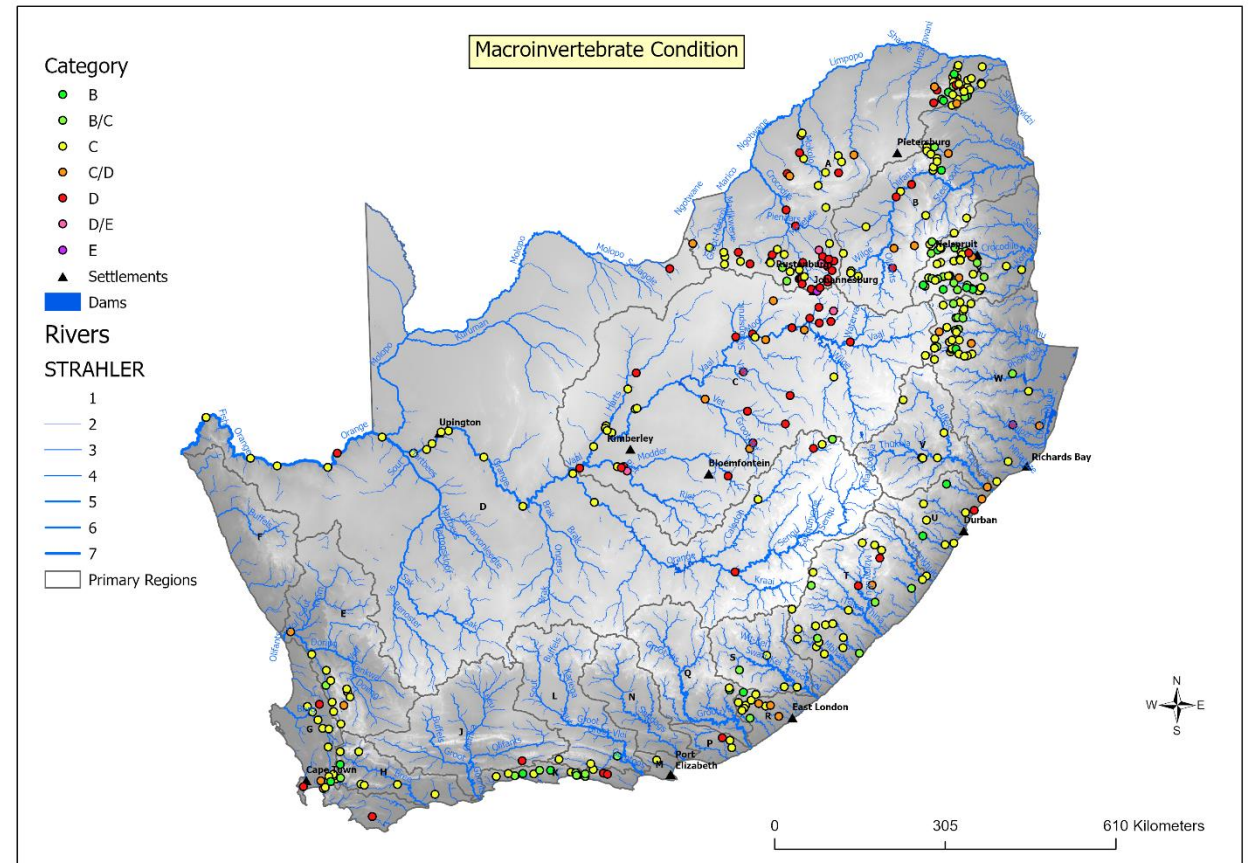
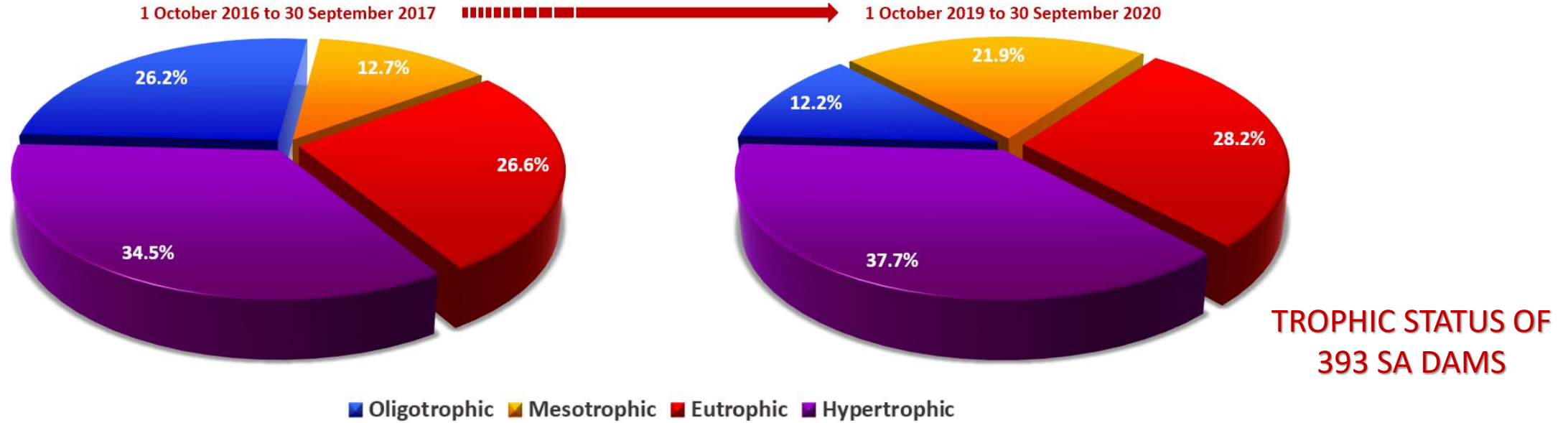


