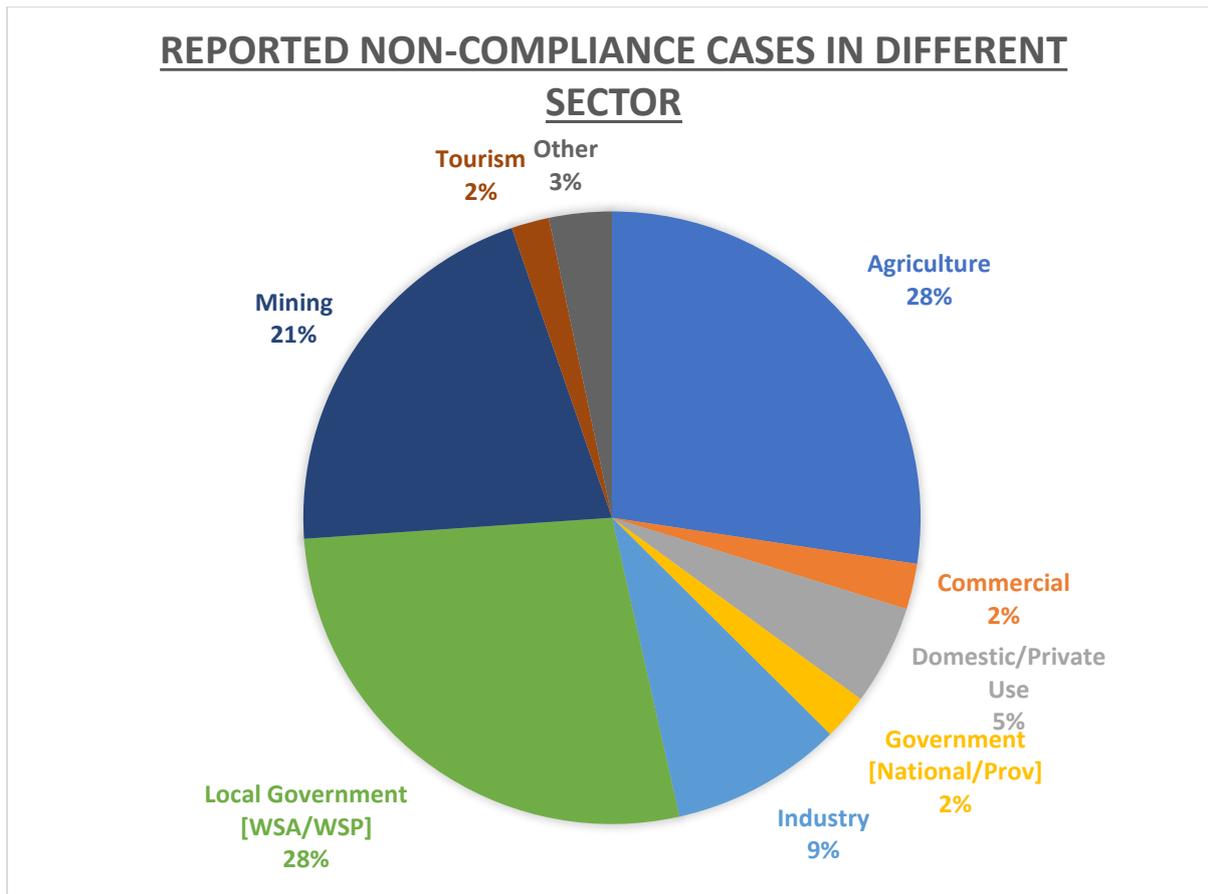
In certain instances, findings arising from these investigations unveiled non-compliance with the water-related legislation. In response to these contraventions, the DWS invoked its authority to initiate administrative enforcement actions aimed at rectifying the identified contraventions. Furthermore, where necessary, the DWS has exercised its prerogative to initiate criminal proceedings or pursue civil actions in instances where such enforcement measures were deemed appropriate and necessary to address cases of significant non-compliance.

