



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



National Water & Sanitation Master Plan

Water Security and Water Governance in South Africa

Agbiz Congress

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DDG Strategic and Emergency Projects
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Context (Constitution and NWA)

- The Constitution contains several provisions that give direction to the water and sanitation sector
- Constitutional imperative:
 - Guarantees the right to an environment that is not harmful to health or well-being (Section 24(b)(i to iii));
 - Guarantees the right to have access to sufficient food and water (Section 27(1)(b))
 - States that the property clause may not impede the state from taking measures to achieve land, water and related reform, in order to redress the results of past racial discrimination (Section 25(8))



Context (Constitution and NWA)

- The National Water Act (NWA) seeks to ensure that water resources are protected, used, developed, conserved, managed, and controlled to take into account:
 - To promote equitable access;
 - Redress the results of past racial and gender discrimination.
- The National Water Act translates this Constitutional imperative into (the NWA version of “set aside”):
 - The Basic Human Needs Reserve is the water allocated for human consumption before any other water can be assigned (The Reserves ensures that people are never overlooked in favour of ecosystems, calculated as a minimum of 25 litres per person per day).
 - The Ecological Reserve relates to water required to protect and sustain the aquatic ecosystems in order to secure ecologically sustainable development and water use (the National Water Act protects the rights of water ecosystems because they provide people with many free services necessary to life).



Context (NW&SMP)

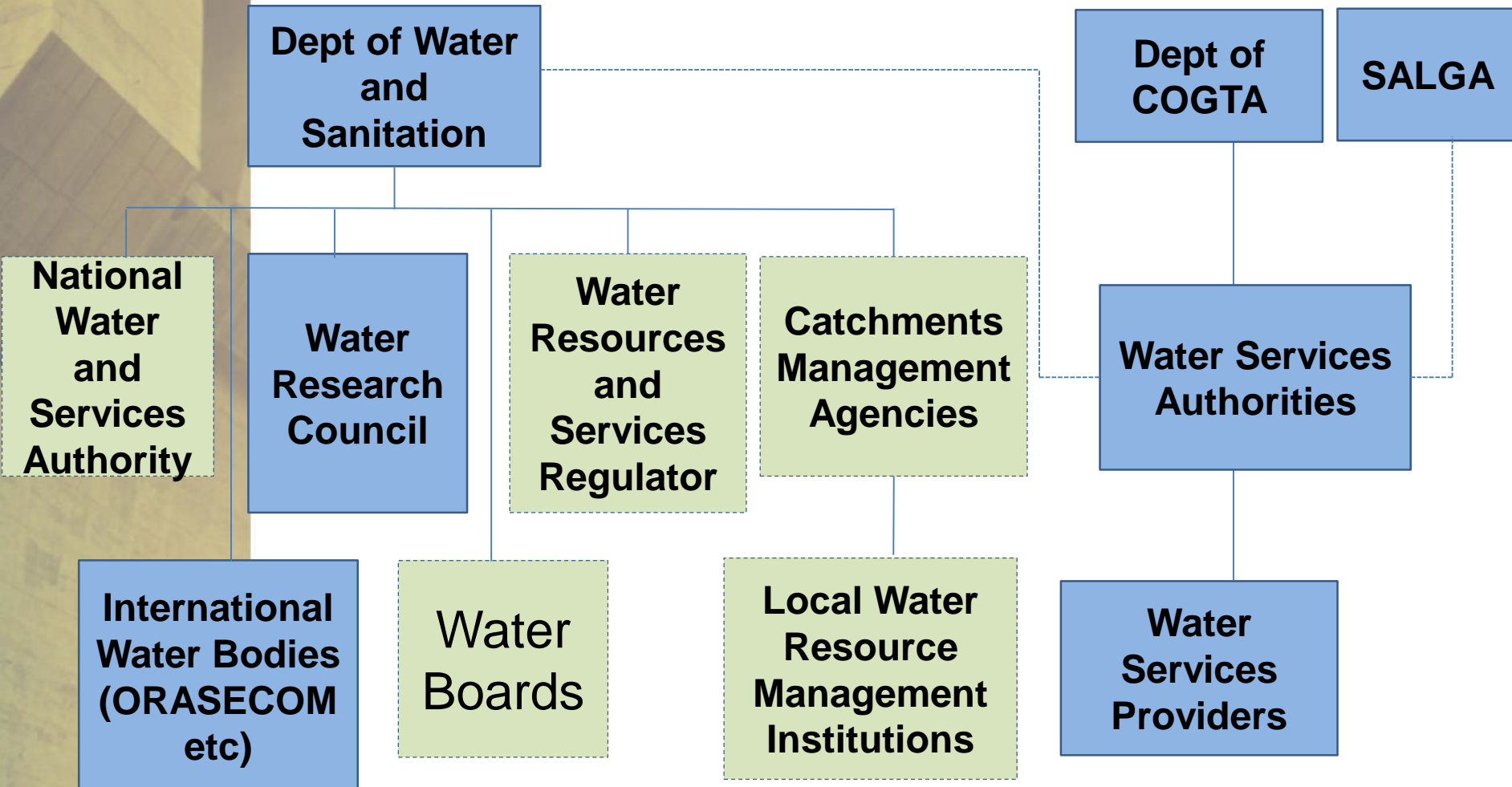
- The National Water and Sanitation Master Plan (NW&SMP) is based on five key objectives that define a “new normal” for water and sanitation management in South Africa:
 - Resilient and fit-for-use water supply
 - Universal water and sanitation provision
 - Equitable sharing and allocation of water resources
 - Effective infrastructure management, operation and maintenance and
 - Reduction in future water demand.
- These five objectives enable the achievement the targets set out in the National Development Plan (NDP) Vision for 2030 and the Sustainable Development Goals (SDG Goal 6 2030), of affordable and reliable access to sufficient and safe water and hygienic sanitation for socio-economic growth and well-being, with due regard to the environment.



