

LEPELLE NORTHERN WATER
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OVERVIEW OF THE WATER SECTOR VALUE CHAIN AND CHALLENGES AND LEPELLE NORTHERN WATER

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CHIEF EXECUTIVE: LEPELLE NORTHERN WATER

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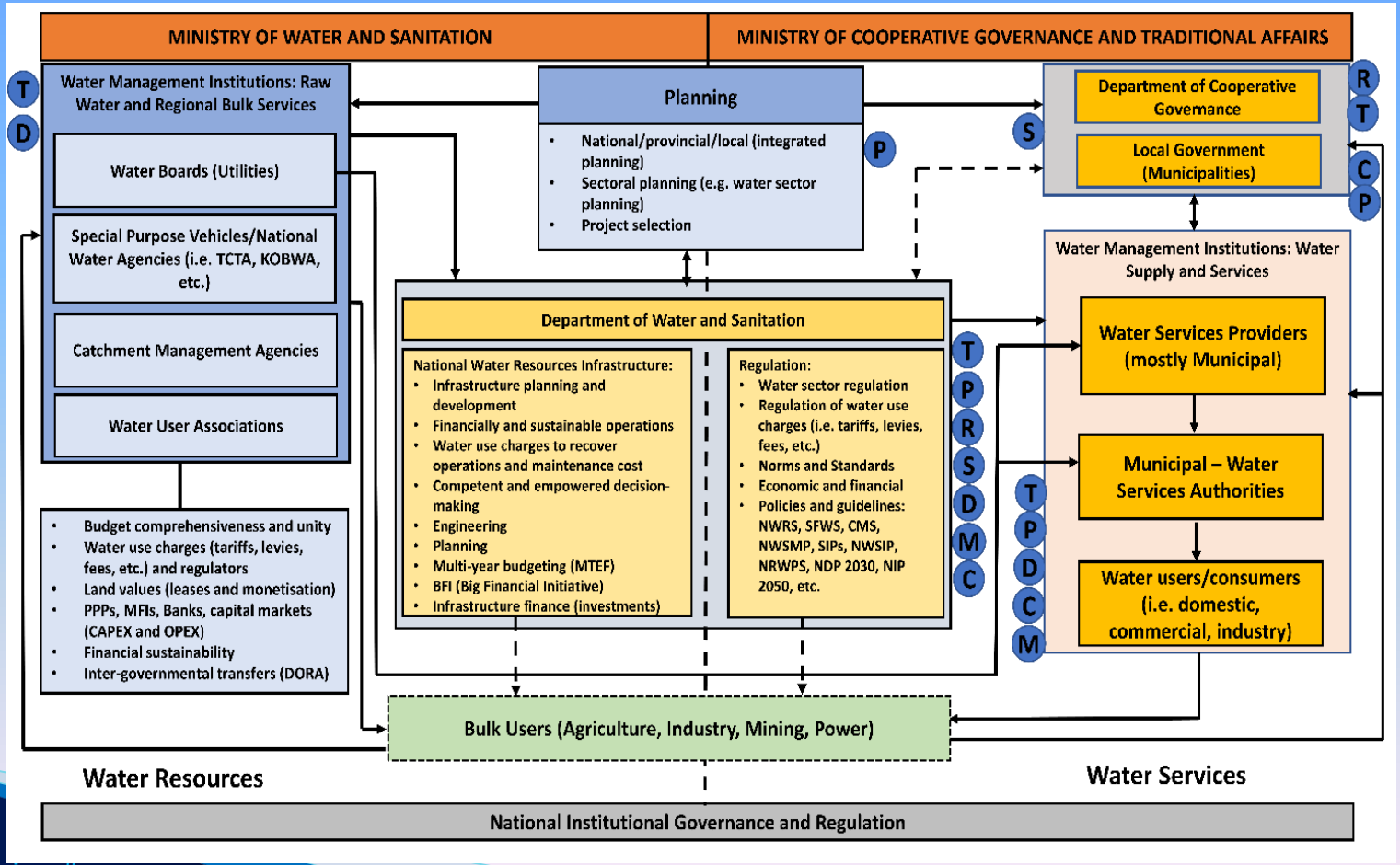
1. Water Sector Value Chain





THE CONCEPTUAL HIERARCHICAL WATER INFRASTRUCTURE VALUE CHAIN FRAMEWORK OR ECOSYSTEM FOR THE DEVELOPMENT, MANAGEMENT, AND INVESTMENTS OF WATER INFRASTRUCTURE IN SOUTH AFRICA.



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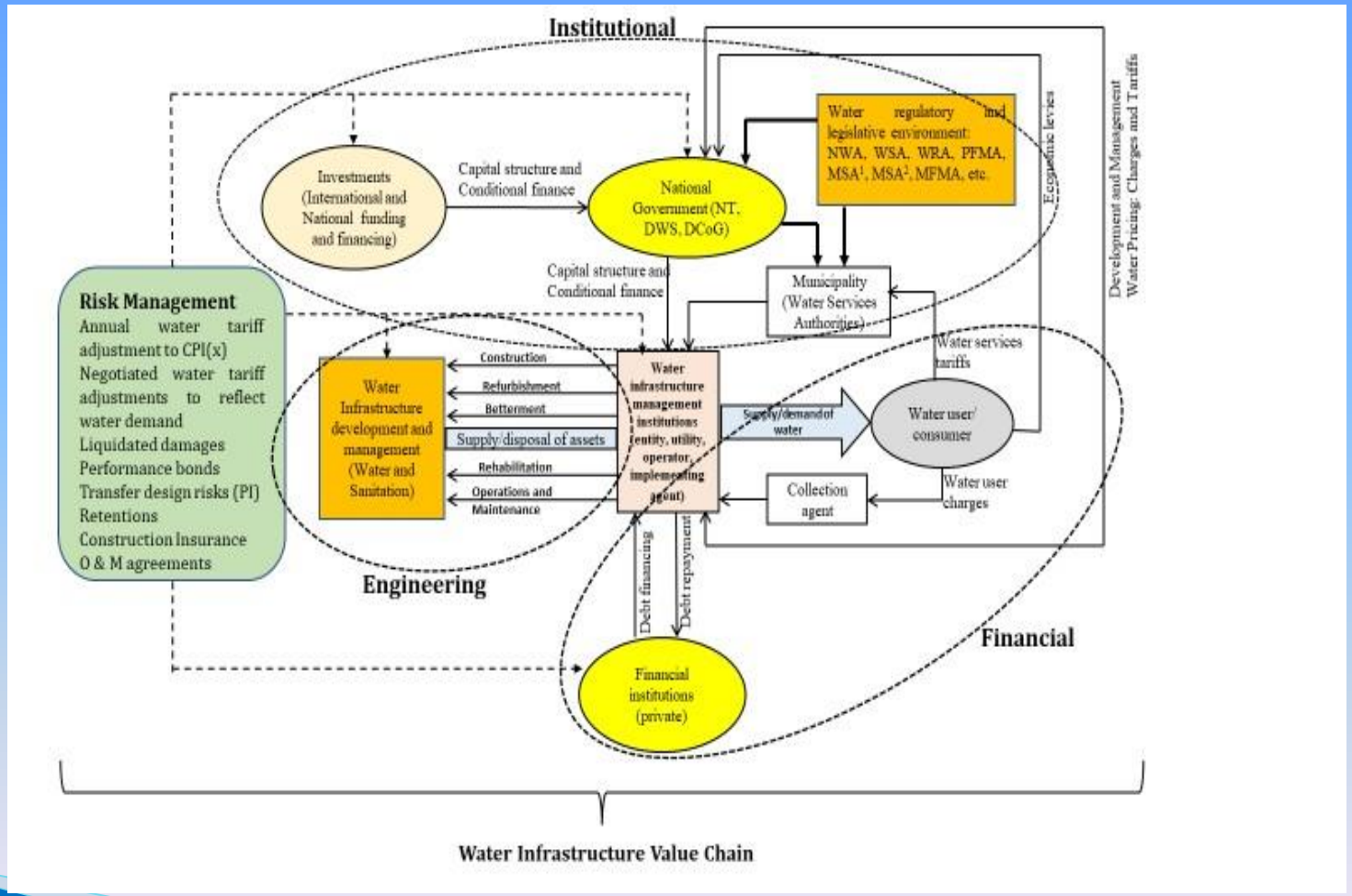

