



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Briefing the Portfolio Committee on Human Settlements, Water and Sanitation

SONA Implications for the Department of Water and Sanitation

10 March 2020

Presented by:
Mr M Tshangana
Acting Director General

Contents

- Water Security measures (including drought mitigation)
- Mzimvubu Water Project
 - Background
 - Locality
 - Project Status
 - Project schedule
 - Project reconfiguration
- Water Use Licences
 - Legislative framework
 - WULA Regulations 2017 March
 - Annual Performance from 2015/16 - 2018/19
 - Implementation plan in accordance with to SONA commitments(90 days
 - Turnaround times from different sectors

Purpose

To brief the Portfolio Committee on Human Settlements, Water and Sanitation on SONA Implications for the Department of Water and Sanitation in relation to:

- Water security measures
- Mzimvubu Dam project
- Water Use Licencing

Water security measures including drought mitigation

- The department has developed a National Water and Sanitation Master Plan which supports socio-economic developments in line with commitments of the 2020 SONA, including in relation to the District Development Model interventions
- As part of drought interventions, the Department of Water and Sanitation (DWS) and related entities monitor water resources to establish trends in terms of availability of water countrywide
- Data and information collected is used to inform water resource management actions such as planning and efficient operation of the water supply systems
- DWS also develop operating rules and decision support systems to manage the water supply systems efficiently.
- Where appropriate, DWS implements water restrictions to protect water supply systems from complete failure.
- The department develops infrastructure to ensure that water supply systems are resilient by implementing augmentation options such as drilling new boreholes, re-use of effluent, sand water extraction as well as Water Conservation and Water Demand Management (WCWDM)

Water security measures including drought mitigation

- Water resources are monitored, data processed and made available on the National Integrated Water Information System (NIWIS) to stakeholders such as water resource managers, farmers, Municipalities Water user associations, amongst others.
- Working together with the WRC the DWS investigates irrigation technologies to save water
- The DWS also monitors the water losses in water use sectors such as agricultural and local government sectors
- The proposed Smart City will be primarily supplied from the Integrated Vaal River System (IVRS) which is in the process of being augmented by the implementation of Phase 2 of the Lesotho Highlands Water Project (LHWP)

Water security measures including drought mitigation

- The DWS will also play an advisory role on water technologies that are water use efficient for the Smart City and new human settlement development
- The DWS is working with WRC and Department of Science and Innovation to evaluate and demonstrate non-sewered Sanitation Technologies that minimise the use of water resources
- The SABS has adopted international standards (ISO/SANS 30500) for non-sewered sanitation, therefore Sanitation systems that are accredited can be recommended for future smart cities
- The DWS will continue developing plans to support water service infrastructure projects
- The DWS has a Climate Change Response Strategy for the water sector which will need to be updated to be in line with the proposed Climate Change Bill driven



Mzimvubu Water Project

Project Background

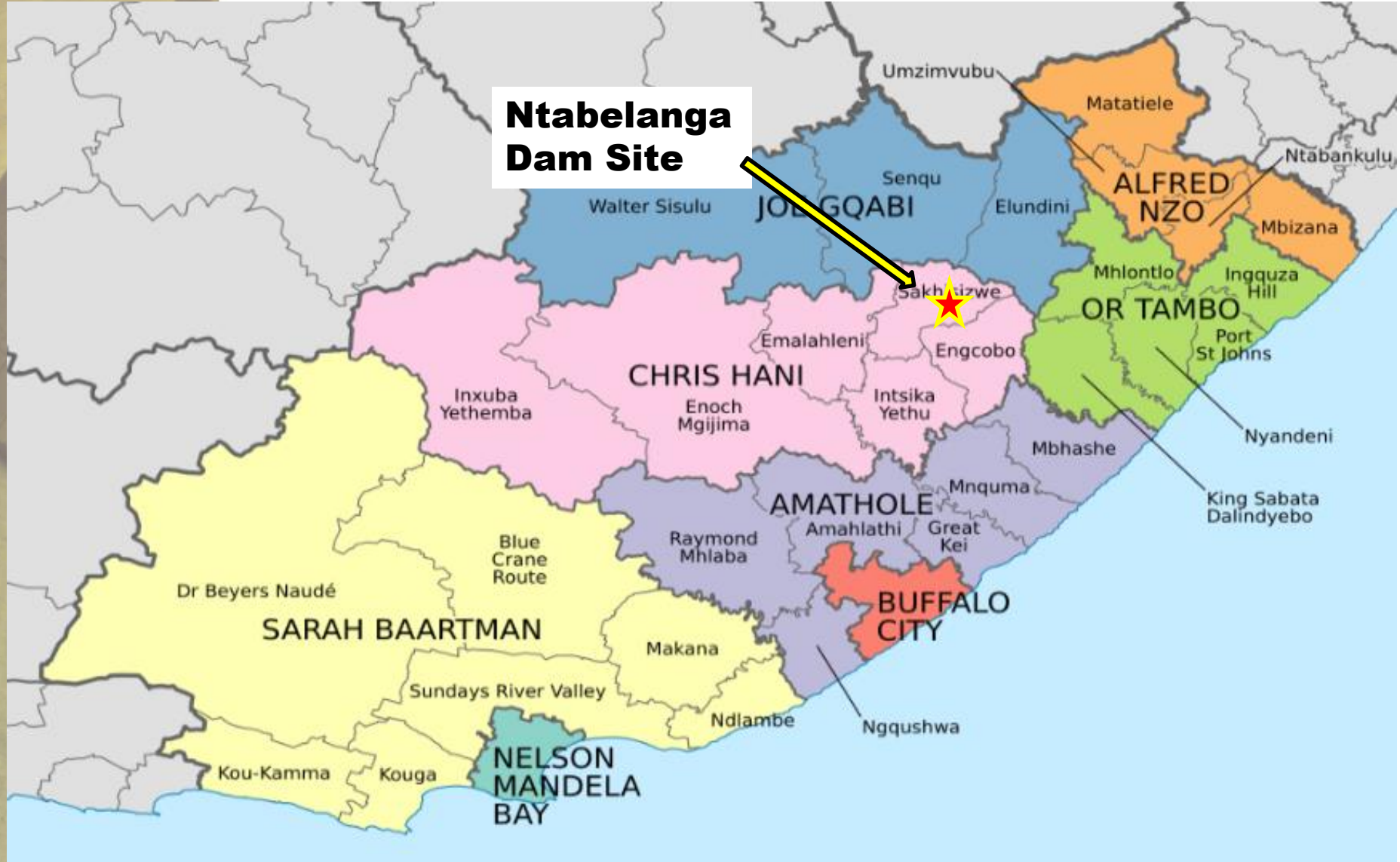
- The Mzimvubu Water Project is a multi-purpose water scheme comprising; two dams, Ntabelanga and Lalini on the Tsitsa river which is a tributary to Mzimvubu river and associated infrastructure.
- The scheme is primarily to supply potable water to the Mzimvubu River catchment area but will also provide for irrigation, hydropower and tourism.
- The project is expected play in the broader socio-economic development of the region
- Government has classified the project as a Strategic Integrated Project under SIP-3.
- Strategic Impact: Mzimvubu Water Project aims to develop the water resources in the Mzimvubu river catchment to provide a stimulus for the regional economy, in terms of domestic water, irrigation, hydropower generation and job creation.

