Funding water Infrastructure- The Role of Development Finance

INCREASING PRIVATE SECTOR PARTICIPATION IN WATER SERVICES

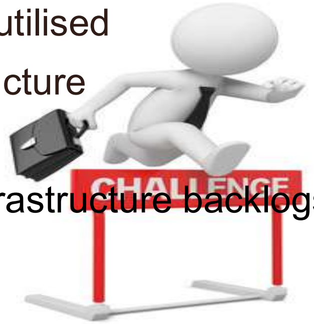
1 September 2023

Discussion points

1. Overview and status of water infrastructure challenges
2. Funding (bankability) requirements for water infrastructure
3. The Role of DFI’s in water infrastructure delivery
4. Potential funding instruments

1. OVERVIEW AND STATUS OF WATER INFRASTRUCTURE CHALLENGES

- **SA is a water stressed country** ranked as 30th driest country in the world (DWS, National Water Reuse Strategy, 2nd Edition, 2013)
- Experienced close encounters of net deficits in many parts of SA not only well-publicised areas such as Cape Town, Gqeberha and Mpumalanga
- **Basic water-related services** including provision of potable water, access to sanitation & stormwater drainage **not readily available to significant proportion of population**
- Impact of Climate Change exacerbating and increased frequency and severity of droughts
- SA's **current water supply mix is dominated by surface water (79%) – relying on surface water infrastructure (4,395 registered dams) to meet national water demands**
- Many parts of SA have reached or are fast approaching the point at which all viable freshwater are fully utilised - according to National Water Resource Strategy, 98% of all surface water resources have been utilised
- Municipalities are struggling to provide water & sanitation services with aged and ailing infrastructure
- Approx**. 80% of 1,400 wastewater works** are **classified as Medium to High Risk**
- Inadequate resource allocation and expenditure for asset creation, renewal, rehabilitation &, infrastructure backlogs - resulting in **poor operation of critical water infrastructure**
- 46% of Non-revenue resulting in loss of revenue and poor service delivery



OVERVIEW CONT...

Investment landscape

POLITICAL

Coalition governments resulting in political instability at a local government level hampering water service delivery.
Political will required to create a culture of payment for services

ECONOMIC

Low economic growth resulting in job losses and inability to pay for water services. Loadshedding affecting the efficiency of critical water infrastructure.

SOCIOCULTURAL

Urban migration to metros are placing heavy burden on delivery of water. Culture of non-payment for water services

TECHNOLOGICAL

Both locally and internationally there are technological advances with smart digital systems meet the challenges and constraints both form a policy and infrastructure rehabilitation perspective

ENVIRONMENTAL

Climate change impacting fresh water supplies. Long lead times taken for permitting to build new climate resilient water infrastructure. Poor functioning wastewater treatment works and spillages into nearby rivers resulting in waterborne diseases - Cholera

LEGAL

Ambivalence in role and regulations have hindered private sector participation in the water sector, as well the demands from procuring water infrastructure through traditional PPPs and unsolicited bids

2. FUNDING (BANKABILITY) REQUIREMENTS FOR WATER INFRASTRUCTURE DELIVERY

- Water services are typically delivered by municipalities
- **Can be funded on Balance sheet** or **limited recourse funding**
  - Funding requirements differ depending on source of funding
  - Fiscal constraints
  - Socio-economic challenges (stumbling economy exacerbated by loadshedding and reduction or disappearance of SMME rates and taxes)
- Choosing the model relevant to contextual reality
- Municipal Capacity (technical and financial) constraints
- Clarity of policy and regulatory framework
- Clarity of compensation regime or payment mechanism -
- Few Municipalities have healthy balance sheets or creditworthy exacerbated by the reality of almost 50% national average Non-revenue water reducing much needed **revenue to reinvest in adequate infrastructure planning, preparation or acquisition of new assets; to attract bankable funding structure**
- Therefore less attractive as a borrowing counterpart-this necessitates partnership with Private sector, **however DFI involvement may be required as a precursor to unlock co-investment**

3. THE ROLE OF DEVELOPMENT FINANCE INSTITUTIONS INCLUDE..

DBSA

- **Concessional Funding**
- **Upstream development (Project Preparation)**
- **Capacity Building**
- **Policy advisory status**

Most Important Pre-cursor to investment are well-prepared Project pipelines

Key challenges Project Preparation addresses

- **Lack of packaged bankable** projects which can attract investment.
- **Capacity challenges in organs of state** to plan, prepare and develop bankable projects for implementation.
- **Lack of capacity to implement large infrastructure programmes** from well developed infrastructure master plans
- **Limited Funding for project preparation activities due to high risk** associated with project preparation activities – after all the effort to establish bankability may not be viable for all projects