The DWS duly issued a total 205 notices indicating its intention to subsequently issue directives. A total of 72 directives were issued. Moreover, the DWS recorded 17 criminal cases against offenders. Six cases, which had been initiated in preceding financial years, were subsequently referred to the National Prosecuting Authority (NPA) for a decision (Table 10-2).

Several complaints have been reported regarding unlawful water uses and pollution-related cases, highlighting non-compliance in various sectors. The agriculture sector and local government municipalities account for the highest proportion of reported cases, at 28% for each, followed by mining at 21% (Figure 10.6).

*Table 10-2: Enforcement actions taken against non-compliant water users and water polluters in the various provincial offices.*

Region	Percentage of reported non-compliant cases investigated	*Notices Issued	*Directives Issued	*Cases Registered with SAPS	*Cases referred to NPA
Eastern Cape	34/50 = 68%	13	7	-	1
Free State	9/9 = 100%	1	5	1	-
Gauteng	58/64 = 91%	9	17	2	1
KwaZulu-Natal	55/75 = 73%	3	4	6	1
Limpopo	36/38 = 95%	9	9	2	1
Mpumalanga	82/95 = 86%	69	24	5	2
North-West	67/71 = 94%	25	1	-	-
Northern Cape	28/29 = 97%	42	3	-	-
Western Cape	16/29 = 55%	34	4	1	-
<b>Total</b>	<b>385/460 = 84%</b>	<b>205</b>	<b>74</b>	<b>17</b>	<b>6</b>



*Figure 10.6: Enforcement cases per water sector for the FY2022/23.*

An analysis of the cases resolved following enforcement interventions on reported non-compliance cases reveals several outcomes (Table 10.3). At least 27 cases were investigated and revealed no evidence of contravention, indicating that the alleged non-compliance claims were inadequately substantiated. In four cases, a plea sentence agreement was reached, with the responsible party admitting guilt. Additionally, remedial actions were taken for 11 cases during the investigation phase, highlighting the importance of addressing non-compliance issues promptly.

Overall, this analysis provides insights into the various resolutions achieved following enforcement interventions, emphasising the significance of enforcing compliance and taking appropriate measures to rectify non-compliance instances.

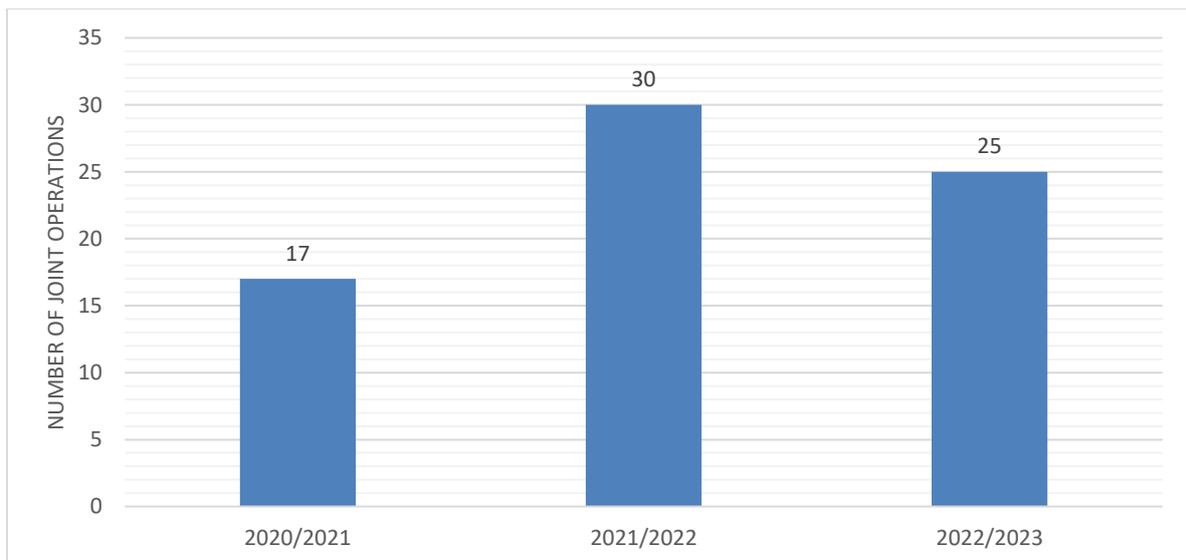
*Table 10-3: Summary of resolved enforcement cases in FY2022/23.*