Project Background (Cont...)

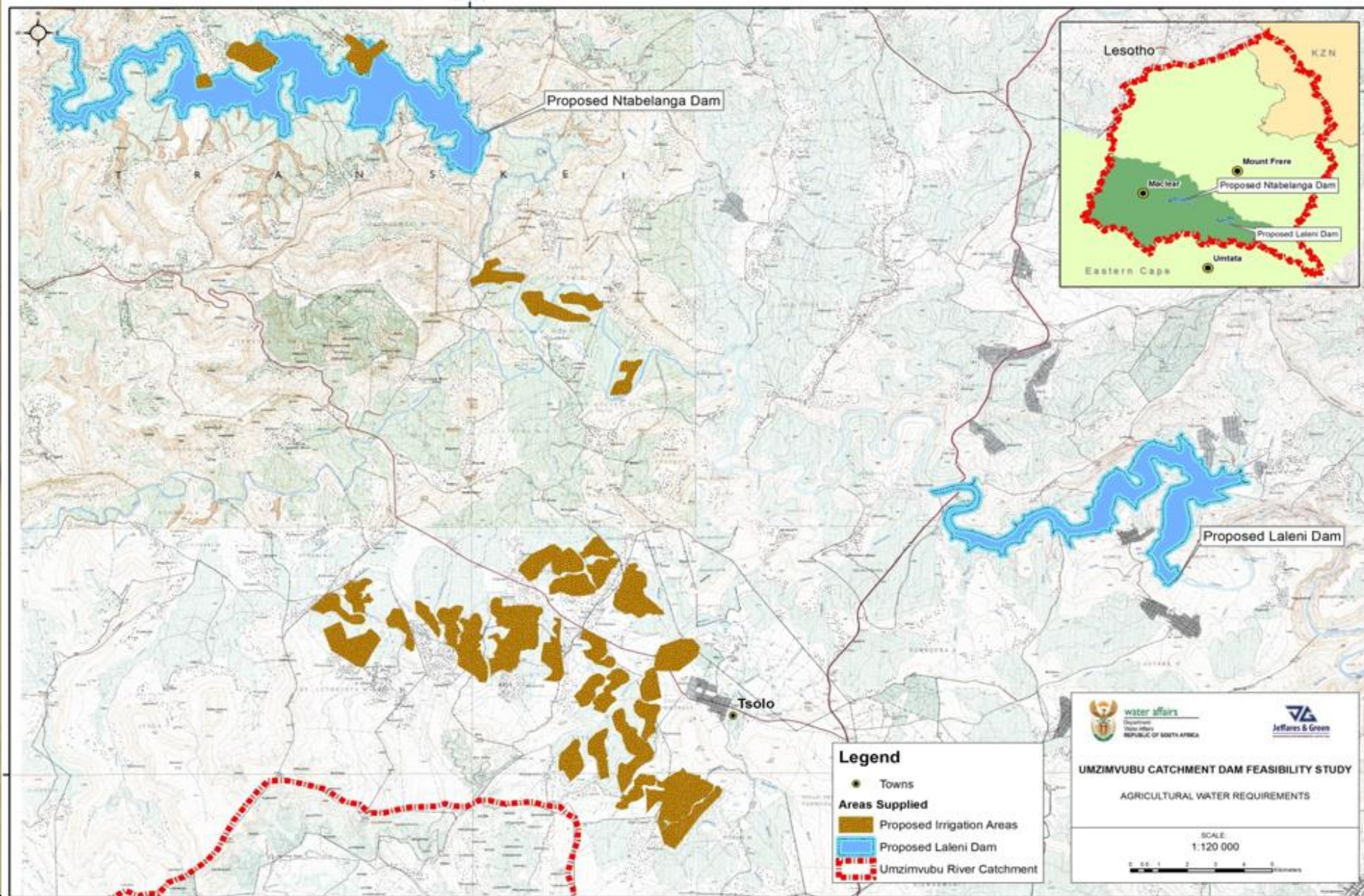
The project will be implemented in the stages as follows:

- Stage 1: Advanced Infrastructure – roads, buildings, services, etc. (2020/2021).
- Stage 2: Ntabelanga Dam (490 million m³) and Water Treatment Works (2022/24).
- Stage 3: Bulk Distribution System (BDS) (2023/27).
- Stage 4: Irrigation and Hydropower (2023/25).

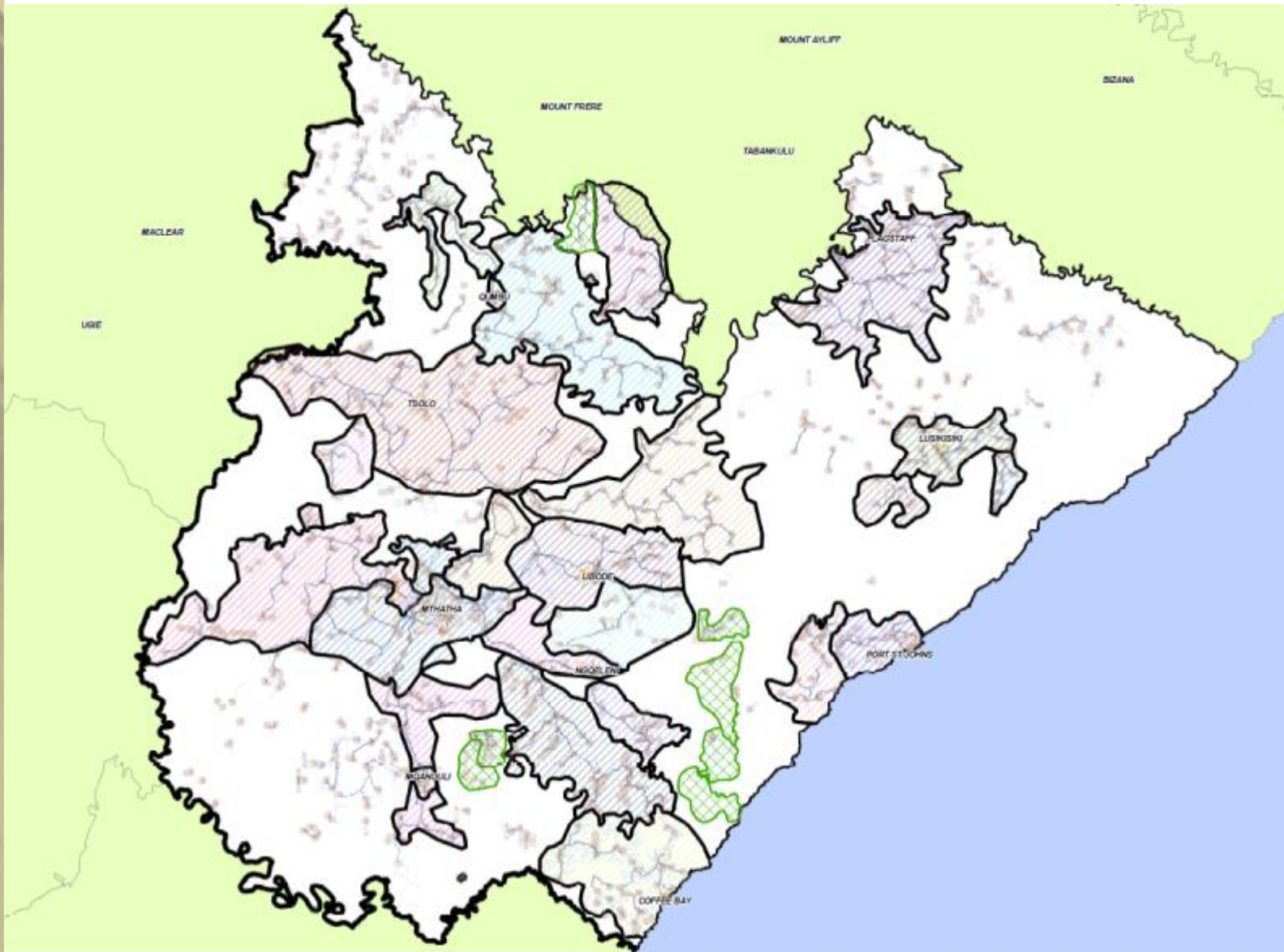
Locality



Mzimvubu Project (Water Resource) Layout



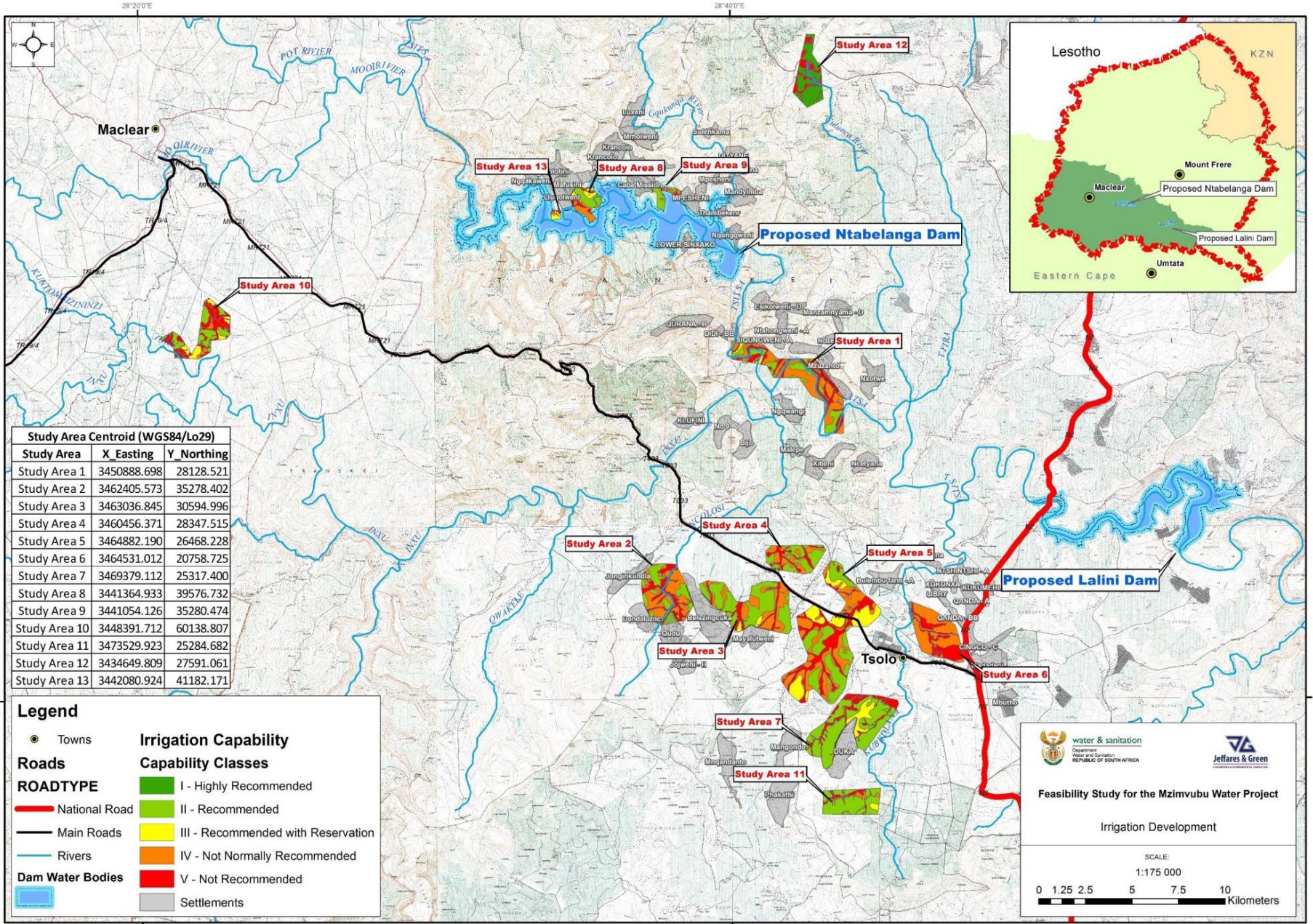
4. Existing RWS Schemes (Infrastructure)