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2. Water Supply and Services

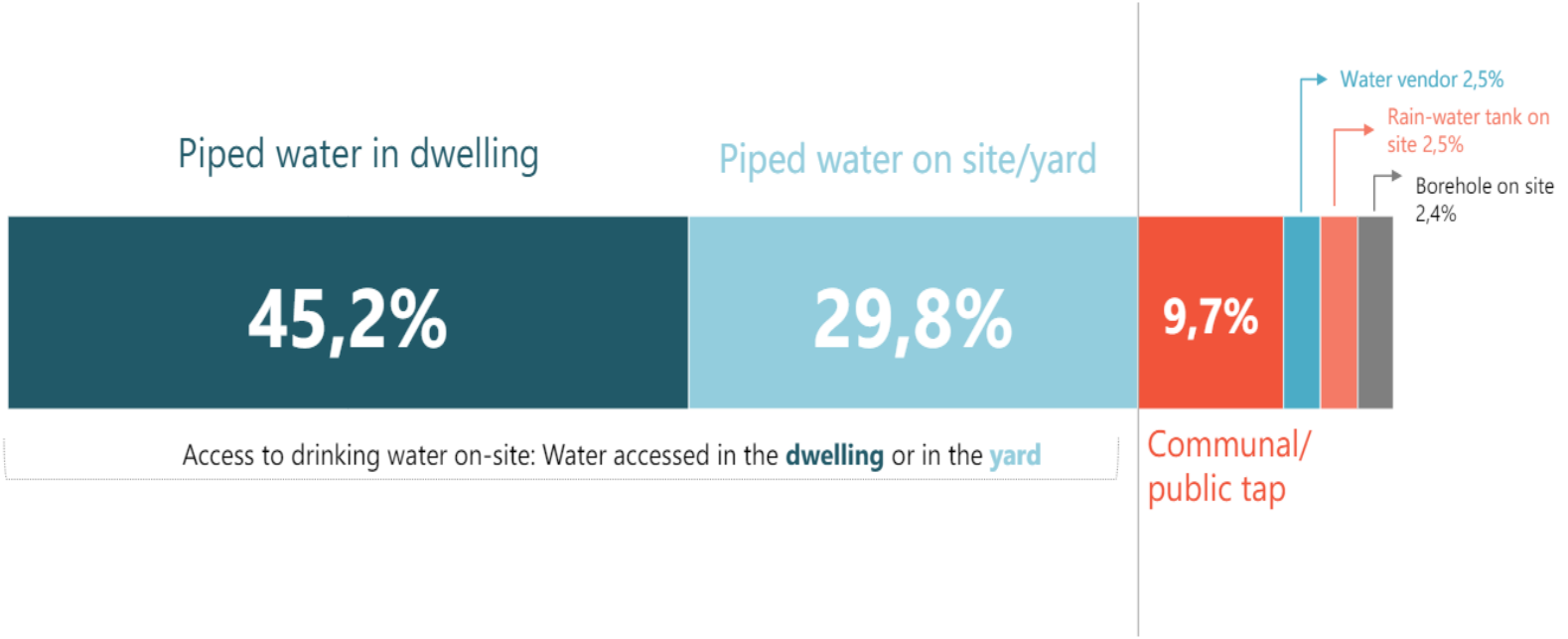




Three quarters (**75%**) of South African households have access to **improved water** sources in the dwelling or in the yard.

Approximately, one-tenth (9,7%) of households relied on a **communal/public tap** as a main source of drinking water. .

Percentage of households by selected main water source **(top 6 sources shown),** 2023



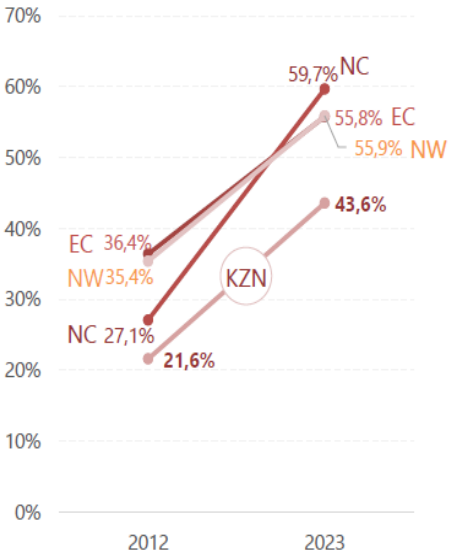




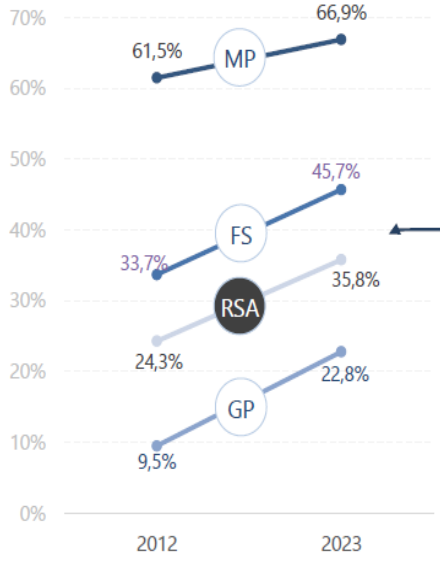
Percentage of **households that experienced water interruptions lasting more than 2 days at a time, or 15 days in total over the past year increased from 24,3% in 2012 to 35,8% in 2023**.