Summary of Resolved Cases	No
Cases referred from Compliance Monitoring Unit	12
Complied with Administrative Action	23
No Contravention Detected	27
<i>Nolle prosequi</i> * or declined to prosecute	0
Plea Sentence Agreement (Admission of guilt)	4
Remedial action taken at Investigation Phase	11
<b>Total</b>	<b>77</b>

\*A decision not to prosecute will be indicated by the legal term “nolle prosequi” literally meaning “not to wish to prosecute”. The certificate nolle prosequi is a certificate issued by the National Director of Public Prosecutions (DPP) of the region, to the effect that the DPP has considered the matter and declines to prosecute on behalf of the state for varying reasons.

### 10.3.1 Joint Compliance and Enforcement Operations

During the past three financial years, the joint operations by DWS Enforcement Units have shown fluctuating trends in the number of reported non-compliance cases. In the FY2020/21, a total of 17 joint operations were conducted to address reported non-compliance incidents. This number increased significantly in the following FY2021/22, with 30 joint operations conducted, indicating a heightened effort in enforcing compliance. However, in the current FY2022/23, there has been a slight decrease to 25 joint operations (Figure 10.7). In addition to the 25 joint operations DWS were involved with, the IUCMA dealt with one joint operation with DFFE during the reporting period that led to a criminal case and BGCMA conducted a V&V follow-up Blitz operation with DWS regional office officials where 21 facilities were inspected.

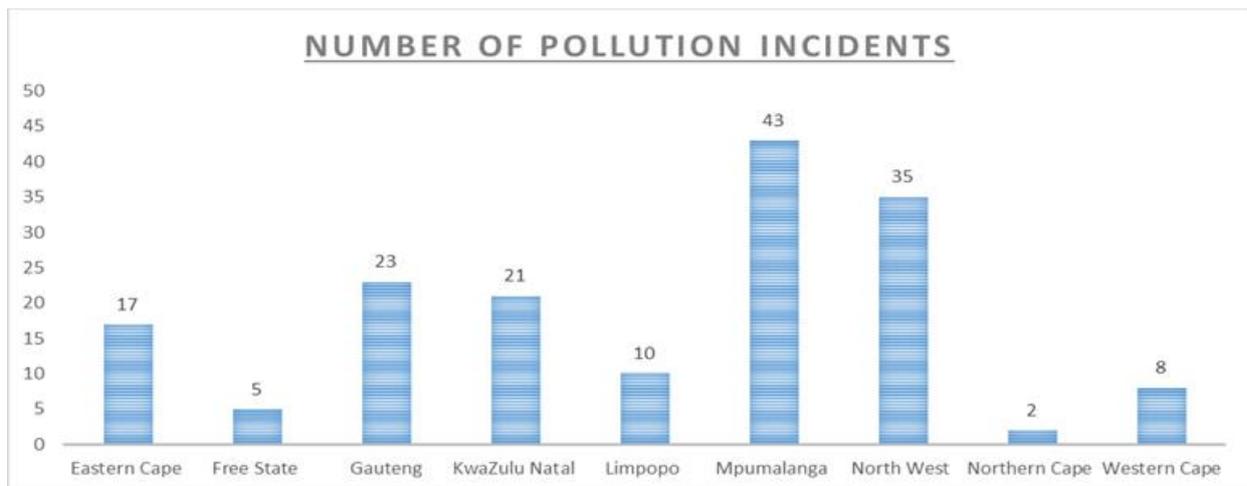


*Figure 10.7: Number of DWS joint enforcement operations over the last three financial years 2020/21-2022/23.*

### 10.3.2 Emergency Pollution Incident Enforcement

During the 2022/23 review period, a total of 460 cases of non-compliance were reported to DWS. Among these cases, 164 cases were related to the control of emergency incidents resulting in water resource pollution. In response to these incidents, the Department conducted thorough investigations and, where necessary, initiated administrative enforcement actions or filed criminal charges against those responsible. These actions were aimed at compelling individuals or entities involved to undertake corrective measures to mitigate pollution.