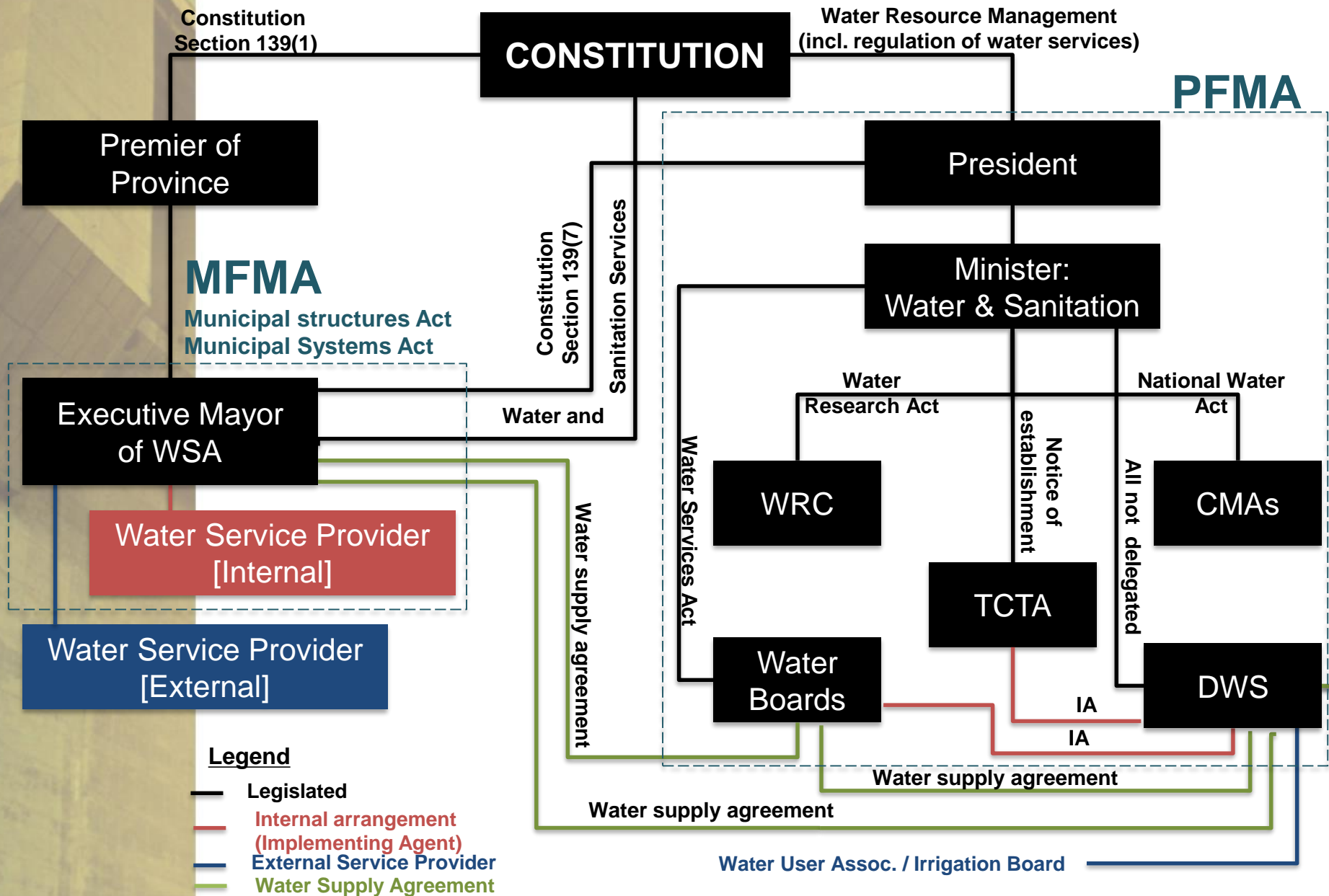
The Master Plan at a glance: Philosophy