Commission 6: MANAGING POLLUTION AND WATER QUALITY

Water Summit Commission Report Back
February '22



Improving Water Quality



Commission 6 Recommendations towards improvement of water quality

- 1) Review Regulation Approach
- 2) Water Quality Management Improvements
- 3) Partnerships: Towards Water Quality Improvement

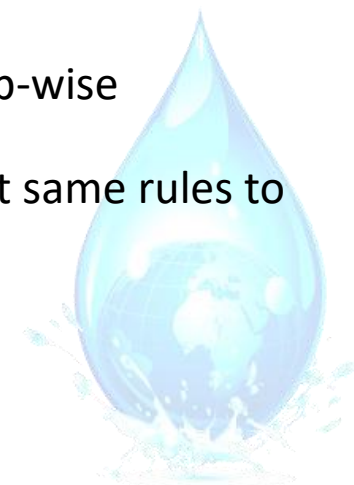
Augment the:

- **Water Services Improvement Plan** (*10-point plan*)
- **DWS Anti-Pollution Action Plan**

Commission Recommendations

1.) Review Regulation Approach: Towards Sustainably Improving Water Quality

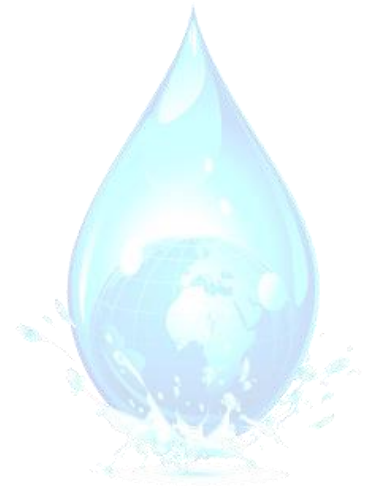
1. Improvement in monitoring & enforcement:
 - Invest in new monitoring technology (Satellite imagery and Remote Sensing) to improve real-time compliance monitoring
 - Integrate monitoring (analyses of samples to serve various measurement objectives; increase monitoring efficiency), and centralise storage of data
 - Restore Laboratory capacity and credibility
 - Digitization of all systems and processes (Commenced)
 - Improve Compliance and Enforcement Monitoring (Establish Forensic Laboratory architecture revisited)
2. Inter-departmental action required to implement an integrated Land Use Management; to mitigate water quality risk (incl. groundwater). National borehole registration programme crucial, to inform land use management limitations especially where groundwater is the primary water resource.
3. Research new pollutants and review national standards for water quality.
4. Review *unaffordable* Water Quality Limits set as License Conditions, in favour of enforcing a step-wise improvement approach.
5. Expand Green Drop Certification programme to Industry (private sector), increase incentives but same rules to apply for public and private sector.
6. Ensure the implementation of the Polluter Pay Principle (But stop pollution)