It is important to highlight that these incidents primarily occurred during normal operations of various activities, often involving spillages, manhole overflows and others. The affected sectors included local government, mining, industrial, and agriculture. The Department is monitoring efforts to ensure that appropriate clean-up and rehabilitation measures are implemented to protect our valuable water resources from further harm and degradation. Mpumalanga had the most emergency pollution incidents at 43 followed by North West at 35 (Figure 10.8).



*Figure 10.8: Number of emergency pollution incidents of non-compliance reported per DWS provincial offices.*

The Department issued 36 notices and 18 directives, while a criminal case was initiated against a facility operator who, either intentionally or negligently, engaged in activities that resulted in the pollution or potential pollution of a water resource. Collaboratively, the Department is actively engaged with SAPS to facilitate the completion of the case docket, which will then be forwarded to the NPA for a decision. Furthermore, seven cases have been closed as facility operators have undertaken corrective measures to clean and rehabilitate the affected areas, effectively mitigating the pollution risk to our water resources.

Additionally, the IUCMA CME unit received 30 reported pollution incident-related cases for investigation. The majority of these issues were related to sewage overflow as a result of municipal infrastructure failure. At least 25 of the reported matters were resolved with a verbal directive. Only five directives were confirmed in writing within 14 days of issuing a verbal directive. Follow-up inspections were conducted, and all users issued with directives have fully complied with the satisfaction of the IUCMA.

Furthermore, the BGCMA CME unit also received 26 pollution incident-related cases for investigation. Out of the 26 cases, four notices were issued following the site investigations and the rest were resolved through verbal directives. Most of these incidents are related to sewage spillages due to the municipal infrastructure breakdown. Follow-up site inspections were conducted, and all the pollution cases were dealt with during this financial year.

### 10.3.3 CME Capacity Building

The DWS CME Strategy approved in March 2018 is progressively being implemented with the further training of DWS and CMA CME/EMI personnel and external stakeholders. In respect of EMI Basic Training undertaken during the FY2022/23, 21 DWS and CMA officials received training from the DFFE. All officials passed and have been designated as EMIs. Additional training was rolled out to the IUCMA and BGCMA to capacitate the officials in the CME generic concepts, processes, procedures, and IT Application tools (NCIMS and ECMS) and how to compile a Compliance Inspection Report.

## 10.4 Water Services Regulation

The Department of Water and Sanitation is responsible for ensuring that water is effectively managed in order to promote equitable and sustainable socio-economic development and universal access to water, as well as the provision of safe drinking water to all. As part of regulation, the Department runs the Blue Drop and Green Drop Certification Programmes, which are Incentive-based Regulation (IBR) models pioneered by the South African Water Sector in 2008. The programmes not only assist the Department in meeting its strategic objectives, but they also align with its efforts to achieve the United Nations Sustainable Development Goals for clean water and sanitation, as well as climate action. These programmes call for the country to manage drinking water and wastewater quality to the highest standards.

The Water Services Act, (Act No. 108 of 1997) prescribes the legislative duty of Water Service Authorities (WSAs) to provide drinking water to residents of all municipalities. The Act requires the Minister to establish and maintain a national information system and monitor the performance of all water services institutions. Based on this, the Department has established the Integrated Regulatory Information System (IRIS) to monitor the quality of drinking water. The IRIS is accessible to the public at <http://ws.dwa.gov.za/IRIS/documents.aspx>.

### 10.4.1 The Green Drop Certification Programme

In 2008, the Department of Water and Sanitation introduced a Green Drop Programme, which is an incentive-based, risk management approach to address the design and operating capacity of WWTWs, compliance of the effluent to agreed standards, local regulation (by-laws implementation) and infrastructure management and condition, (i.e., asset management practices). Since its inception, this programme has sought to identify and develop the core competencies that, if strengthened, would gradually and sustainably improve the standard of wastewater management in South Africa (DWS, 2023a).