NTABELANGA KEY WATER SERVICES INFRASTRUCTURE COMPONENTS



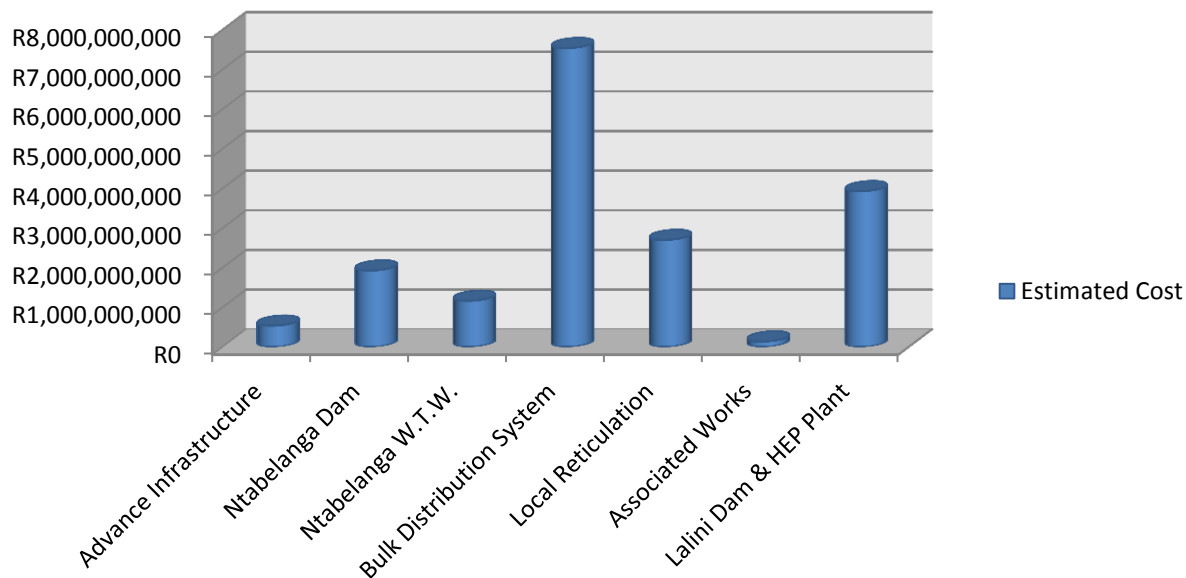
Agricultural Development Options



Original Mzimvubu Cost Estimate

Item	Estimated Cost	Item	Estimated Cost
Advance Infrastructure	R 535 000 000	Local Reticulation	R2 700 000 000
Ntabelanga Dam	R1 928 000 000	Associated Works	R 138 000 000
Ntabelanga W.T.W.	R1 163 000 000	Total (excluding escalation)	R14 004 000 000
Bulk Distribution System	R7 540 000 000	Lalini Dam & HEP Plant	R3 929 000 000
		Grand Total	R17 933 000 000

**Estimated Cost of the Mzimvubu Project
(as @ 2017)**



Funding Arrangements

- Funding available to commence **Stage 1** Access Road.
- Memorandum of Agreement (MoA) for working capital agreed between DWS & TCTA Legal (March 2019), but funds not yet transferred.
- Engagements are in progress with NT to conclude Budget Facility for Infrastructure (BFI) for stages 2 to 4.
- Also in process of issuing a Request for Proposals (RFP) for Stages 2 to 4 on basis of Fund, Build and Transfer

Achievements to date

- On 16 January 2019 TCTA received a revised Directive to provide project management and advisory services for Stage 1, utilizing DWS-Construction Unit (CU) as the Contractor and DWS as the implementer i.t.o. adopted participation model.
- A revised Charter was presented to stakeholders for adoption at Project Work Group (PWG) and other fora (DWS to incorporate their internal governance requirements).
- A revised Directive is under discussion to cater for stages 2 to 4.
- Detailed designs development undertaken by Professional Service Provider (PSP) is at an advanced stage.

Achievements to date (Cont...)

- The Minister launched the project on 18 February 2019.
- Project Organising Committees (POC's) and Project Liaison Committee (PLC) have been established as part of social facilitation, which has included meetings with communities and business fora.
- A site meeting held on 16 August & 2 September 2019 by **DG's of NT, DWS, DAFF, Presidency, Premier's office & TCTA CEO** resulted in the decision to reconfigure the project. Technical Task team has been formed for the project reconfiguration task (Expected outcome: July 2020).

Minimization Options Considered for Mzimvubu (Towards Reconfiguring the Project)

A.) Water Services Programme

Limiting project to Abstraction work from River plus upgrading of bulk distribution and reticulation work.

A.) Draw-back Consequence

- A reduced footprint of communities benefitting from the WS programme.
- Reduced Water Resource Assurance.
- Limit Agriculture Development to run-off availability.

B.) Weir plus Water Services Programme

Including a weir (to improve abstraction) plus upgrading of the bulk and reticulation water services

B.) Draw-back Consequence

- Similar to Option A.
- But with improved Abstraction Operations; Yet siltation will require innovative weir design and increase operational costs.

C.) Dam plus Water Services

A Reduced sized dam plus upgrading of bulk and reticulation water services. This will include the Irrigation development

C.) Draw-back Consequence

- Similar to A.
- O&M costs of Dam and WS infrastructure.

Proposed Project Reconfiguration: Water Resource Planning

- Entails the trimming of the project layout/ resizing/ leaving out some of the proposed infrastructure, which can be implemented at a later stage due to unavailability of funds.
1. The Proposed Reconfiguration comprises:
 - **Full Size Ntabelanga Dam to store 490 million m³ , estimated cost of R 2 600 million:**
 - The proposed **visitors centre** can be taken out which would cost **R140 million**, and only **one access road** is recommended, saving a potential **R200 million**
 2. Bulk Irrigation Infrastructure:
 - Depends on the outcome of the review of the feasibility reports by the DAFF currently underway.
 - The **conveyance infrastructure** is estimated to cost R837 million while on-farm developments will cost R180 million.

Proposed Project Reconfiguration: Water Resource Planning

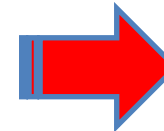
3. Bulk Potable Water Distribution Infrastructure:

- A centralised water treatment works and arterial (primary) bulk water distribution infrastructure at an estimated cost of R2 400 million is recommended.
- The 3 district municipalities will have to be responsible to provide the secondary and tertiary distribution infrastructure as well as the reticulation using either RBIG, MIG or water services infrastructure grant and not from the Ntabelanga Dam Project (As per original designs).