- **Upscaling the client's existing capacity** for planning to create a pipeline of projects for funding by various funders, **unlocking fiscal allocations,** and increasing absorption of grants and loan funding**.**
- **De-risks projects in early development stages to bankability.**

Key to executing above is contributing to transformational policy development; stepping into risk private sector unable to assume; 'market maker' by bridging risk (in lending and project preparation); crowd-in funds through blended finance (concessional, grant, green/climate finance blended with commercial lending)

DBSA's Integrated Approach to Infrastructure Development

1. Plan

- Municipal assessments
- Bulk infrastructure plans
- Infrastructure planning advice

2. Prepare

- Project identification
- Feasibility assessments
- Technical assistance
- Programme development
- Project preparation funds

3. Finance

- Long-term senior and subordinated debt
- Corporate and project finance
- Mezzanine finance
- Structured financing solutions

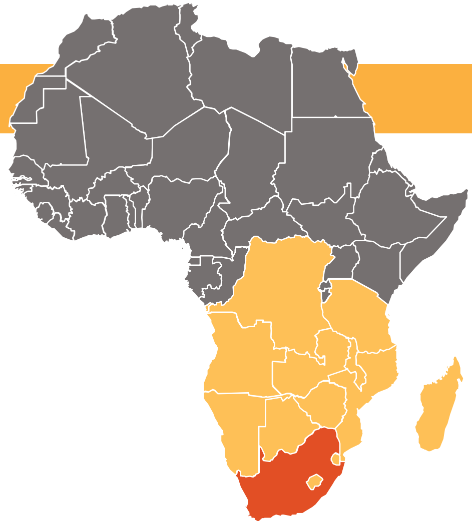
4. Build

- Managing design and construction of projects in education, health and housing sectors
- Project management support

5. Maintain

- Supporting maintenance/ improvement of social infrastructure projects

Clients



Public

- Municipalities
- SOEs
- Sovereigns

Private

- PPPs
- Private sector

PROVEN EFFECTIVE TOOL TO ACCELERATE INFRASTRUCTURE DELIVERY: PROGRAMMATIC APPROACH

Motivation for a programmatic approach

1

CENTRALISE EXPERTISE

Programme Management Office:
Create a centralized "center of excellence" to drive preparation, facilitate funding and monitor implementation

2

FUNDING SOLUTION

Customised funding solution to support the implementation of a specific new investment grade asset class that attracts funding

RATIONALE FOR A PROGRAMMATIC APPROACH

1. The scope of individual projects is often too limited to deal with the complexities associated with infrastructure planning & delivery
2. Water infrastructure programmes enable a group of projects to achieve benefits that would not have been realised had the projects been undertaken independently
3. Allows different solutions to be deployed under one engagement in a **standardised and transparent manner**
4. Effective in Crowding in private and/or donor capital into infrastructure development

TO PREPARE PROJECTS, AND MOBILISE SCALED FUNDING AND TECHNICAL PROCUREMENT OF PROJECTS

PRIMARY PROGRAMME OBJECTIVE

FUNDING SOLUTION

Blended finance approach

2 FUNDING SOLUTION

Blended finance principles:

- Introduces **Credit enhancement, concessional & grant funding** to crowd in private sector funding making use of debt capital market instruments
- It **allows for competitive pricing in funding package** (senior, subordinated, concessional) competitive basis (example bond auction programme)
- Programmatic approach and finance option used to **create specific and dedicated asset classes**
- Different programmes will have different funding options, structures and solutions

Role of Development Finance Institutions:

- Innovative product and instrument design to address market failure
- Credit enhancement with partner DFIs and MDBs
  - **1st loss** / subordinated facilities
  - Tenor extension- **patient capital**
  - **Guarantee products**
- Crowd in private sector investment
- Catalyze infrastructure projects and programmes

50-70%	**Senior Investors** • Commercial banks • Asset managers • Pension funds	Blended Finance
20-30%	**Subordinated Investors (credit enhancement)** • DFIs • MBDs	
10-20%	**Grant & Concessional Finance** • GCF • SA Government • Donors • Others	