Consequently, the Green Drop certification process recognises and rewards progressive improvement and excellent performance. The process measures and compares the results of the performance of Water Services Institutions (WSIs) and subsequently rewards or reprimands the institution upon evidence of their excellence or failures according to the minimum standards or requirements that have been defined.

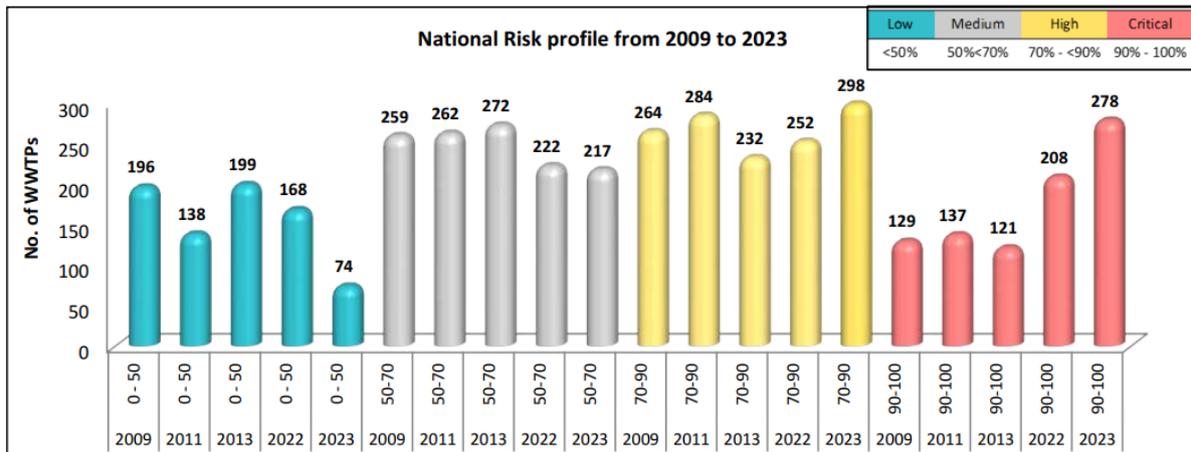
The annual Green Drop report intends to provide WSIs with comparative analysis and diagnostics to help them focus on specific areas for improvement. Each Green Drop audit cycle is distinguished by gradual changes in the audit criteria, which are guided by the status and priorities of the wastewater sector. Therefore, the maintenance of the previous cycle's Green Drop evidence and performance does not result in the same Green Drop score for any WSI.

### 10.4.2 The 2023 Green Drop Assessment

The Green Drop Progress Assessment was conducted for 144 Water Services Authorities (WSAs) via an infrastructure network comprising 867 WWTWs, the Department of Public Works, Government, and some private institutions across the country. The report covered 1004 WWTWs within WSIs assessed as reported in the Green Drop Report 2022. The progress report revealed a negative national trend in risk movement over the past five (5) assessment cycles (2009-2023), with an increase in average risk rating from 70.1% to 76.5% placing the country in a **high-risk category**. Figure 10.9 shows the movement in the number of WWTWs in each risk category at a national level as summarised below:

- The overall national risk profile in 2023 leans towards WWTWs dominating the medium, high, and critical risk areas, with prominence in the high-risk category.
- The number of WWTWs in the low-risk category has reduced from 199 in 2013 to 168 in 2022, with a further reduction to 74 in 2023 indicating a negative movement with deterioration in wastewater management.
- The number of WWTWs in the medium-risk category has decreased since 2013 from 272 to 217 in 2023, noting a small decrease between 2022 and 2023.

- The number of WWTWs in the high- and critical-risk categories have both increased since 2013.
- The number of WWTWs in the high-risk category has increased from 232 in 2013 and 252 in 2022 to 298 in 2023. This indicates negative movement of WWTWs from low and medium category into the high-risk category.
- The same pattern is apparent for the number of WWTWs in the critical-risk category with a notable increase from 2013 with 278 WWTWs now residing in the critical-risk category.