Ntabelanga Scheme (Distribution Infrastructure Costs Only)

Table 5-1 Cost Estimate for Bulk Distribution Network (potable water)

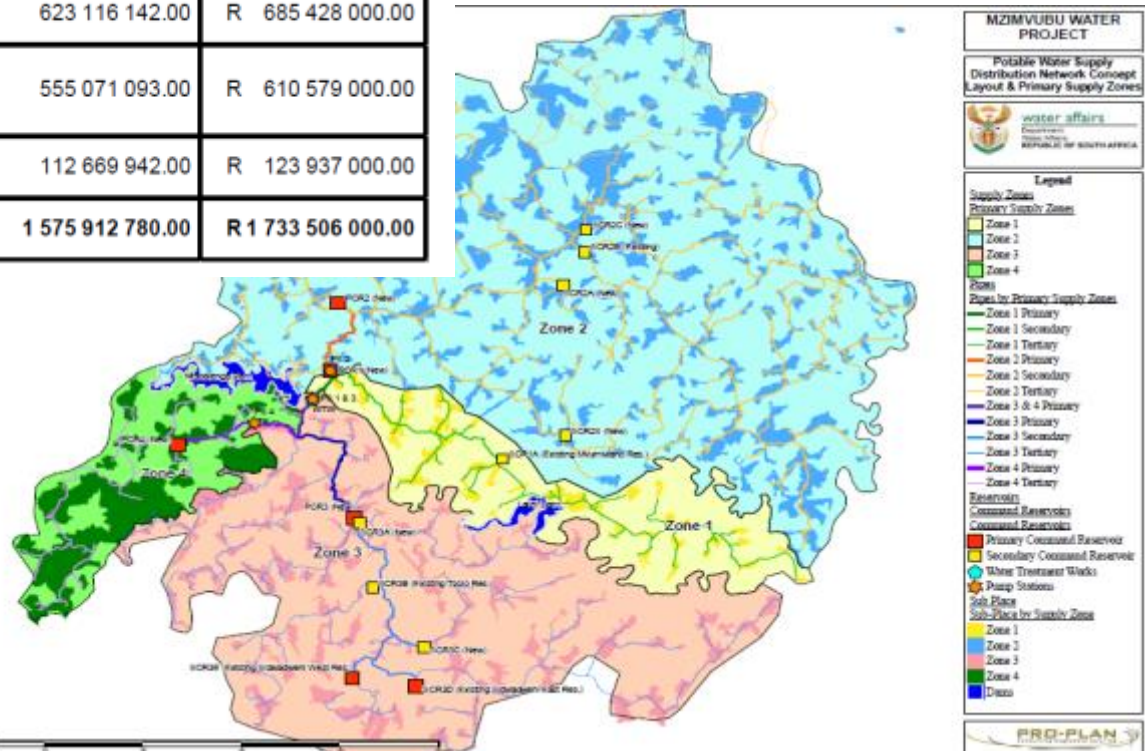
Zone	Feasibility Report (2014)			Cost 2015 (@10% inflation per annum)
	Primary	Secondary	Subtotal	
Zone 1	R 141 865 789.00	R 143 189 814.00	R 285 055 603.00	R 313 562 000.00
Zone 2	R 294 728 193.00	R 328 387 949.00	R 623 116 142.00	R 685 428 000.00
Zone 3	R 203 988 139.00	R 351 082 954.00	R 555 071 093.00	R 610 579 000.00
Zone 4	R 112 669 942.00	R -	R 112 669 942.00	R 123 937 000.00
Grand Total	R 753 252 063.00	R 822 660 717.00	R 1 575 912 780.00	R 1 733 506 000.00



@ 5% Inflation rate
Cost 2020: R 2.2bn

@ 10% Inflation rate
Cost 2020: R 2.8bn

5%	2015	10%	2015
1,734.00	2015	1,734.00	2015
1,820.70	2016	1,907.40	2016
1,911.74	2017	2,098.14	2017
2,007.32	2018	2,307.95	2018
2,107.69	2019	2,538.75	2019
2,213.07	2020	2,792.62	2020
2,323.73	2021	3,071.89	2021
2,439.91	2022	3,379.08	2022



Current Activities

- Designs for Advance works complete
- DWS:CM mobilizing equipment for advance work
- Procuring Environmental Compliance Officer and Occupational Health and Safety practitioner
- Preparing for Land acquisition (Surveying Full supply Level of the Ntabalanga Dam)
- Recruitment of local labour
- Reconfiguration of scope for the project (Especially on the Bulk Distribution System)

Planned Project Schedule for project

Component	Start Date	End Date
Stage 1 – Advance Infrastructure, roads, services	Mar 2020	Jun 2021
Stage 2- Ntabelanga Dam, Water treatment works	Apr 2021	Mar 2024
Stage 3- Bulk distribution system	Apr 2022	Mar 2027
Stage 4 – Irrigation and Hydropower	Apr 2023	Mar 2026

Project Schedule for - Stage 1 - Access Road

Key Milestones	Initial Planned	Actual/Revised
Revised directive	Jan 2019	Jan 2019
Social Facilitation	Feb 2019	Mar 2019
Land acquisition (Stage1)	May 2019	Sep 2019
Compliance with Regulation	May 2019	Mar 2020
Commencement of construction	May 2019	Mar 2020
Procurement of subcontractors and Resources	Apr 2019	June 2020
Completion	Mar 2020	July 2021

Mzimvubu Water Project Summary

Project Description

Two multi-purpose dams and associated infrastructure, Ntabelanga and Lalini dams, on the Tsitsa river which is a tributary of the Mzimvubu river, will be developed to provide for potable water supply, irrigation, hydropower and tourism.