Commission Recommendations

Water Quality Management Improvements

1. Address dam water quality deterioration through the implementation of measures to reduce pollution at source (e.g. Intervene at failing wastewater treatment in Johannesburg and not spending funds at Hartbeespoortdam)
2. Implement the Offsetting principle to ensure Industry (Private Sector) assist with overall water quality improvement in Municipal Sector under strict conditions negotiated with the Regulator.
3. Refocus on non-point pollution; introduce the construction of pollution control buffers as Labour-intensive projects (job creation)
4. Revive and expand the functionality of the DWS Anti-Pollution Task Team



Commission Recommendations

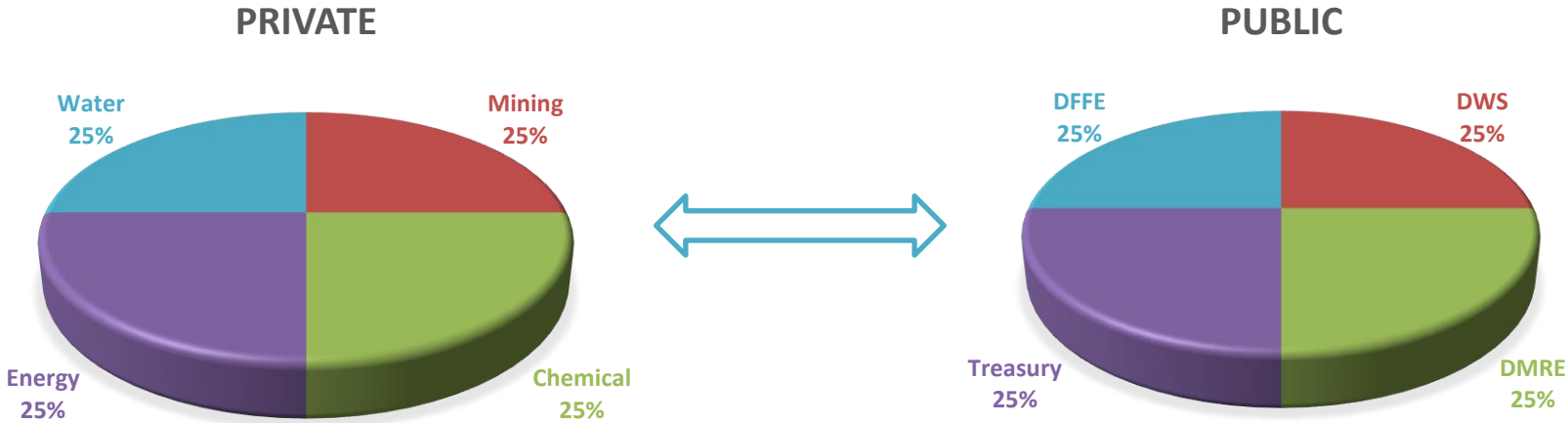
Partnerships: Towards Water Quality Improvement