*Figure 10.9: National Risk Profile Trend from 2009 to 2023.*

The Department is concerned about the increase in the number of WWTWs in the high and critical-risk categories as this represents poor wastewater management at these WWTWs. The WSIs with high- and critical-risk rated WWTWs must ensure funding is secured for targeted interventions to improve the risk rating of these WWTWs.

The 2023 national risk profile and the results are summarised as follows:

- The average %CRR deviation score is 76.5% placing the country in the high-risk category;
- 9% of WWTWs are in the low-risk category;
- 25% of WWTWs are in the medium-risk category;
- 34% of WWTWs are in the high-risk category; and
- 32% of WWTWs are in the critical-risk category.

#### 10.4.3 The Blue Drop Certification Programme

The Blue Drop certification programme is an incentive-based regulation that was introduced in 2008, where the DWS measures all aspects contributing to a sustainable Water Services Business and provision of safe water to the citizens of South Africa. This programme gives prominence to the World Health Organisation's (WHO) *Water Safety Planning* concept as the basis for a proactive, risk-based approach to drinking water quality management from catchment to consumer. Since then, DWS has been monitoring the risk of each water supply system based on the performance against

Blue Drop Certification criteria. The results create an enabling environment whereby the Water Services Authority (WSA) and DWS identify, prioritise and implement targeted and specific interventions to improve performance.

The South African National Standard for Drinking Water (SANS:241) is the definitive reference on acceptable limits for drinking water quality determinants. SANS:241 prescribes the minimum numerical limits that must be met for drinking water quality to be deemed safe for human consumption. There are over 1300 drinking water treatment works in South Africa, mostly owned by municipalities, water boards or privately owned. Several determinants are analysed in the laboratory to determine compliance which are mainly grouped into microbiological, chemical (acute) and chemical (chronic). In addition, physical and aesthetic determinants are also monitored.

Blue Drop assessments are detailed assessments of the entire water value chain, the audit scorecard is designed to consider evidence against 5 Key Performance Areas (KPA's):

- Capacity Management;
- Drinking Water Quality Risk Management;
- Financial Management;
- Technical Management; and
- Drinking Water Quality Compliance.

Each KPA and sub-criteria carries a different weighting based on the regulatory priorities. These assessments are supplemented by a physical Technical Site Assessment (TSA) to confirm the findings of the desktop audit. The TSA score reflects the physical condition of the raw water handling system (abstraction facility, pumps and pipelines), the water treatment plant (inlet works to disinfection and sludge treatment), and the distribution system (command reservoir/s or tower/s, including pump stations and bulk pipelines).

The Blue Drop report, which is a comprehensive assessment of the state of all drinking water systems was released by the Minister of the Department of Water and Sanitation on **05 December 2023**.

- *2023 Blue Drop Report Findings*

The findings from the 2023 Blue Drop assessment are summarised as follows:

- All 144 WSAs, i.e., municipalities given the responsibility for water services provision by the Minister of COGTA were audited during the period 1 July 2021-30 June 2022.
- 26 WSSs scored more than 95% and qualified for the prestigious Blue Drop Certification. In 2014, 44 WSSs were awarded Blue Drop status, there is an overall decline in excellence noted between 2014 and 2023.

- 277 of 958 (29%) WSSs (in 62 WSAs) were identified to be in a critical state of performance compared with 174 of 1036 (17%) WSSs (in 33 WSAs) in 2014.