Phase 1: Access Road

Phase 2: Ntabelanga Dam

Phase 3: Bulk Distribution System (BDS)

Phase 4: Hydro power infrastructure (incl. Lalini Dam)

Summary Progress

- Environmental Compliance Officer (ECO) services secured for Phase 1 (Access Road)
- Obtained approval from EC Roads Dept. to allow construction.
- DWS Construction Unit is mobilising plant temporarily kept at Mthatha dam; Obtaining approval from the Chief to use his property for plant storage in the interim
- DWS Survey team to do the interim pegging of the FSL to inform expropriation negotiations.
- Request for Proposals (RFP) being drafted for Fund and Building of Phase 2, (3) & 4

Project Phase

Construction – **Stage 1: Roads**

Project Start

Feb 2019

Project Finish

2021

Estimated Total Cost at Completion

R14 004 000 000

Total Expenditure to Date

R 293 800 000

R'000	2019/20	2020/21	2021/22
MTEF Budget Original	26 087	0	0
MTEF Budget Revised	50 000	30 000	35 000

Summary Project Schedule (Stage I – Access Roads)

Key Milestones	Planned	Actual/ Revised
Revised Directive	16 Jan 2019	16 Jan 2019
Social Facilitation	21 Feb 2019	Mar 2019
Land acquisition (Stage 1)	May 2019	Sept 2019
Compliance with Regulation	May 2019	Aug 2019
Commencement of Construction	May 2019	March 2020
Completion	Mar 2020	February 2021

Key Issues/ Challenges (1)

- Funding model not yet secured.
- Reconfiguration of BDS (Phase 3) depends on previous design work done by DMs, reducing capital cost but must still be aligned.

Key Issues / challenges

- Unavailability of funding to implement the entire project.
 - Solution: Outcome of the RFP process and reallocation of grant funding for bulk and reticulation.
 - Continue with reconfiguration of high-cost project phases to enhance affordability.
- Resolve contractual dispute between PSP & DWS
 - The Arbitrator judged in favour of the Department. Finalising the implementation of the settlement agreement.