Percentage of households that experienced water interruptions lasting more than 2 days, or 15 days in total over the past year

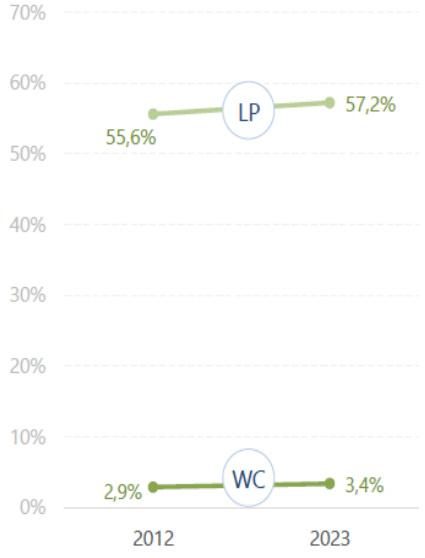
Provinces with rapid increases



Provinces with modest increases



Provinces with low or dropping rates

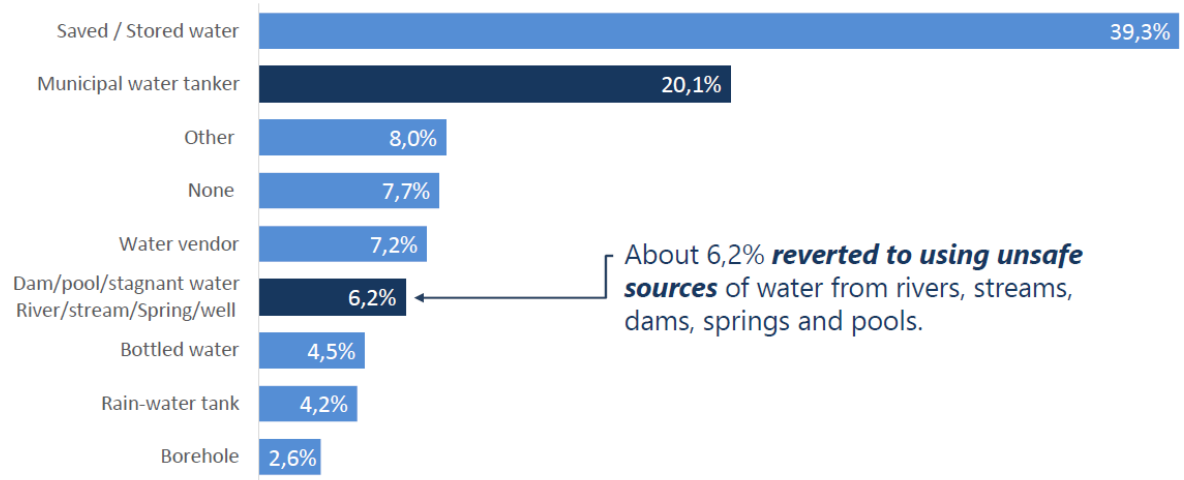






Approximately **one-fifth of households** depended on municipalities to provide water using **tankers** as an alternative source **during water interruptions**. *Approximately, **5 out of 100** households used **bottled water** as an alternative water source during water interruptions.*

Percentage of households by alternative sources of drinking water used during water interruptions that lasted 2 days or longer, 2023



stats sa
Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

StatSA General Household Survey 2023

IMPROVING LIVES THROUGH DATA ECOSYSTEMS

30 YEARS OF FREEDOM

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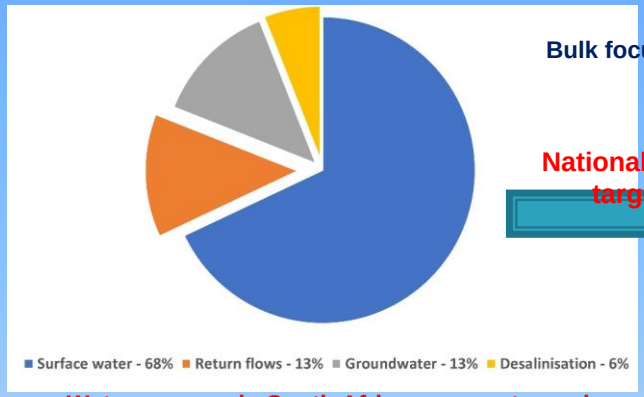
Water resource diversification







Water sources in South Africa – current supply

Bulk focus – but see StatSA General Household Survey 2023

National 2040 target

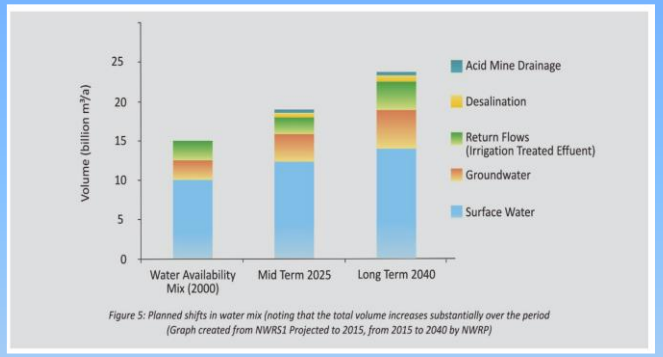
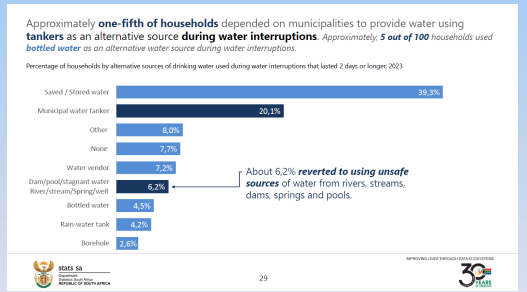


Figure 5: Planned shifts in water mix (noting that the total volume increases substantially over the period (Graph created from NWRS1 Projected to 2015, from 2015 to 2040 by NWRP)

Proposed source diversification & decentralisation (yellow)

	Surface		Groundwater		WW Reuse	Greywater	GW	Desal Sea	Stormwater Harvesting	AMD	Rainwater Harvesting	Fogwater
City												
District												
Village Connected												
Household Connected												
Village Not Connected												
Household Not connected												