1. “*Unemployed ≠ Unskilled*”; Partner Community based volunteer groups (incl. NGOs) to implement labour-based interventions (e.g. Buffer strips at selected diffuse pollution hotspots)
2. Create a “*Working for Sanitation*” in collaboration with DFFE to ensure labour-intensive projects are initiated to explore initiatives such as:
 - Buffer Strip Construction in high density areas with polluted stormwater run-off
 - Aesthetical upgrades of Wastewater Treatment Works (restoring workplace pride)
 - Maintaining Sewer Mains from blockages
3. Getting Local Government and industries to agree on partnerships to ensure that reasonable bylaws are in place and effective local regulation applies
4. Establish a National Campaign against Littering and Dumping (changing the behaviour of the public) to share a common aspiration “*we shall not live in filth*”, & Get metropolitan municipal enforcement to act upon illegal dumping.
5. Establish a new balanced relationship with Industry led by the objective to improve the quality of water in our water resources, but not to negotiate with a *stubborn* polluter.
6. Inter-Governmental Collaboration required to give effect to these plans.

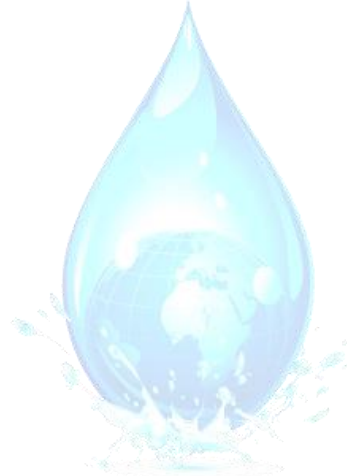


Commission Recommendations

Shifting the Paradigm from Pollution to Renewable Resources



- Green Hydrogen
- Brine Economy
- Renewable Energy (incl WWTW)
- Renewable Water
- Underground Dams
- AMD Economy



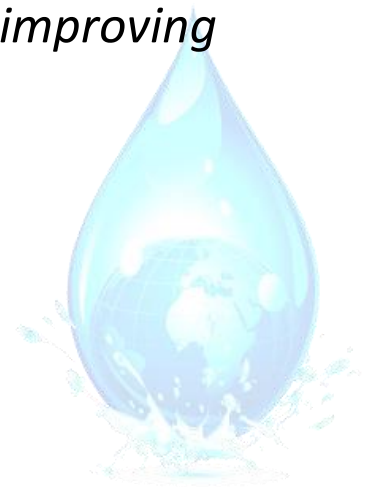
ACTION PLAN

Action	Target Date	Responsibility	KPI
Catchment based WQ recovery plans	30 June 2022	CMA/Proto	Improve WQ by 60% within 36 months
Partnerships with Industry to improve WQ (Framework)	90 days	BUSA & DWS	Framework developed between DWS and private sector -BUSA
		DTIC	W & S Reindustrialization master plan
Establish a Working for Sanitation programme	12 months	DWS & DFFE	<ul style="list-style-type: none"> Aesthetical Upgrades of WWTWs Construction appropriate technologies
Include all Commission 6 recommendations in the DWS APTT Action Plan as well as the WS Improvement Plan	2 months	DWS	Improve WQ by 60% within 36 months

Commission Recommendations

The Way Forward

1. Shifting Paradigms.
2. Explore incentives which will assist in expanding the incentive-based regulation approach.
3. The fight against vandalism should not primarily be increasing of security, but ensuring industrial reforms (incl. formalising illegal/informal mining)
4. The Water Research Commission to assist with assessment of appropriate and smart technology to enhance water quality.
5. Revival of Adopt-a-River (& Wetlands) programmes
6. Through Partnerships Support the bold target of the DWS Anti-Pollution Action Plan: *Have Catchment-based Water Quality Recovery Plans in place by June '22, with set target of improving the water quality by 60% over the period of 3 years.*