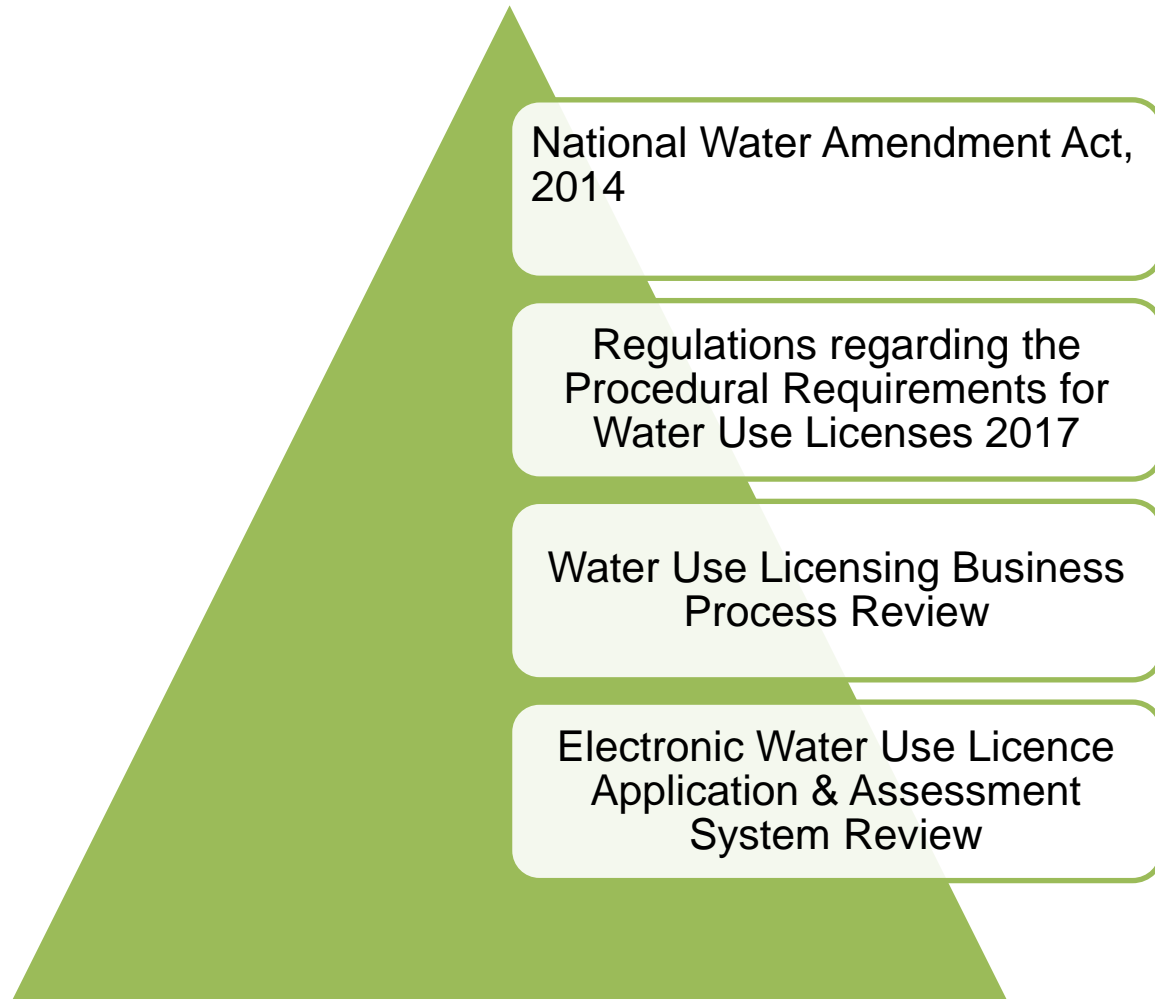


90 Day Turnaround Time for the Finalisation of Water Use Licenses

Legislative framework

- **Constitution of the Republic of S**
 - Bill of rights – Section 24 and 27: Environment, water and food.
- **National Water Act, Act no. 36 of 1998**
 - Water is a public good with the Minister as the custodian of the Nations water resources, responsible to ensure that water resources are protected, used, developed, conserved, managed and controlled in manner that is sustainable and ensure equitable access.
- Water Use licensing is a critical tool for protecting, managing and controlling water resources
- **Regulations:**
 - Water Use Licence Applications and Appeals, No R267, 24 March 2017
- The Department published the Regulations to prescribe the timeframes and information requirements for water use license applications.

Water use authorisation regime



Regulations regarding the procedural requirements for Water Use Licence Applications and Appeals

- In 2014 the Department embarked on discussions with Departments of Environmental Affairs and Mineral Resources to streamline the processing of authorisations for mining purposes.
- The discussions led into the One Environmental System (OES) agreement between the three departments.
- The OES only covers the mining sector and was established to streamline the timeframes for processing mining related authorisations (Mining permit, Environmental Authorisation and WULA).
- The three Departments agreed on a period of 300 days for a water use authorization, (from application to making a decision).
- Promulgation of the National Water Amendment Act 2014
- In order to give effect to the OES, the Department published Regulations for Water Use Licensing in March 2017.

Annexure A:

Regulations 24 March 2017 (300 days)

Regulation	Steps in processing of water use licence applications	Maximum days allocated	Cumulative days	Responsible
0	Pre-application enquiry	0	0	Applicant / Responsible
1	Application submitted	1	1	Applicant
2	Responsible authority acknowledges receipt of the application	10	11	Responsible authority
3	Applicant confirms arrangements for site inspection with an allocated case officer	5	16	Applicant
4	Site inspection to confirm water uses, determine information requirements and the need for public participation	20	36	Responsible authority / Applicant
5	Confirm requirements for water use licence application technical report based on site visit and meeting	5	41	Responsible authority
6	Compilation, consultation and submission of water use licence application technical report by applicant	105	146	Applicant
7	Reject / Accept water use licence application technical report	10	156	Responsible authority