CURRENT CHALLENGE OF WATER SERVICES





- Management problem
  - Strategic adaptive management
- **Operational problem**
  - Arresting water losses & NRW
  - O & M
  - Ageing infrastructure
  - Loadshedding & Energy interruptions (vandalism and theft) TShwane
  - Drawdowns/behavior/climate
  - Financing
- **Loose bylaws and application**
  - Encroachment and vandalism of water infrastructure
  - Safety and Security of water sector personnel
  - Financial Sustainability of the sector due to non-payment by citizens and municipalities to municipalities and the Water Board, respectively.
  - Inadequate water and sanitation technical skills in municipalities

- Systems not designed for fast-growing migration
- Consequence of old fragmented planning (inclusive approach)
- Great ambitions without acknowledging water constraints – like mega human settlement and economic planning
- Inability to drive effective campaigns to change user behavior
- Lack of good monitoring and understanding of consumption patterns
- Early warning system and water quality

USER ACCEPTANCE DWINDLING

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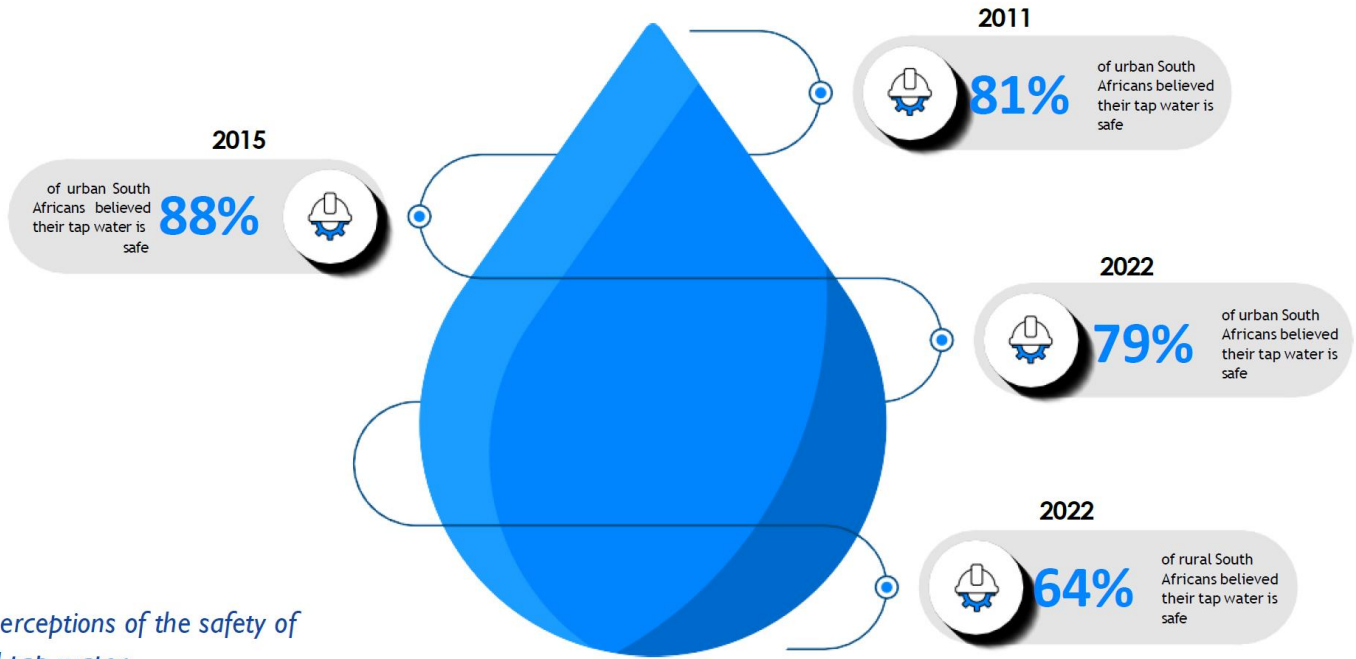
Background

These objectives of the perception surveys is to establish user satisfaction of the quality of water services in South African municipalities. The previous two studies were undertaken in 2011 and 2015 respectively. The 2022 study investigated these same aspects, plus current user satisfaction with municipal water services in view of contextual changes, such as the impact of COVID-19, and compared the findings with those of the previous studies, where it was relevant. This was the first time that rural householders were also interviewed as part of the study.



Trend in perceptions of the safety of municipal tap water

CAN SERVICE DELIVERY BE IMPROVED BY EXPANDING WATER BOARD BOUNDARIES?