EG. CONCEPTION OF THE NATIONAL WATER PROGRAMME

- The **National Water Programme** was conceived over a number of years of investment in project preparation at the DBSA to solve for **delivery of water infrastructure and water security at scale and with speed** (e.g. IPPO)
- The NWP is a programme of over 15 subprogrammes developed to address the complexities within the sector and the capacity constraints of municipalities to address these
- Formed with a **view to develop standardized national programmes for private sector participation in municipal water and sanitation services**
- If successful it will be **easier, faster and cheaper for municipalities and water boards to enter into partnerships**, without having to 'reinvent the wheel' for each partnership, where especially municipalities are lacking in expertise to undertake feasibility studies and financial structuring
- Facilitated by innovating and structuring **blended financing**
- **DWS, SALGA and DBSA** entered into a contractual arrangement to establish **a PMO, the Water Partnership Office-e**.g. IPPO **ringfenced from the Dept and incubated at the DBSA**
- WPO will **follow DWS mandate and policy-DWS is owner of the Programme and PMO**
- **Bankability and recruitment:- Ringfenced from sponsoring Department and owner of the programme? (**no "deployment" etc._

STANDARDISED PROGRAMMES FOR PARTNERSHIPS

6 Subprogrammes approved for resourcing and piloting by the new WPO

01 Wastewater Treatment

Assisting municipalities upgrade, refurbish and rehabilitate Wastewater treatment facilities

02 Management Contracts

Private sector provides management support to W&S function in municipality. This includes both engineering and non-engineering functions

03 Non – Revenue Water

Comprehensive WCWDM and cost recovery programme focusing on reducing losses and over-consumption and improving cost recovery

04 Seawater Desalination

Independent producing potable water through seawater desalination in coastal cities

05 Water Reuse

Further treatment of municipal Wastewater to enable it to be resold for other purposes e.g. potable, industrial or agricultural

06 Non-Sewered Sanitation

Cocreate & operationalize the fast-tracking and large scale adoption of non-sewered sanitation solutions in South Africa

PROGRAMME OFFICE

WPO to Implement the NWP and the consequences of a centralized office incl…

WATER PARTNERSHIPS OFFICE

ENABLING ENVIRONMENT

Policy and regulatory considerations

MONITORING, REPORTING & CONTRACT MANAGEMENT

Mobilise funding, monitor and report on implementation

PROJECT PREPARATION

Project scoping, preparation and design to create bankable projects
Create a pipeline of projects (supply and demand)

TECHNOLOGY & INNOVATION

Centralise expertise to consider, test and vet new technology and innovation

PROCUREMENT

Centralised procurement of consultants, contractors, operators via appropriate procurement mechanisms such as panels or framework contracts

COMMUNICATION

Manage public education and awareness campaigns

BEST PRACTISE

Incorporate international best practice & lessons learnt

STANDARDISATION

Standardisation of procurement documents, contracting documents, loan agreements, etc.

WATER REUSE PROGRAMME

A standardised approach

- DBSA is an accredited agent of both GCF and GEF (two largest international green climate funds)
- Accreditation allows it to access concessional and grant funding on behalf of investors who (meeting relevant criteria) to develop projects in inter alia Adaptation finance and natural based solutions projects
- DBSA secured funding from the **Green Climate Fund (GCF) for the design of a national water reuse programme (WRP) for South Africa**
  - Funding comprised of secured grant and concessional loan funding of around R4.23 billion (USD235m @ R18/USD) from the GCF for the scaled implementation of water reuse projects across the country
- The WRP will provide:
- standardization of procurement:
  - A strong focus on **climate adaptation**
  - A **blended finance solution which allows for catalyzation of investment (commercial and development Finance)**
  - A **standardized project preparation approach**
  - A **communications, environmental, social and gender focus**
  - **Private sector participation**

WATER REUSE PROGRAMME

A standardised approach

- The WRP is designed to assist municipalities and water boards to scale their water reuse projects and includes the following:
  - Assistance to municipalities and water boards to **prepare their water reuse projects**, following a standardized and best practice approach
  - Assistance with a **blended finance funding solution** (opportunity to develop a water reuse project bond programme and maximise private sector investment into this new financial asset class)
  - Opportunity to **access international climate finance**
  - Promotion of PPPs to **leverage private sector investment** (funding) **and expertise** (construction and O&M)

  - It is also intended that the above will result in capacity building within municipalities to prepare and procure similar infrastructure in the future

4. POTENTIAL FUNDING INSTRUMENTS

Alternatives to Municipal and Water Board co-investment:

IWP Agreements provide opportunities outside of public sector to provide water security to corporates directly without any public sector participation requirement on a programmatic basis, similar to developments in the renewable energy sector when IPPS were granted dispensation to provide energy independent of Eskom being buyer

IWPAs are being concluded in INDUSTRIAL ZONE OPPORTUNITIES, PRIVATE SECTOR ESSENTIAL SERVICES

Can be Extended to rehabilitate key polluters and threats to water availability e.g.