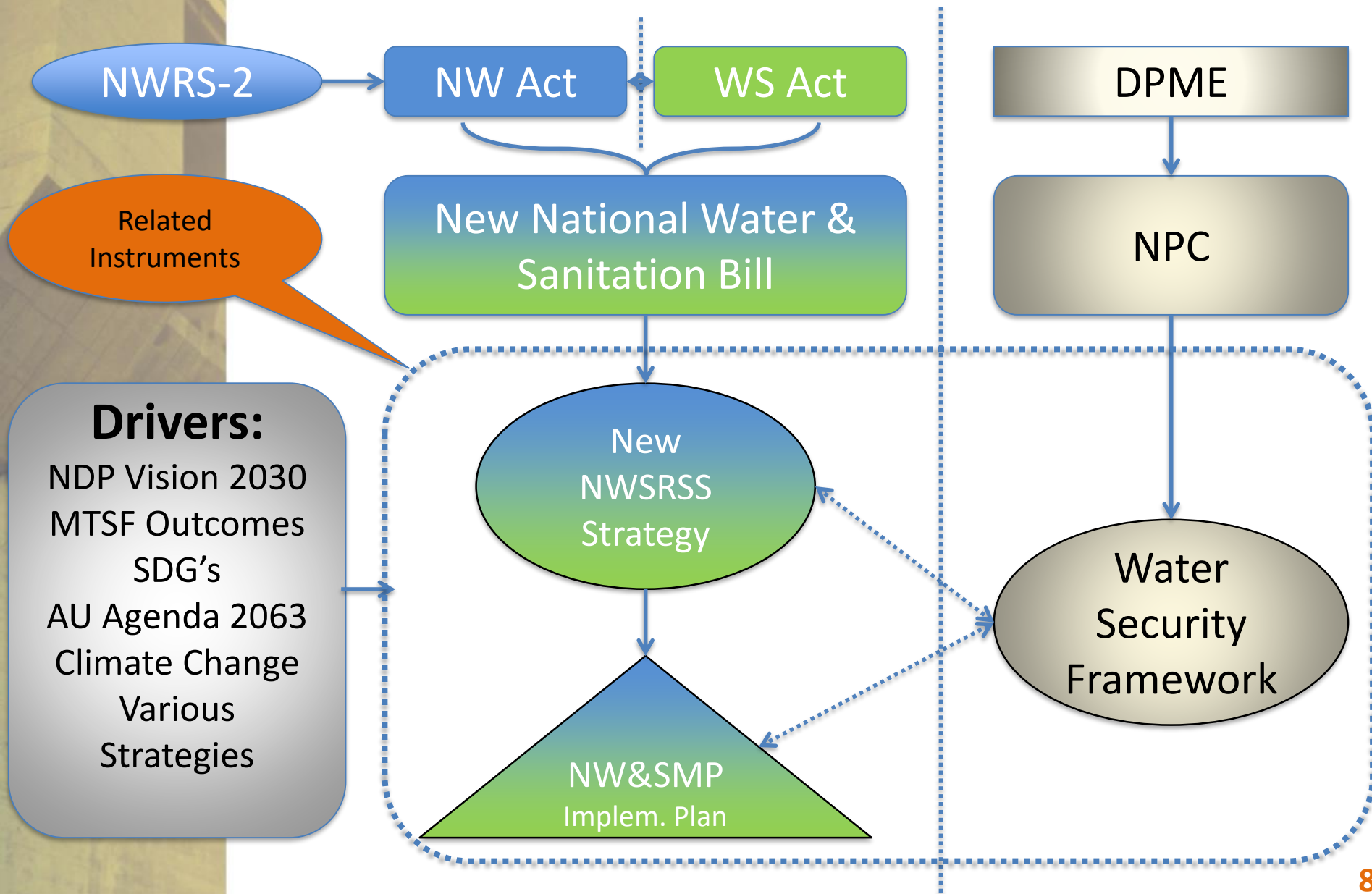
PLANNED INSTITUTIONAL ARRANGEMENTS FOR THE WATER SECTOR