8	Assessment	139	295	Responsible authority / Applicant
8	Decision communication to applicant	5	300	Responsible authority

Regulations regarding the procedural requirements for Water Use Licence Applications and Appeals

- In the Regulations, the Department applied the 300 days arrangement to other water use sectors, including the mining sector.
- From the 2016/17 financial year to date, the Department has set itself an annual performance target of finalising 80 % authorisation applications, within 300 days.
- Since the introduction of the 300 days performance indicator, the Department has been able to meet the 80 % target.
- Despite meeting the target, there were a few applications that were delayed. Further challenges include:
 - Water Use Licence conditions that are onerous, and unimplementable
 - Uncertainty with regard to key requirements such as public participation and security by applicant.

Water Use Authorisation Applications (WUAs) Annual Performance from 2015/16 financial year to 2018/19

2015-16	2016-17	2017-18	2018-19
91% water use authorisation applications finalised as per the water use authorisation guidelines (262 out of 288)	68% water use authorisation applications finalised as per the water use authorisation guidelines (275 out of 404)	95% water use authorisation applications finalised as per the water use authorisation regulations (447 out of 469)	82% water use authorisation applications finalised as per the Water use authorisation regulations (496 out of 601)

Implementation plan in accordance with to SONA commitments

- The DWS welcomes and accepts the call by the president to reduce the turnaround times from 300 to 90 days as an effort to improve the country's ailing economy.
- In the Regulations, the Department applied the 300 days arrangement to other water use sectors, including the mining sector.
- The department has revised the business process to adjust the timeframes accordingly.
- In addition to the reduction of turnaround times to 90 days, the Department has differentiated between the timeframes applied to the different water use sectors.

Turnaround times from different sectors

No	Step	Agric and Forestry	Infrastructure projects from SOC	LG and developments	Mines and industry
0	Pre-application and compilation of application (reports + PP)	-	-	-	0
1	Submit application and supporting documents	1	1	1	1
2	Accept or reject application	2	3	3	3
3	Preliminary Assessment	3	5	5	5
4	Specialist comments	35	45	45	45
5	Final Assessment	9	12	12	12
7	WUAAAC presentation	5	7	7	7
8	Recommendation (RH / CEO)	2	2	2	2
9	Recommendation (DDG Reg.)	2	3	3	3
10	Preparing documents for signature	2	2	2	2
11	Consideration and decision	5	6	6	6
12	Post decision admin	4	4	4	4
Total		70	90	90	90

36



Thank you