- ACID MINE DRAINAGE DESALINATION

ANNEXURE:
WRP

ANNEXURE: NWP BLENDED FINANCE APPROACH

SOUTH AFRICAN LOCAL GOVERNMENT ASSOCIATION SALGA Inspiring service delivery

water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA

DBSA

Creation of a new asset class

- Five key objectives for the financial architecture, to create a programme that is ready for operationalisation and investment

New Asset Class

Creating a new, investment grade, asset class for water re-use.

Blended Finance

Designing a blended finance mechanism(s) to crowd-in private sector capital for this new asset class.

Low-Cost Climate Finance

Motivating for the use of low-cost, blended financing from the GCF (only for projects that required concessional funding) to ensure affordability and bankability.

Bankability

Improving the bankability and efficiency of water re-use projects at preparation stage.

Pipeline

Supporting a pipeline of water re-use projects with accessible and affordable financing.

WRP

Project pipeline criteria, outputs and initial focus projects

- **Project Pipeline Criteria:** In the development of the initial project pipeline, several exclusionary criteria were applied to ensure projects selected would be able to make a strong case for inclusion into the WRP. These criteria include:

  - **Treatment plant size:** The size of the WWTW was selected as a criterion as it directly impacts on the size of a potential water reuse project and the associated investment costs for that project. WWTW with a capacity of > 20Ml/d were included.
  - **WWTW compliance**: The compliance of a WWTW was selected as a criterion as it can be used to determine which municipalities are likely to be more viable from a technical perspective, based on their overall effluent compliance as per published reports from the Department of Water & Sanitation. WWTW's with a chemical compliance of >50 were included.
  - **WWTW type**: Given that biofiltration plants are not recommended for potable or industrial reuse projects, only activated sludge plants were considered for inclusion.
  - **Reuse status:** A municipality that has already initiated reuse projects has clearly indicated their favourable appetite for reuse and thus these municipalities were included.

- **Initial Output from the application of this criteria**

  - **27 potential projects in 19 municipalities across all 9 provinces of South Africa**
  - **Total potential reuse flow of up to 1,067 Ml/d**

MARKET STUDY

Project pipeline criteria, outputs and initial focus projects

- **Initial Focus Projects:**
  - The **WRP will be developed in phases** whereby the first phase targets projects with the highest probability of being implemented. There is likely to be only a few projects within the first 3 years to prove the concept and build confidence in the WRP as well as the technology
  - The initial list of projects is likely to come from those Municipalities that have **already started planning for reuse and have initiated feasibility studies.** There are also a few that have a strong wastewater and water treatment capability who may also be interested but may not have initiated a project just yet
  - The first phase of projects <u>could</u> thus come from the following:
    - City of Cape Town;
    - Nelson Mandela Metropolitan Municipality;
    - City of Ekurhuleni;
    - City of Johannesburg Metropolitan Municipality;
    - City of Tshwane Metropolitan Municipality;
    - eThekwini Metropolitan Municipality;
    - Buffalo City Metropolitan Municipality;
    - Mangaung Metropolitan Municipality
    - City of uMhlathuze
    - Sol Plaatje LM
    - Emfuleni LM
    - Polokwane LM
    - Drakenstein LM
    - Mbombela LM
    - Steve Tshwete LM
    - Msunduzi LM
    - Emalahleni LM

BLENDED FINANCE APPROACH

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BLENDED FINANCE APPROACH

GCF capital – what are the parameters

- The **first phase** of the WRP is **estimated at around R22 billion**
- The funding approved by the GCF includes the following instruments:
  a. **A grant component of around R630 million (USD 35m @ R18/USD)**
     i. Project preparation component of around R540m (USD 30m @ R18/USD)
     ii. Capacity building component of around R90 million (USD 5m @ R18/USD)
  b. **Concessional loan component of around R3.6 billion (USD 200m @ R18/USD)** – primarily intended for capex and to lower the blended cost of debt on qualifying projects
- We need to meet the **6 investment criteria of the GCF**
- **MUST DEMONSTRATE** how the GCF funding will be used to achieve **CLIMATE BENEFITS**
- **MUST DEMONSTRATE** the **ADDITIONALITY** of the GCF Capital, which is rooted in the financial viability of delivering projects through a WPO