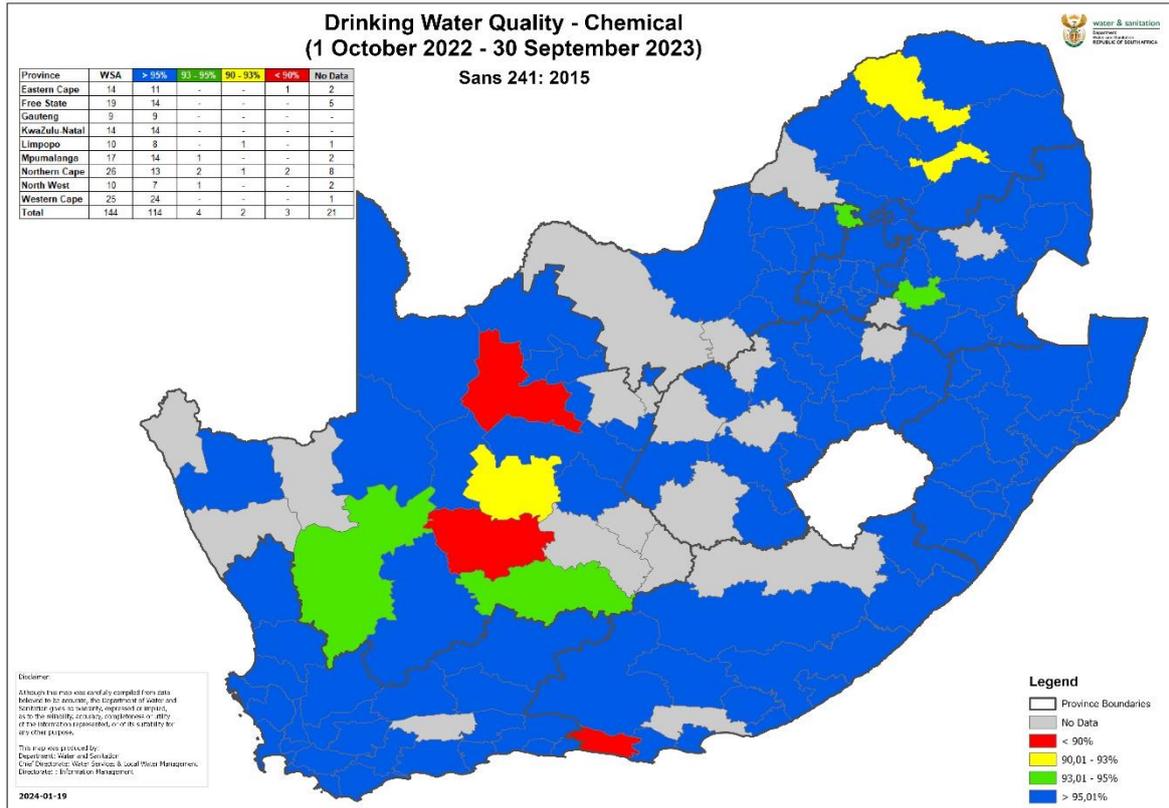
#### 10.4.4 Drinking Water Quality Compliance (Oct 2022 – Sept 2023)

##### i. Chemical Drinking Water Compliance

Chemical water quality is determined by determinants prescribed by SANS:241 or WHO, which may be acute or chronic health with specific health risks associated with each determinant. Acute health risks can result in death if the limit is exceeded, while chronic limits provide maximum limits that can be ingested over a period of time before health effects are observed.

Chemical determinants contrary to microbiological determinants may be monitored at least once per annum for drinking water provided that a risk to consumers has not been prior identified. In compliance monitoring, all WSAs are required to perform a full SANS:241 as prescribed by the standard. At a minimum, for the supply system to be considered safe, drinking water must achieve a **95%** chemical compliance status.