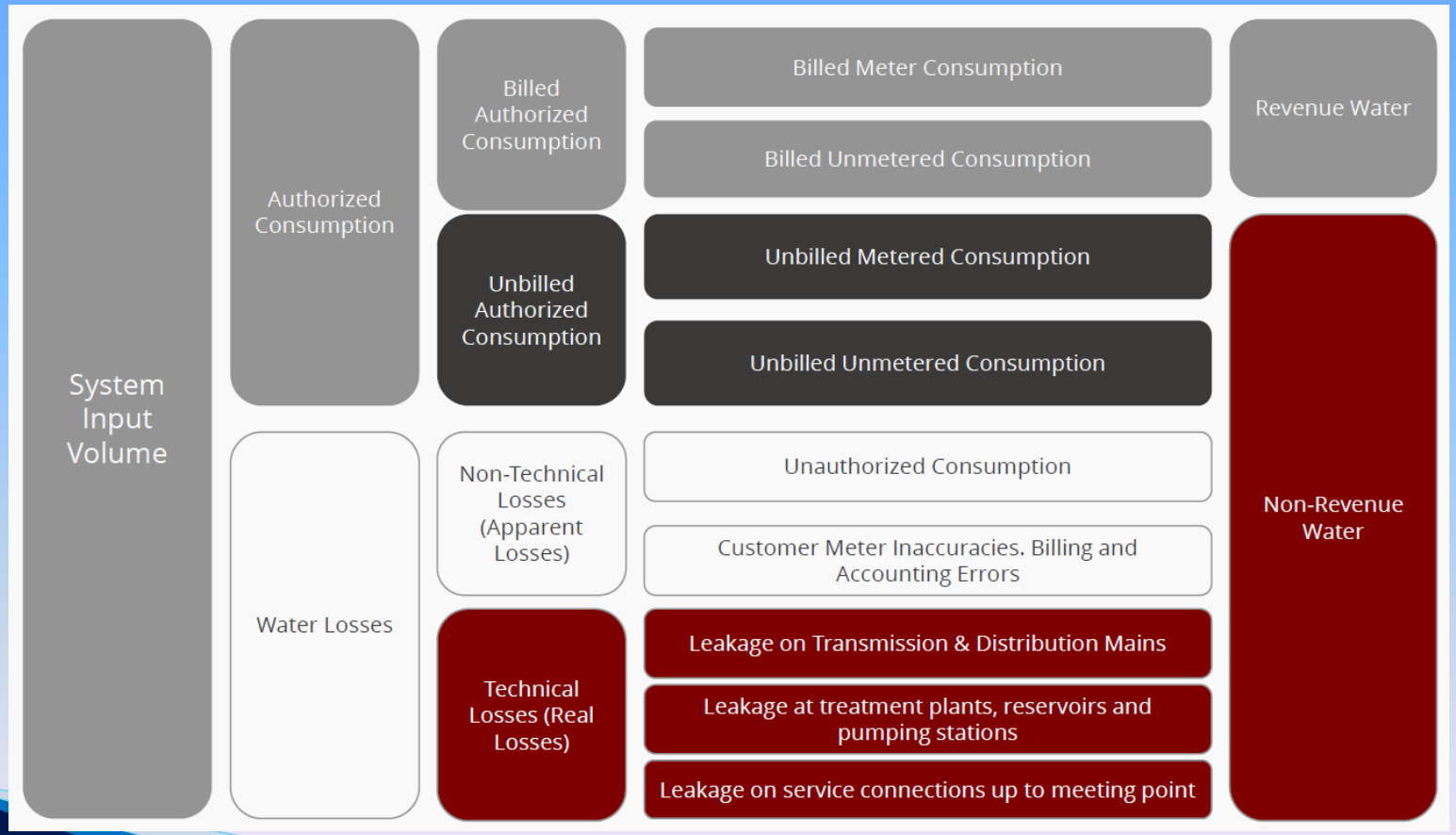
- Expanding **Rand Water** to cover the whole of Gauteng and Mpumalanga **may result in an improvement** in service delivery in these two provinces.
- Expanding **Umgeni and Mhlathuze Water** to cover the whole of the Kwa-Zulu Natal province **also may result in improved service delivery, if governance issues can be resolved**, but this is subject to a better understanding of the costs and organisational impacts of amalgamating Umgeni and Mhlathuze Water.
- Expanding **Bloem Water** to cover the Free State and Northern Cape provinces **may result in improved service delivery if the current financial instability at Bloem Water related to the absorption of Sedibeng Water can be resolved**.
- Expanding **Magalies Water** to cover the North West, **may result in improved service delivery if the current financial instability related to the absorption of Sedibeng Water can be resolved**.
- Expanding **Lepelle Northern Water cover to whole of the Limpopo Province to increase its water supply area footprint and increase its financial viability and sustainability. Due diligence was completed and submitted to the Ministry: Water and Sanitation (April 2024).**
- **Amatola** and **Overberg Water** to provincial boundaries is **unlikely to result in improved service delivery** unless the existing financial and governance issues at these water boards can be resolved.

Bloem, Magalies and Lepelle Northern in particular are relatively large water boards, currently supplying most of the bulk water to twenty-five municipalities. Their failure will certainly result in a collapse in service delivery in these municipalities, and so improving their current financial performance and governance is a key priority in order to secure service delivery going forward.





NON-REVENUE WATER IN WSA







NON-REVENUE WATER IN WSA

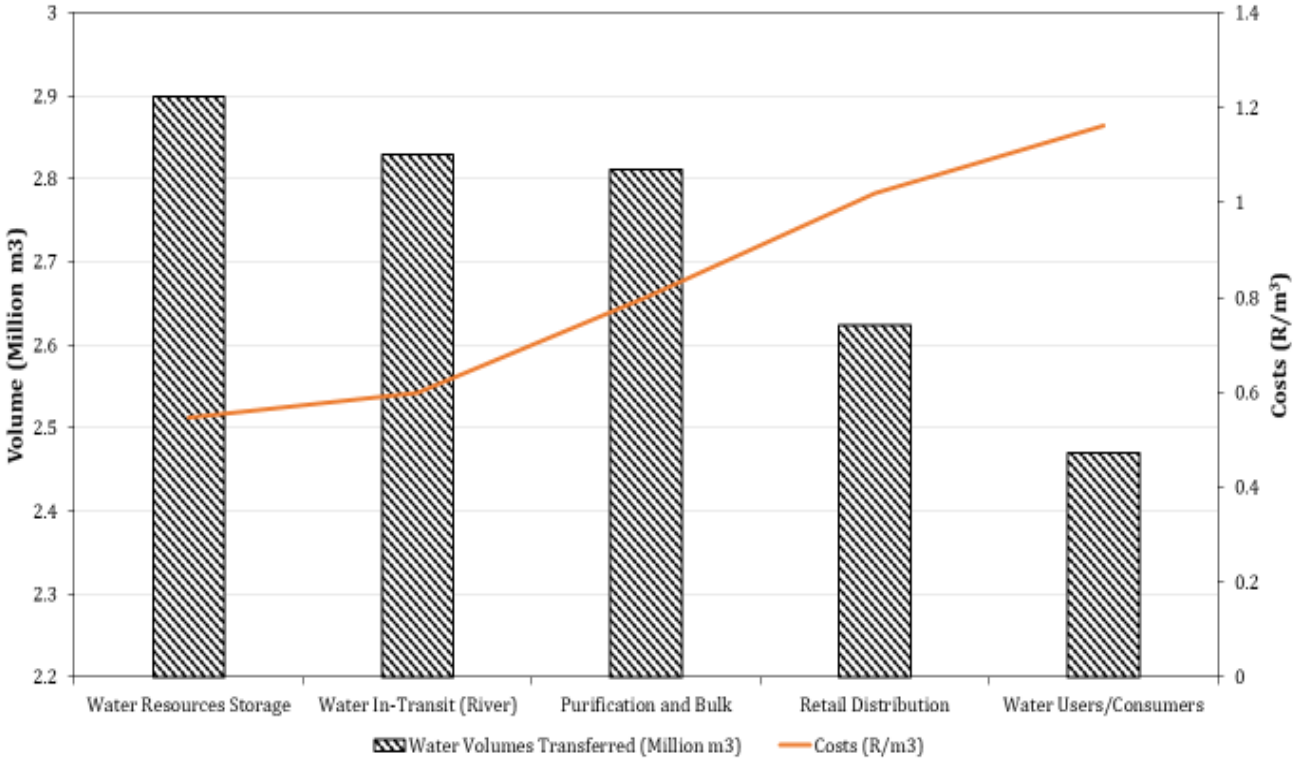
The non-revenue water loss due to illegal connections, meter inaccuracies and leaks, is insurmountable and adversely impacts negatively on the surety of supply to the consumers and the fiscus.