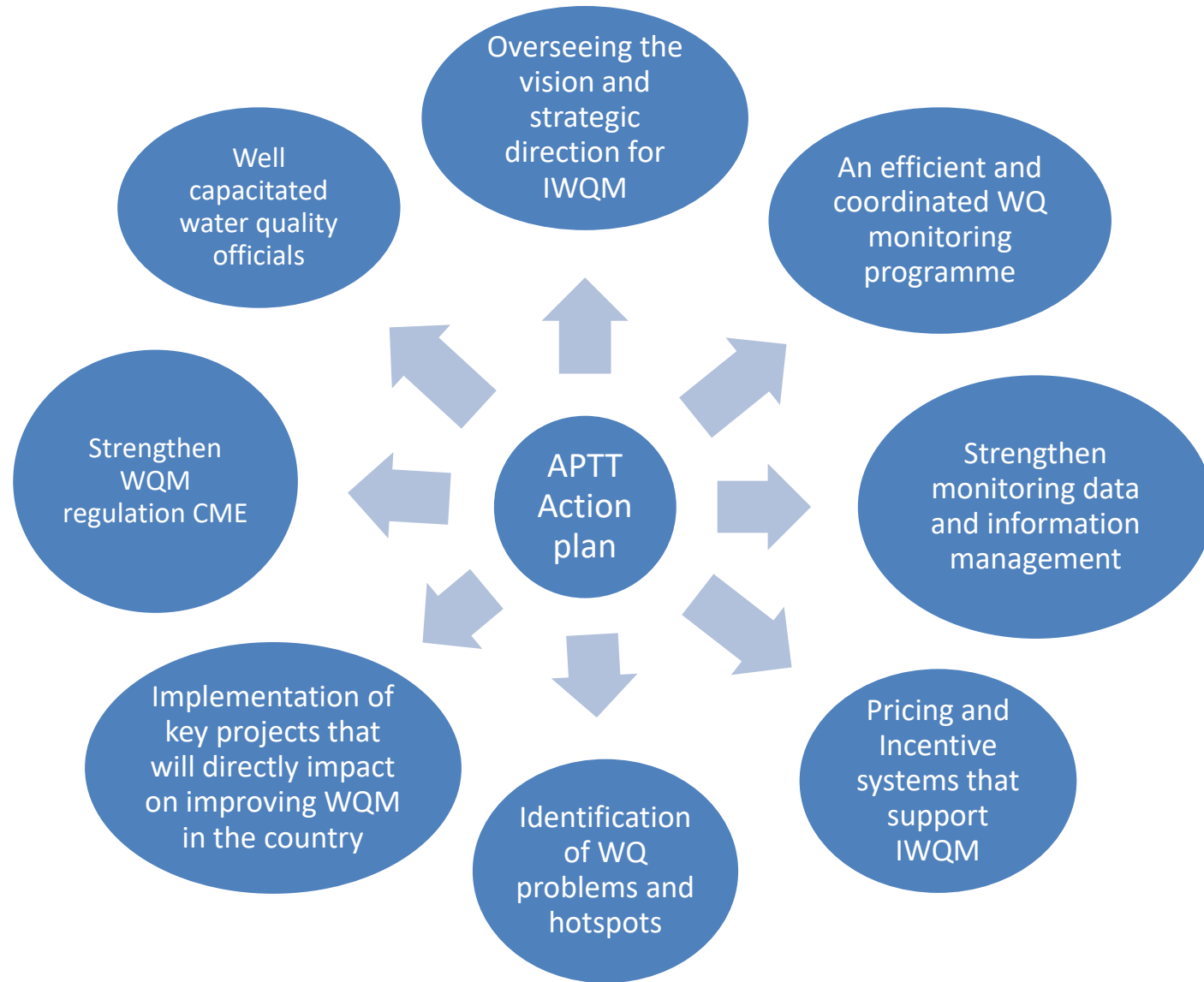




9

Commission 6: “Thank You”

ANTI-POLLUTION TASK TEAM



Representation: APTT

- All units from Regulation
- Water Ecosystems
- Planning
- Resource quality information Systems
- Water Information Management
- Water use efficiency
- Legal Services
- All regional Offices
- IUCMA and BGCMA
- DFFF