Governance of water and sanitation



RELATED INSTRUMENTS ON WATER SECURITY



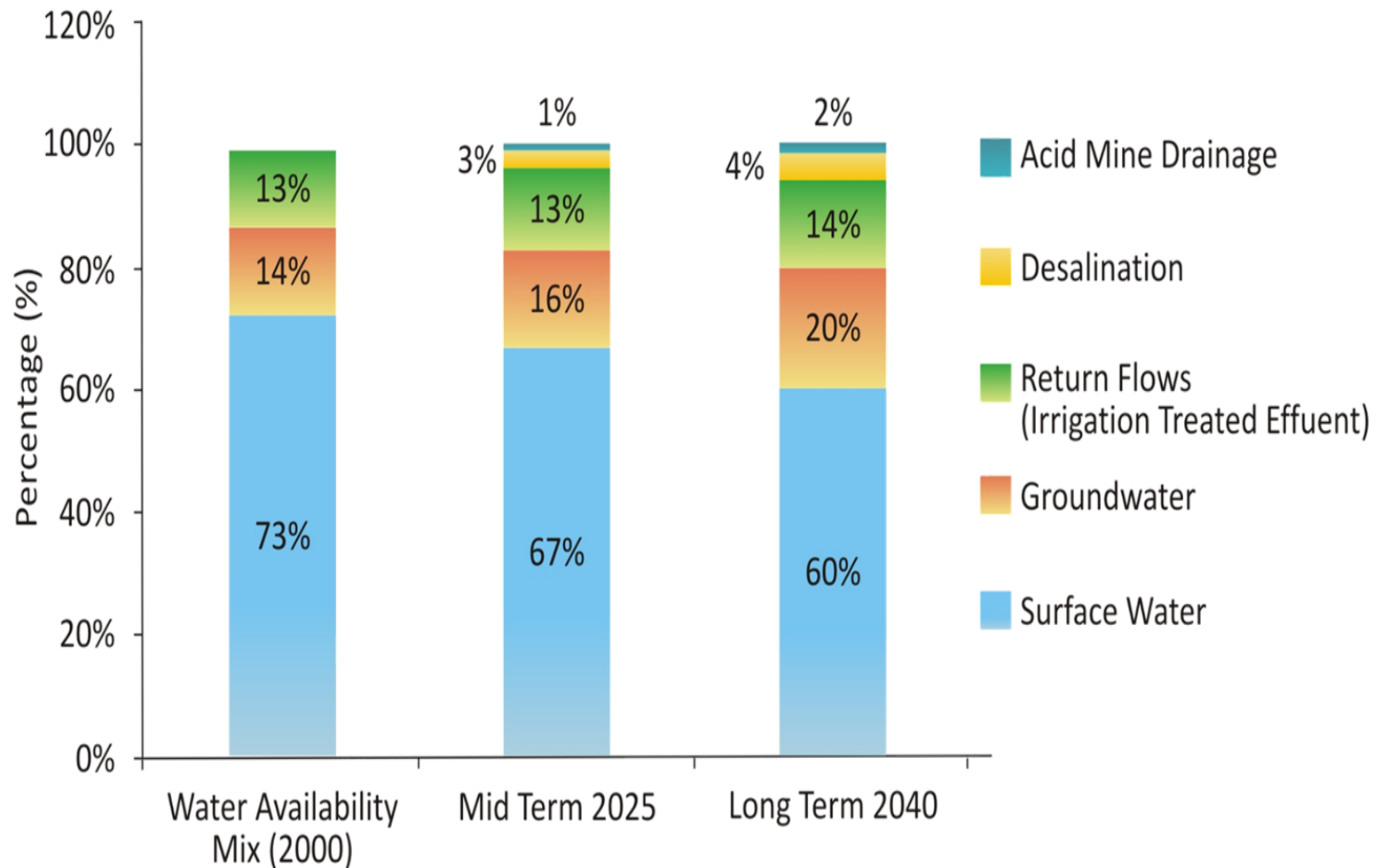
Problem statement/Key challenges (1)

Why this Call to Action?

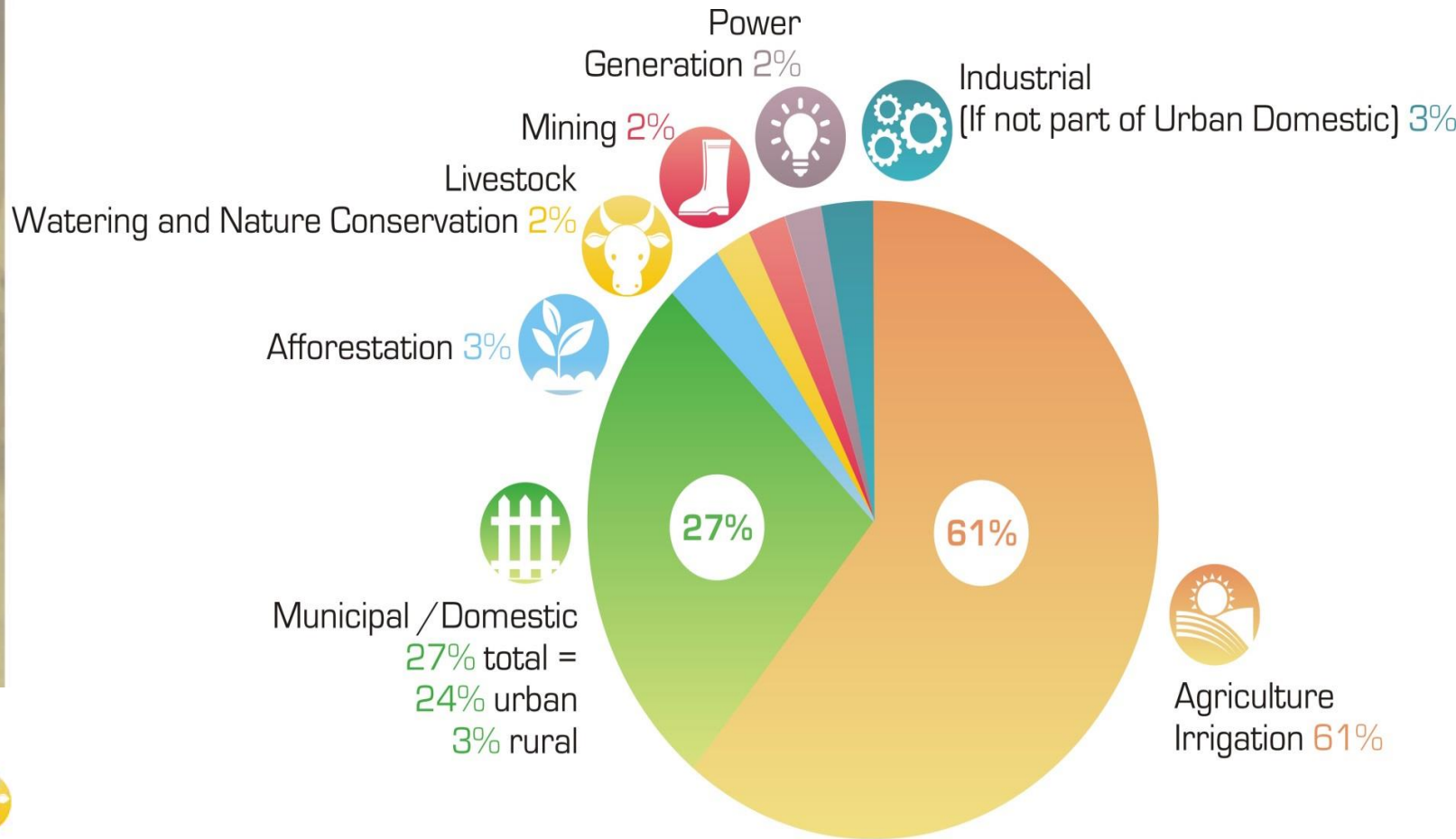
- *Without intervention*, national water deficit will be around 17% by 2030 (deficit could be between 2 700 and 3 800 million m³/a).
- Water availability could deteriorate as supply contracts and demand escalates due to growth, urbanization, inefficient use, degradation of wetlands, water losses and the negative impacts of climate change.
- Over 3 million people still do not have access to a basic water supply service and 14.1 million people do not have access to safe sanitation.
- IPAP sets out the intentions of South Africa in terms of expanding the manufacturing sector, which must drive innovation and which will in turn increase water demand but has the potential to increase water pollution if not appropriately regulated
- There is currently a heavily reliance on surface water (73% of total available yield). Not sufficiently diversified water Mix.
- Past 20 years, the sector has failed to deliver on its mandate for water allocation reform (reallocation to address racial and gender discrimination).
- The agricultural sector, the largest employer in the rural areas of the country, uses the most water (approximately 61%) and benefits from a large subsidy on the price of water (structure of the water pricing strategy), need for greater efficiency in water use.