- In the order of 40% or more is lost nationally due to non-revenue water, hence a critical focal point.
- Quick wins to address the challenge includes:
  - Meter Audits to verify the accuracy of the readings. A small margin of error on the meters can lead to millions of rands in lost revenue per annum.
  - Optimizing the water distribution system through appropriate selection and use of PRVs as a pressure reducing management system.
  - Installation of surge arrestors and surge tanks, where required, to prevent pipe bursts in the event of pressure surge.
  - ensuring correct billing through elimination of administrative/accounting errors.





The typical water losses, inefficiencies and associated estimated costs in the water infrastructure value chain of South Africa.





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LEPELLE NORTHERN WATER OVERVIEW

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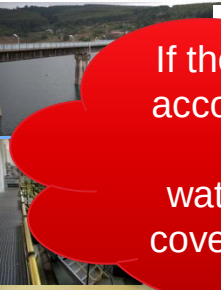
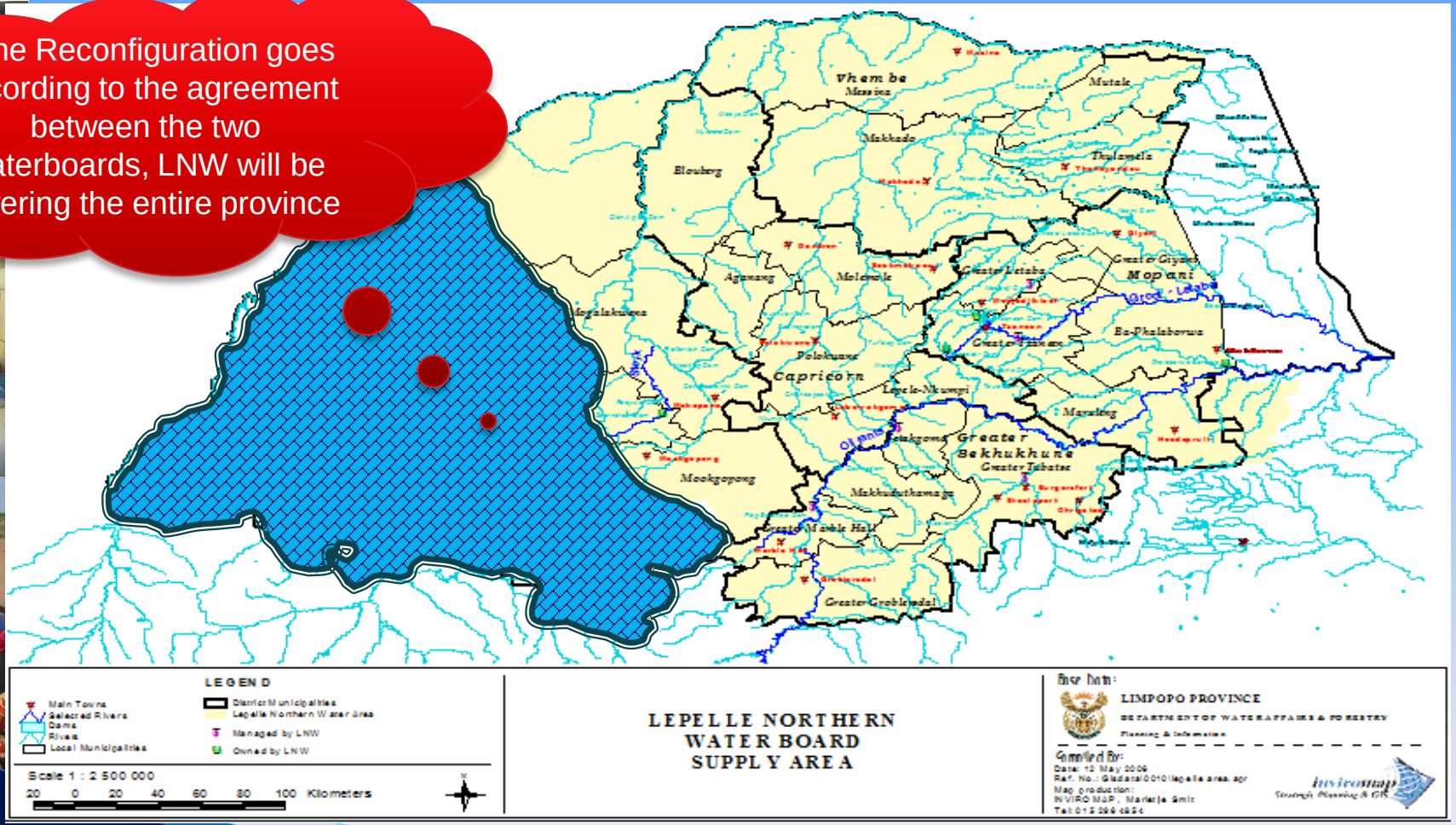
LNW FOOTPRINT IN THE PROVINCE

If the Reconfiguration goes according to the agreement between the two waterboards, LNW will be covering the entire province





LIST OF SCHEMES OPERATED BY LNW

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NAME OF SCHEME	DISTRICT MUNICIPALITY SITUATED IN	OWNED BY	CAPACITY Mℓ/DAY
Phalaborwa	Mopani DM	LNW	148,00
Olifantspoort	Capricorn DM	LNW	60,00
Ebenezer	Mopani DM	LNW	50,00
Doorndraai	Waterberg DM	LNW	12,00
Politsi	Mopani DM	LNW	5,50
Dehoop/Malekane	Sekhukhune DM	Sekhukhune DM	12,00
Mooihoek	Sekhukhune DM	Sekhukhune DM	12,00
Burgersfort	Sekhukhune DM	Sekhukhune DM	7,50
Marble Hall	Sekhukhune DM	Sekhukh	3,30
Steelpoort Conventional	Sekhukhune DM	Sekhukh	5,00
Nkadimeng	Sekhukhune DM	Sekhukh	3,00
Hlogotlou	Sekhukhune DM	Sekhukh	2,00
Steelpoort Boreholes	Sekhukhune DM	Sekhukh	0,75
Ohrigstad	Sekhukhune DM	Sekhukh	0,35
Kutullo	Sekhukhune DM	Sekhukhune	0,30
Mapodille	Sekhukhune DM	Sekhukhune DM	0,75
Flag Boshielo	Sekhukhune DM	DWS	16,00
Nandoni	Vhembe DM	DWS	60,00
TOTAL VOLUME			398,45

A 60 Mℓ Plant at De Hoop/Malekane will resolve all these expensive small schemes

It is proposed that these schemes are transferred to LNW since DWS plays an oversight role

SERVICE DELIVERY





- LNW produces approximately 390 Mℓ/day to supply the population of about 4 220 119 of the total population of 6 015 000, which is 70% of the total population.
- LNW also supply approximately 60 Mℓ/day of semi-treated raw water to the mines.
- Below are the Customers supplied with water:
  - Mopani DM
  - Vhembe DM
  - Sekhukhune DM
  - Mogalakwena LM
  - Capricorn DM
  - Polokwane LM

MINES

- Phalaborwa (PMC)
- Foskor
- Farmers World





PERFORMANCE ENVIRONMENT: STRATEGIC ISSUES

Water Resources Optimisation:

- Operating in a province with scarce water resources, requires that LNW optimise the available water.