ELIGIBILITY CRITERIA

Approach

- Selection of Sub-Projects (Public and Private):
  - Sub-Projects that apply for support will be required to pass first the **primary climate change screening** process (using the Screening and Governance Toolkit)
  - Whether a Sub-Project applies for project preparation support or where a Sub-Project is already prepared and requires funding for implementation, the application (and passing) of the **primary climate change screening** is a pre-requisite to assess the strength of the project's climate basis
  - After the primary climate change screening, all approved Sub-Projects will be required to also undertake a comprehensive **climate risk vulnerability assessment (CRVA)** (this could include undertaking these assessments from the start, or updating and strengthening an existing study)
  - Depending on the score achieved during the primary climate change screening, the climate risk vulnerability assessment may be required prior to the secondary screening to determine a Sub-Project's eligibility for WRP's further support during its implementation
  - Should a Sub-Project not meet the **secondary assessment criteria**, it will not be eligible for further WRP funding
  - The **tertiary criteria** are applied only to assist in providing a short list of priority projects and are not exclusionary

1A Primary screening

1B Climate Risk Vulnerability Assessment

2 Secondary screening

3 Tertiary screening

Prioritisation

ELIGIBILITY CRITERIA

Overview of primary, secondary and tertiary screenings

Criteria	Value	Requirement
Primary Screening (Exclusionary)		
Water insecurity driven by climate vulnerability	Scorecard includes climate change and risk vulnerability, drought exposure, resilience benefits and adaptation optimization Post screening climate risk vulnerability assessment to be completed.	Clear climate vulnerability with the screening scorecard scores greater than 60% Only Sub-Projects where 70% or more of the water supply deficit is driven by climate change
Secondary Screening (Exclusionary)		
Wastewater Treatment Works ("WWTW") Design Capacity	Greater that 20 Ml/d	Yes, greater than 20-Ml/d
Regulatory Compliance (Chemical)	Greater than 50% regulatory compliance	Yes, greater than 50% compliance
WWTW Technology Type	Only activated sludge plants will be supported to ensure the consistency of effluent quality required	Yes, incorporates an activated sludge plant
Environmental Safeguards	All projects shall comply with both GCF and DBSA Environmental and Social Safeguards Standards, with only Category B and C levels of impact being acceptable.	Yes, meets the safeguard requirements of GCF and DBSA and risk is at levels B and C.
Financial viability	All Sub-Projects that move beyond project preparation into implementation must be financially viable, and this will be required to be demonstrated in the project-specific feasibility studies / project information memorandums to be undertaken prior to Programme funding commitment.	Yes the Sub-Project is financially viable
Tertiary Criteria (Prioritisation)		
Beneficiation	Priority will be provided to Sub-Projects that provide for mitigation including biogas, solar power, sludge management and sludge beneficiation.	
Linkage to strategic projects	Priority will be provided to water reuse projects in supporting of strategic projects.	
Offtake agreements	Priority will be afforded to Sub-Projects where the existence of confirmed offtake agreements	

GCF FUNDING

General

- Environmental and social:
  - no Category A projects may be supported
  - Comply with environmental and social management framework (ESMF) for the WRP and the Sub-Project
  - For each sub-project develop an environmental and social impacts assessment ("ESIA") and environmental and social management plan ("ESMP")
- Gender:
  - Comply at all times with the recommendations and requirements of the Gender Action Plan
- Project preparation funding from co-funders (municipalities own funding, national government grants, DFIs, other providers of project preparation funding) available as grants or reimbursable grants
- The GCF Loan is in the form of a limited recourse loan channeled through the DBSA (as Accredited Entity of the GCF) into Sub-Projects – GCF therefore takes project risk on the Sub-Projects
- GCF funding availability:
  - Funding is available and must be commitment over a period of 10 years (until 2033)
  - Maximum loan tenor of 20 years
  - Total programme funding therefore 30 years

PROCESS AND APPROACH

Steps to become part of the WRP

1. A municipality, water board or private sector entity to **express an interest** to the WPO for project preparation and/or implementation support for their water reuse projects (letter signed by municipal manager <u>plus</u> council resolution will be required)
2. Party requesting support must indicate **co-funding contribution** for project preparation
3. WPO to enter into an **agreement** with the recipient (municipality/water board/private sector) which will govern the relationship and the process of receiving support under the WRP
4. The WPO to **conduct the primary screening (incl CRVA), secondary- and tertiary screenings** to determine whether a project **meets the eligibility criteria and qualifies (for both project preparation and implementation)** to form part of the WRP (the WPO will procure and appoint a service provider to conduct the CRVA)
5. Continue with **project preparation activities (bankable feasibility studies)** for projects that meets the eligibility criteria – WPO to procure service providers for project preparation or work with service providers already appointed by a municipality or water board
6. Continue with **financial structuring, arranging of funding (following DBSA processes) and procurement** for implementation (projects ready for implementation)

THANK YOU

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