Being ready for the future means making a diversified water mix a reality in South Africa



Current water use by sector



How we use our water resources in South Africa

Problem statement/Key challenges (2)

- About 50% of South Africa's water resources originate from 10% of the country's land, but many of these "water factories" are under threat.
- Between 1999 and 2011 the extent of main rivers in South Africa classified as having a poor ecological condition increased by 500%, with some rivers pushed beyond the point of recovery.
- South Africa has lost over 50% of its wetlands, and of the remaining 3.2 million hectares (approximately 30%) are already in a poor condition.
- Approximately 56% municipal wastewater treatment works and approximately 44% water treatment works in the country are in a poor/critical condition and need urgent rehabilitation, with some 11% completely dysfunctional which is having a significantly detrimental impact on the environment and driving up the cost of water treatment.



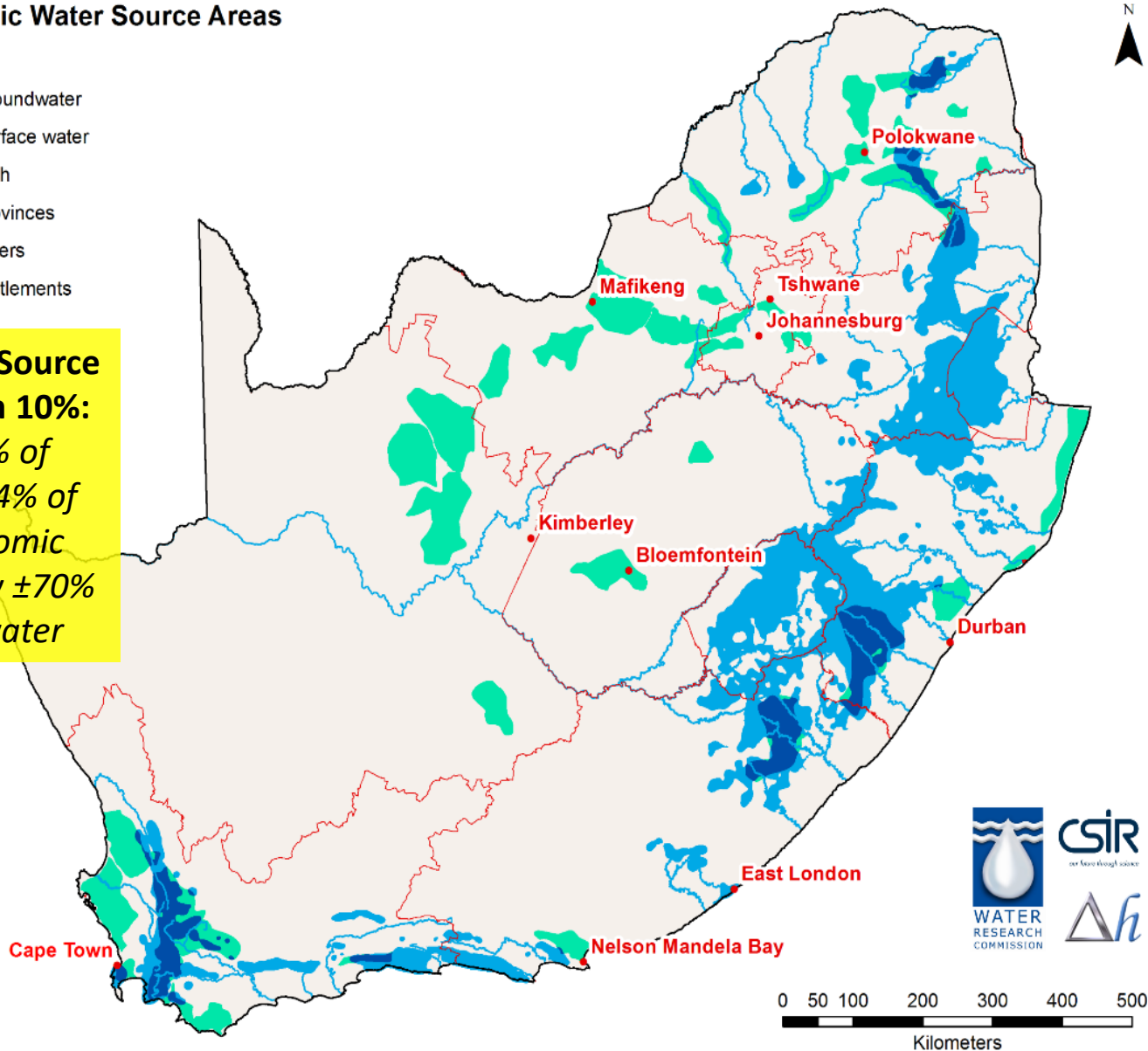
Map of Strategic Water Source

Strategic Water Source Areas

Type

- Groundwater
- Surface water
- Both
- Provinces
- Rivers
- Settlements

Strategic Water Source Areas-50% from 10%:
Support >50% of population, >64% of national economic activity & supply \pm 70% of irrigation water



Problem statement/Key challenges (3)

- Projected gap of 17% in supply and demand on a “do nothing scenario”.
- DAFF Irrigation Strategy (2013): very little areas left with irrigable soils that can be put under irrigation
- Responsibility for water supply and sanitation (constitutionally) lies with 144 municipalities that are Water Services Authorities (WSAs). At least a third of these are regarded as dysfunctional and more than 50% have no, or very limited, technical staff. Twenty-seven priority districts have been identified as being particularly dysfunctional and requiring specific intervention (though not all are WSAs).
- The reliability of services that have been provided since the advent of democracy is declining, with only 64 % of households having access to a reliable water supply service (StatsSA General Household Survey).
- Some 77% of rural households are indigent and therefore entitled to free basic water which is placing a significant strain on municipalities with a low revenue base.

Municipalities have made little progress towards meeting water conservation targets set by the NDP with average municipal water use currently around 237 litres per person per day compared to the world average of 173 litres per person per day.



Problem statement/Key challenges (4)

- Current pricing strategy does not adequately make provision to: reward users who conserve water and penalise consumers that ignore consumption caps .
- Waterborne sanitation is unsustainable, need to adopt “water-less” sanitation technology. Pragmatic management of the Free Basic Water policy is required.
- Non-Revenue Water in municipalities is estimated at 41%, losing some R 9.9 billion of potential revenue per year. Need to deal with non-payment for services, and enforce cost-recovery.
- The water sector is not financially sustainable, Pricing Strategy will have to be reviewed to address the historic undervaluation of water and sanitation services.
- High levels of debt at municipal level reverberate up the value chain, impacting on the financial sustainability.
- South Africa invests R 42 billion per year into water infrastructure, and R13 billion into sanitation. The estimated capital investment requirement is R90 billion per year over the next ten years, which is R 33 billion per annum more than the current investment.
- The institutional landscape of the water sector is also overly complex and not sufficiently transformed, which is impacting the value chain.



Selected Proposed Actions (1)

- The NW&SMP seeks to rally all water sector stakeholders to work together to address the challenges confronting the sector
- DWS will report annually on delivery against the plan
- A Phakisa is proposed for the latter part of 2018, where the plan will be refined and focussed to ensure that the (together) the country moves forward to a water secure future, together.
- DWS will establish a specialised municipal intervention unit for water and sanitation (MIUWS) to drive the national programme of interventions, which includes the reintroduction of a Sector-Wide Approach (SWAP)
- Address financial sustainability issues across the sector to turn around the currently poor levels of maintenance and refurbishment that are contributing to the decline in reliability of services and the high levels of wastage of water through leaks.
- A national programme is proposed to drive the reduction of non-revenue water levels to meet national and catchment targets.