Socio-economic Factors:

- The LNW functions in municipalities characterized by elevated rates of indigence and unemployment,
- Necessitating the establishment of tariff structures both economically accessible and cost-reflective, while ensuring the organization's financial viability.

Infrastructure Status:

- Significant portion of the water and wastewater infrastructure reached full operational capacity and exhibits signs of aging and deterioration, adversely impacting the quality of water.

Sectoral Collaboration:

- Inter-agency collaboration is essential to ensure continuous and sustainable provision of water services across all regions of Limpopo Province





Performance Environment: Strategic Challenges

- Non-payment by Water Services Authorities
- Ageing infrastructure (Non-payment contribute to this challenge).
- Water demands that exceed the available water sources.
- Lack of cost recovery from the Water Services Authorities (affect WBs indirectly).
- Deteriorating raw water quality.
- Load Shedding and high energy costs.
- Uncertainty on chlorine gas in the country (reliance on one supplier).

Financial Position as at 30 June 2023

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Figures in Rand thousand	Note(s)	2023	2022 (Restated)	% Changes
Assets				
Current Assets				
Inventories	9	232 603	147 135	37%
Receivables from exchange transactions	10	916 066	989 142	-8%
VAT receivable	11	57 861	58 695	-1%
Cash and cash equivalents	12	631 763	184 876	71%
		1 838 293	1 379 848	25%
Non-Current Assets				
Property, plant, and equipment			2 603 435	20%
Intangible assets			1 019	-22%
Other financial assets			63 790	0%
Receivables from exchange transactions			0	100%
			2 668 244	21%
Total Assets		**5 205 593**	**4 048 092**	22%
Liabilities				
Current Liabilities				
Finance lease obligation	14	916	0	100%
Payables from exchange transactions	6	694 080	717 689	-3%
Short-term employee benefits			53 919	-10%
			771 608	-4%
Non-Current Liabilities				
Finance lease obligation			0	100%
Post-retirement employee benefits			97 671	-3%
			97 671	-2%
Total Liabilities		**839 294**	**869 279**	-4%
Net Assets		4 366 299	3 178 813	27%
Accumulated surplus	13	4 366 299	3 178 813	27%
Total Net Assets		**4 366 299**	**3 178 813**	27%

Total Assets
5 205 593

Total Liabilities
839 294

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AVERAGE TARIFF (POTABLE)

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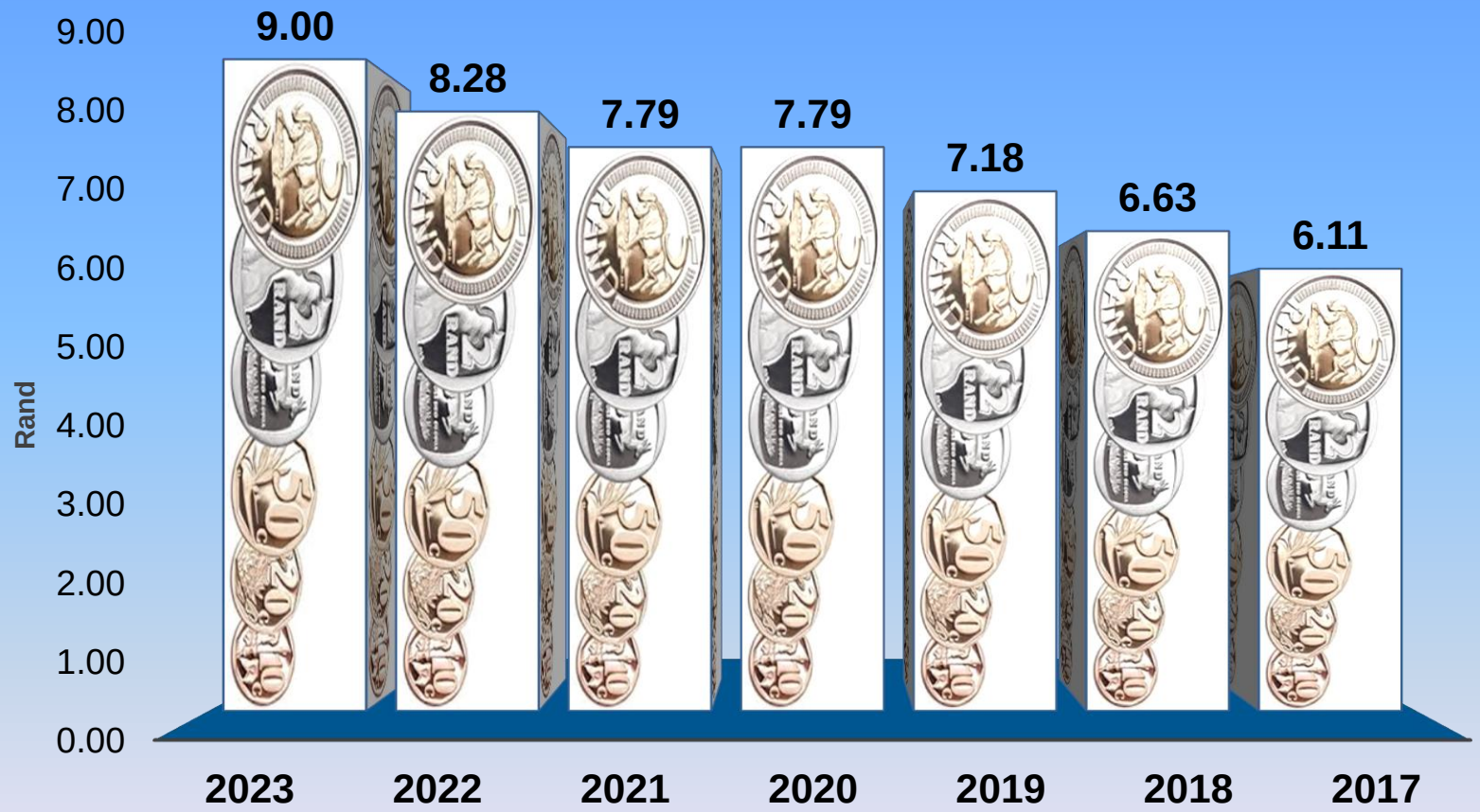