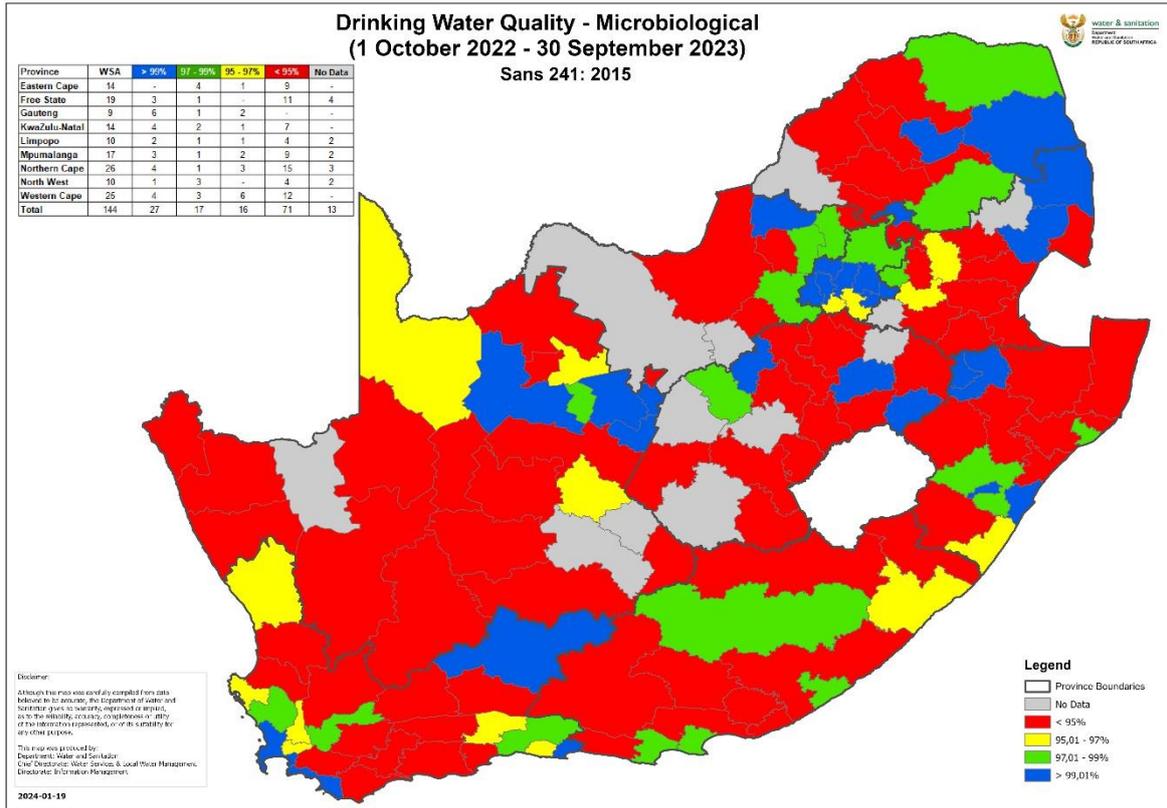
A total of 144 water services authorities were assessed for the 2022/23 hydrological year as shown in Figure 10.10. However, 14.6% of the water services authorities did not upload data on the Integrated Regulatory Information System (IRIS). The results of the Water Supply Systems (WSS) compliance in terms of chemical drinking water quality from October 2022 to September 2023 show that 79% of the systems had excellent compliance in terms of chemical quality compliance, 2.8% had good compliance, while 3.5% demonstrated poor chemical quality compliance. In cases where non-compliance was observed (< 90%), the reasons should be further investigated. The non-reporting and non-compliant WSAs will be continuously monitored and supported by the Department.



*Figure 10.10: Status of drinking water chemical quality compliance.*

## ii. Microbiological Drinking Water Compliance

Microbiological compliance results presented in Figure 10.11 reflects the actual compliance of the final water and distribution system from Oct 22 - Sept 2023 against microbiological determinants. The presence of these determinants in water is a strong indication of recent sewage or animal waste contamination and there is potential for contracting diseases from pathogens, thus the WSIs are expected to be compliant 99.9% of the time for all microbial indicators analysed.



*Figure 10.11: Status of drinking water microbiological quality compliance.*

An observation is made that **72%** of the WSSs in the country did not meet SANS:241 requirements for the reporting period (1 Oct 2022- 30 Sept 2023) and only **18%** of the WSSs achieved an excellent status (>99.9%). It was also noted that 13 WSAs did not submit their drinking water quality data as prescribed by the norms and standards, thus impacting the national outlook as these WSAs could not be assessed in the absence of drinking water quality data submission to the Department.

The overall low compliance results are of serious concern to the Department as most of the WSSs present a potential health risk to the consumers. The Department through its provincial offices, is continuously monitoring and engaging with the relevant WSAs which achieved microbiological compliance below 99.9% including those that are not submitting water quality data to the Department.