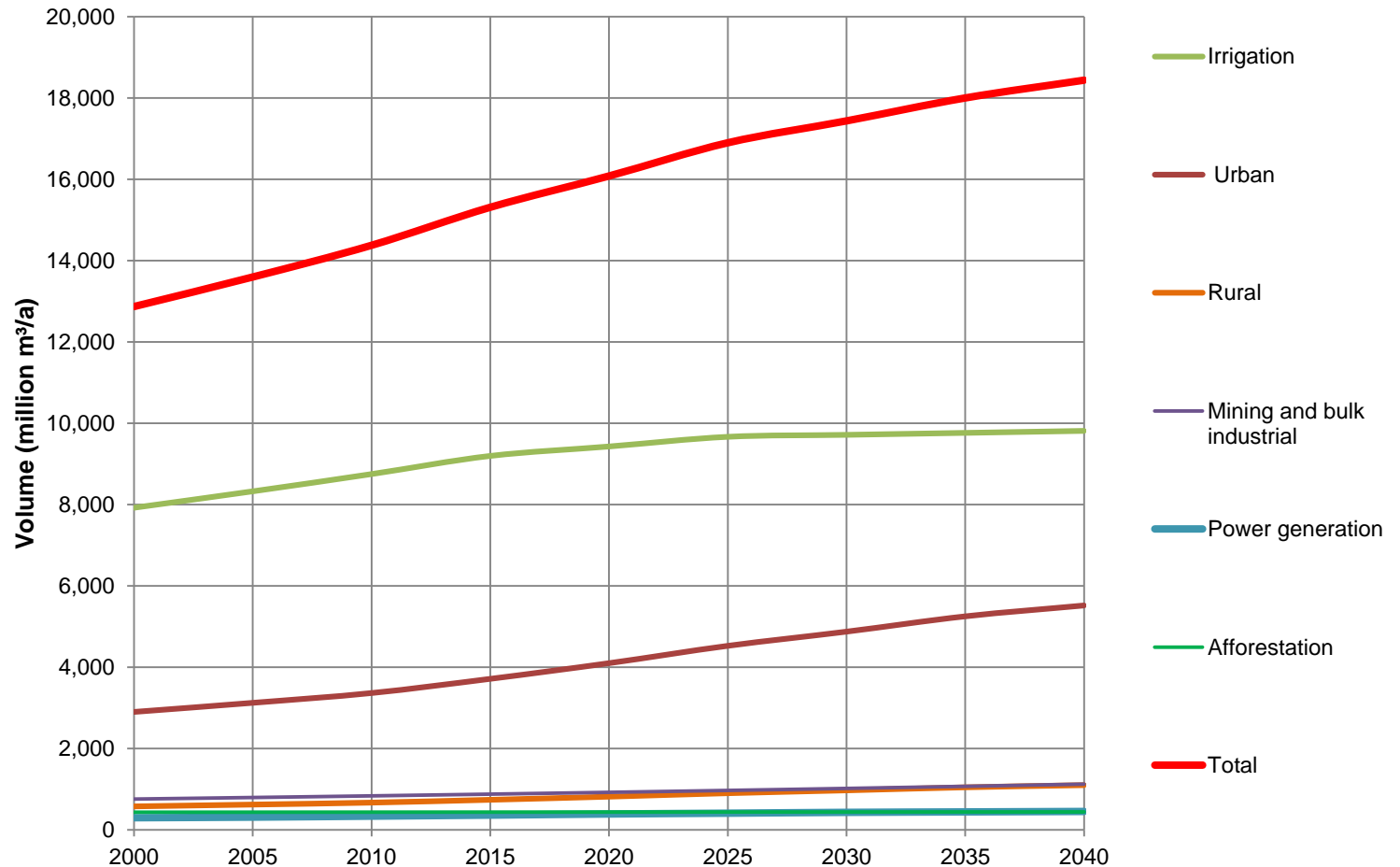
Selected Proposed Actions (2)

- Water Conservation and Demand Management (WC/WDM) targets will be set for all municipalities..
- Metering of water use in the agricultural sector and the reconsideration of the subsidy on agricultural water charges to drive water conservation.
- A national programme, driven by the MIUWS, to support the adoption of alternative water sources such as desalination and water re-use (including a programme to determine the costs and benefits of new technologies).
- A national programme of refurbishing and turning around failing WWTWs to protect our natural resources and citizen health is non-negotiable.
- Re-introduce the Blue, Green and No Drop programmes.
- The water sector research, development and innovation programme, driven by the DST and the WRC will support the implementation of the NW&SMP.
- Increase supply by: increasing surface water yield, increasing ground water use, desalination (including AMD), water re-use



Overview of South Africa's water requirements

Sectoral Water Use



Current Projections of Future Water Requirements

| No | User sector* | Water requirements (million m ³ /annum) | | | | |
|----|--|--|--------|--------|--------|--------|
| | | 2015 | 2020 | 2025 | 2030 | 2040 |
| 1 | Municipal (industries, commerce, urban and rural domestic) | 4 447 | 4 900 | 5 400 | 5 800 | 6 600 |
| 2 | Agriculture (irrigation and livestock watering) | 9 000 | 9 500 | 9 600 | 9 700 | 9 800 |
| 3 | Strategic/Power generation | 362 | 390 | 410 | 430 | 450 |
| 4 | Mining and bulk industrial | 876 | 921 | 968 | 1 017 | 1 124 |
| 5 | International obligations | 178 | 178 | 178 | 178 | 178 |
| 6 | Afforestation | 431 | 432 | 433 | 434 | 434 |
| | Total | 15 294 | 16 321 | 16 989 | 17 559 | 18 586 |

Selected Proposed Actions (3)