IRREGULAR & FRUITLESS EXPENDITURE

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	2017	2018	2019	2020	2021	2022	2023	Condoned	Written Off	Recovery
Fruitless expenditure	383	2,071	20	799	4,374	505	7	0	0	0
Irregular expenditure	10,038	21,175	7,555	11,886	28,385	3,037	0	-546	-76,304	0
Unauthorised expenditure	0	0	0	0	0	0	0	0	0	0
Number of irregular incidents	11	7	2	1	2	1	0	0	0	0

MINISTERIAL PROJECTS



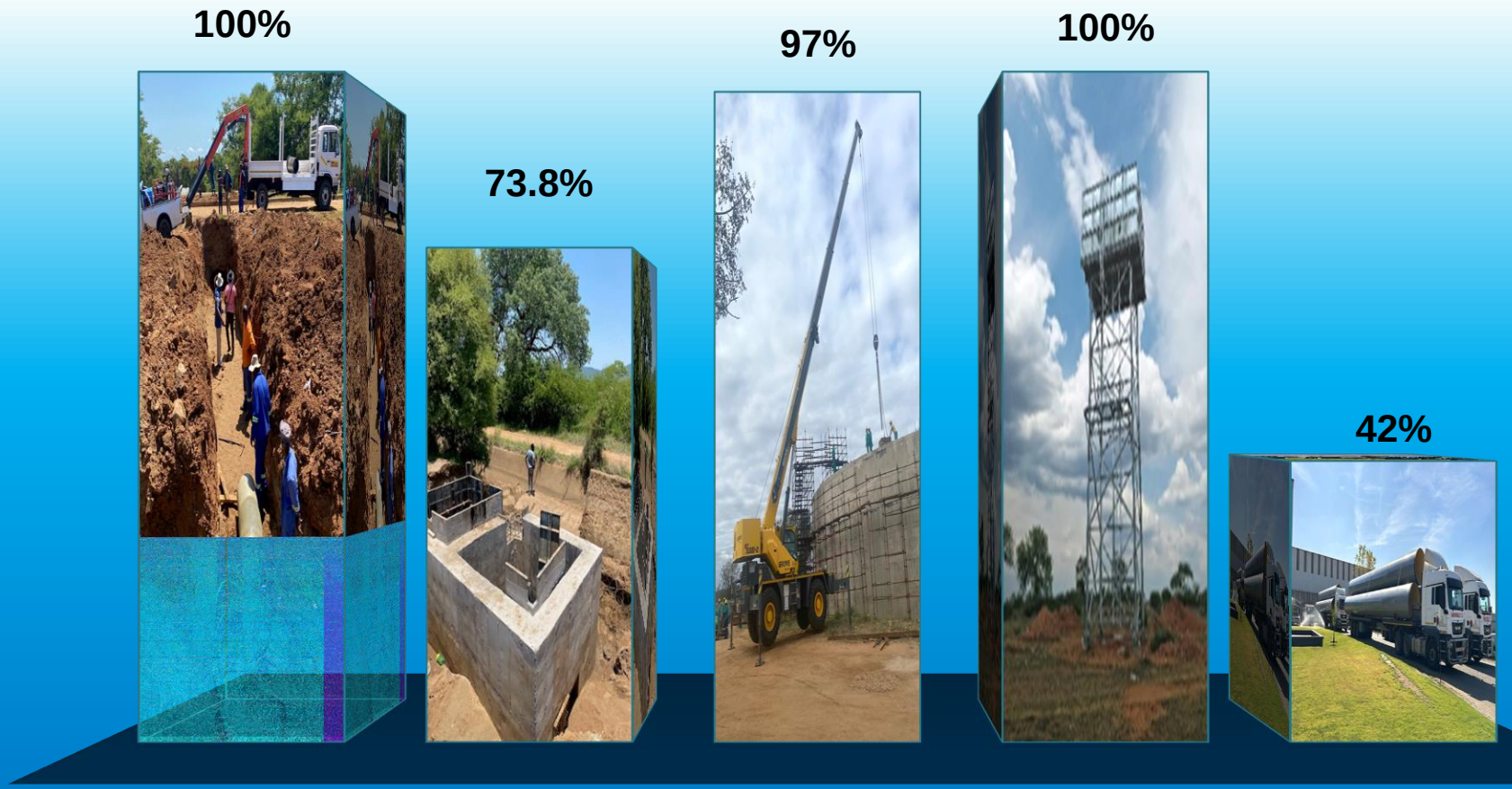


Project Oversight:

LNW serves as the Implementing Agent for various Ministerial Directives issued by the Department of Water and Sanitation, including:

- **Giyani Drought Relief Bulk Infrastructure Project (Nandoni-Nsami Bulk Pipeline) - RL28**: Currently in the Defects Liability Phase following project completion.
- **Giyani Bulk Water Service Project (RM08)**: Progress is being accelerated with functional completion aimed for Dec 2024.
- **Babanana/Nkambako Regional Bulk Distribution**: @99% completion.
- **Olifantspoort and Ebenezer Refurbishment**: On schedule for pipeline construction completion by December 2024, with pump station phasing set for completion by June 2025.
- **Moutse Drought Relief Initiative**: Completed, albeit with ongoing efforts to continue to address regional water scarcity holistically.

PROJECTS % COMPLETION



COMMENTS ON PROJECT DELAYS





CHALLENGES

1. **Procurement Delays:** Prolonged procurement timelines for service providers and existing procurement restrictions.
2. **Community Discontent:** Instances of community unrest and organized protests impacting operations.
3. **Business Forum Dynamics:** Emergence of business forums untimely demanding subcontracting opportunities, leading to service disruptions.
4. **Work Stoppages:** Interventions by tribal authorities and communities along pipeline routes causing project halts.

PROPOSED SOLUTIONS:

1. **Procurement Agility**: Adoption of e-procurement systems and addressing procurement bottlenecks for enhanced efficiency.
2. **Project Monitoring**: Rigorous oversight of project performance metrics.
3. **Community Engagement**: Engagement of experienced, locally-based Social Facilitators to manage community expectations and provide timely project updates.
4. **Performance Management**: Establishment of penalties and management measures for inadequate performance and planning.
5. **Stakeholder Inclusivity**: A comprehensive approach to stakeholder engagement during project inception.

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THANK YOU