To be expanded to include
WS Branch

Additional Complimentary Activities

- Section 19 initiative
- Green Drop Functionality Restoration Drive
- Water Services Improvement Interventions
- Spillage and Leakage reporting

Anti-Pollution Task Team Tasks & Progress

TASK	EXPECTED OUTCOMES	STATUS
1.) OVERSEEING THE VISION AND STRATEGIC DIRECTION FOR IWQM	A core group of water quality champions that would collectively enable IWQM & wall to wall resource protection.	Implemented in 2020
	Approved Action Plan for the Operation of the Task Team and the SteerComm.	Plan Approved in March 2020
	Fully implemented Integrated Water Quality Management Strategy.	Implementation Fora established
		Regional Forums to be established in 2022
2.) AN EFFICIENT AND COORDINATED WATER QUALITY MONITORING PROGRAMME	Re-aligned and coordinated water quality monitoring programmes	Accreditation of DWS laboratories in progress.
	Monitoring Points at all strategic points	Identification of monitoring point gaps in progress.
	The use of technology as an early warning system (to be changed) to deal with pollution promptly	Available real-time monitoring technologies being assessed. Medium term WRM goal.

Completed

In progress and
on time

Medium to Long
Term

Anti-Pollution Task Team Tasks & Progress (ii)

TASK	EXPECTED OUTCOMES	STATUS
3.) STRENGTHEN MONITORING DATA AND INFORMATION MANAGEMENT	Information Systems that are current and accessible to support adaptive water quality management	Regional WMS assessments completed. Gaps identified Alignment of WMS with other systems yet to be achieved – longer term
	The use of technology as an early warning system (to be changed) to deal with pollution promptly	Available real-time monitoring technologies being assessed. Medium term WRM goal. WRC in the process of completing research on best options to be used.
4.) PRICING AND INCENTIVE SYSTEMS THAT SUPPORT IWQM	Fully implemented polluter pays principle	Drafting of Funding model underway with support from National Treasury
		Waste Discharge Charge System (WDCS) Gap Analysis Report for the 3 priority catchment has been finalised.
		Being piloted in the Vaal and to be included in the 2023 Tariffs model. To be consulted in June 2022.
		Penalties and Fines not done as yet. (Research required as well on calculator and criteria for administrative penalties)

Completed

In progress and on time

Medium to Long Term

Anti-Pollution Task Team Tasks & Progress (iii)

TASK	EXPECTED OUTCOMES	STATUS
5.) : IDENTIFICATION OF WATER QUALITY PROBLEMS AND HOTSPOTS	Report on water quality hotspots in the country based on certain variables	9 Reports done with 2020 WQ data analysis.
		Classification and mapping of WQ Hotspots completed in Breede-Gouritz & Mzimvubu-Tsitsikama
6.) IMPLEMENTATION OF KEY PROJECTS THAT WILL HAVE A DIRECT LINK TO IMPROVING WATER QUALITY IN THE COUNTRY	Reduced pollution and improved water quality in all rivers.	Approval of Integrated Water Quality Management (IWQM) Policy. (Inputs received from CSIR& WRC and clusters). Was submitted to Cabinet – purpose to obtain permission for public consultation. Returned for amendments currently at DDG WRM
		Draft Mine Water Management Policy presented to EISID Cluster – Was submitted to Cabinet for final approval. Returned for amendments currently at DDG WRM
7.) STRENGTHEN WQM REGULATION	Reduced pollution and improved water quality in all rivers.	Register for WWTWs and Mining activity was updated.
		Internal resource quality regulation capacity to be improved by creating a dedicated WR Regulation Directorate within CD: WUCME).
8.) WELL CAPACITATED WATER QUALITY OFFICIALS	Formalised training for Management officials, external stakeholders as well as WQM and Regulation Officials	WQM Training Committee is established. Orientation Course ready.
		First induction training for 2022 to be held in March . EMI basic training in May 2022. Advanced sampling training material to be developed in 2022 in collaboration with DFFE

Completed

In progress and
on time

Medium to Long
Term