- DWS/DEA will identify and declare high yielding areas (“Water Factories”), critical groundwater recharge areas and aquatic ecosystems recognised as threatened or sensitive as protected areas
- DWS will work with government departments and other sector partners to formalise funding arrangements for the sector, in order to close the funding gap.
- DWS and DEA , will focus on enforcement (water use licence conditions for both abstraction and waste discharge and other illegal activities), and prosecution of high-impact non-compliant water users (“business unusual”)
- Re-focus the Water Allocation Reform (WAR) programme.
- Implement proposal to establish a water and agrarian reform programme (led by Department of Rural Development and Land Reform (DRDLR)) to ensure that the reallocation of both land and water are aligned and take place within a framework of agrarian reform and effective rural development (MOU between DWS and DRDLR is already in place)

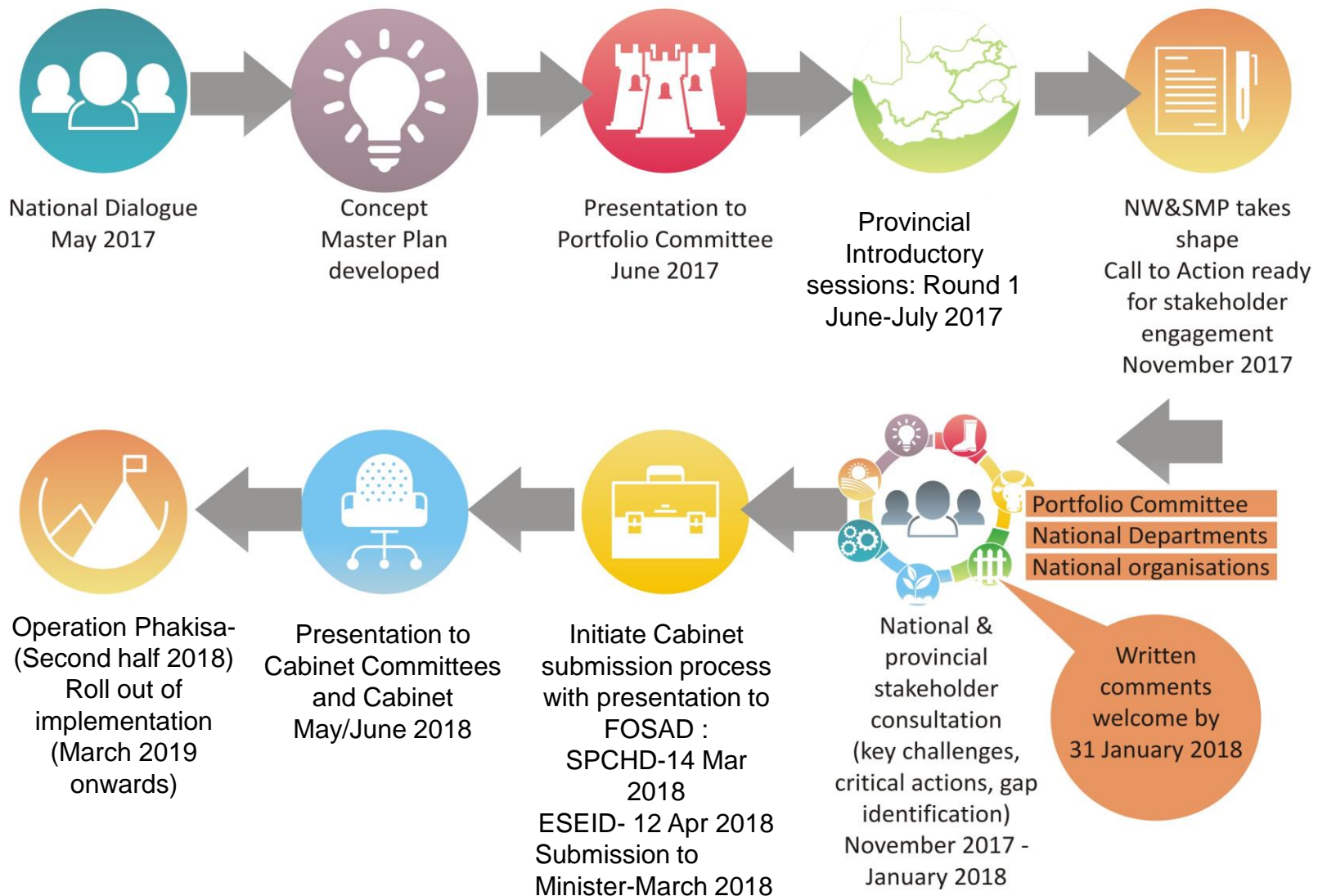


Selected Proposed Actions (4)

- Develop a business case for streamlined institutional rationalisation and organisational alignment in the water sector
- Establish financially sustainable CMAs across the country.
- Establish the National Water Resources and Services Authority
- Establish the National Water Resources and Service Regulator
- Redefine the configuration of Water boards to manage regional bulk water supply; assist municipalities to perform their primary water services mandate where necessary, manage regional water resources infrastructure, manage regional bulk WWTW
- Establish a Municipal Intervention Unit for Water and Sanitation to drive a national programme of intervention at the municipal level.



9. Road Map



THANK YOU

