

Public finance and grant money have been the main sources for the water and sanitation sector. With the contraction of governments' capacity to provide public finance, new sources of finance are sought for the water and sanitation sector. This paper explores existing financing models and suggests a way forward for the DBSA.

# Financing Water – an overview of models

November 2018

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## Executive summary

The water and sanitation (and health – WASH) sector is a key sector in the Sustainable Development Goals (SDGs) agenda. A poorly managed and financed water and sanitation sector could have serious implications for communities and countries, particularly in the context of climate changes and water shortages. This paper offers an overview of existing forms of finance in the water sector in South Africa and Africa with some mention of international experiences. It does not replace any strategic paper prepared by the DBSA nor sector papers prepared by specialists. Rather, it pulls together sources from within the Bank and provides information on what other partners have done in the water sector.

The DBSA has traditionally supported the water sector with loans and grants. This support has been limited but continues under the new Bank strategy in new and innovative ways. The Bank will do well to look at new initiatives from its development partners who are active in the financing and supporting of the water and sanitation sectors around the world.

The opportunities both in South Africa and in the SADC region range from supporting municipalities in minimizing existing water losses and maximizing new financing models linked to climate finance, river basin supporting programmes and blended finance.

The DBSA is undertaking a number of initiatives in the water sector that range from full-package offerings to municipalities such as Tshwane and others, and new innovative options such as the work being piloted by the Product Development Unit. More will emerge as the Bank drives wins in this sector that remains a difficult one to finance in the South African context.

The Bank will map out its strategy as new projects come online with more private sector content. The main aim is to provide an initial overview of the water sector as it currently opens up new opportunities such as end-user options and blended finance resources.

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The opportunities both in South Africa and in the SADC region range from supporting municipalities in minimizing existing water losses and maximizing new financing models linked to climate finance, river basin supporting programmes and blended finance. The main regional focus though should be on river basin management particularly in the light of water scarcity across the SADC region.

This paper has underscored the direction in which the bank is going by highlighting existing models of financing in the water and sanitation sector. The future of the Bank's role in the WASH sector will depend on its adoption of innovative models, preparation support of water projects and collaboration with its existing and new development partners, including the private sector.

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## Introduction

The water and sanitation sector has proved to be a difficult sector to finance both in South Africa and internationally. The common understanding is that it is a public good therefore it should be supported by public finance. This assumption has been challenged by recent developments related to Point-of-Use sales by private companies and the role that non-governmental agencies have played in providing clean, safe drinking water and safe sanitation to communities around the developing world.

The DBSA's mandate includes water and sanitation in the southern African region, including South Africa, however, the pipeline of national and regional projects has reduced to a mere trickle. Financing institutions such as the DBSA are currently looking at innovative ways of financing water and sanitation and for new models of providing WASH at affordable prices particularly to poor households.

This report provides a high-level view of the financing of water and sanitation in the developing world. It aims to highlight best cases where public and private finances have been combined to create best practice with development impact results. The DBSA's repository of specialist papers on the water sector, which have informed this report as and when required.

## Current status of the water and sanitation sector

The 2018 African Economic Outlook estimates that the current financing gap in the water and sanitation sector (including piped water, public stand/tap, safe wells/boreholes, improved latrines, safe pit latrines, septic tank and sewer) in sub-Saharan Africa is around US\$56 – 66 per annum (2018:70).

The Sustainable Development Goals (SDGs) have identified water, sanitation and hygiene (WASH) in Goal 6 that has two targets, namely, universal and equitable access to safe and affordable drinking water and access to adequate and equitable sanitation and hygiene for all. The World Health Organisation (2017) has estimated that there is a financing gap of \$114 billion per annum in the endeavor to meet these two targets. The Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), a United Nations Water initiative implemented by WHO, reports that 2.4 billion people live without access to improved sanitation facilities and 700 million people are not receiving their drinking water from improved water sources.<sup>1</sup>

The UN's SDG report states clearly on Goal # 6 that if<sup>2</sup>:

If the natural environment continues to be degraded and unsustainable pressures put on global water resources, 45 per cent of the global gross domestic product, 52 per cent of the world's population and 40 per cent of global grain production will be put at risk by 2050.

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<sup>1</sup> [http://www.who.int/water\\_sanitation\\_health/monitoring/investments/glaas/en/](http://www.who.int/water_sanitation_health/monitoring/investments/glaas/en/)

<sup>2</sup> Sustainable Development Goal 6 – Synthesis Report 2018 on Water and Sanitation, UN Water United Nations, p10.

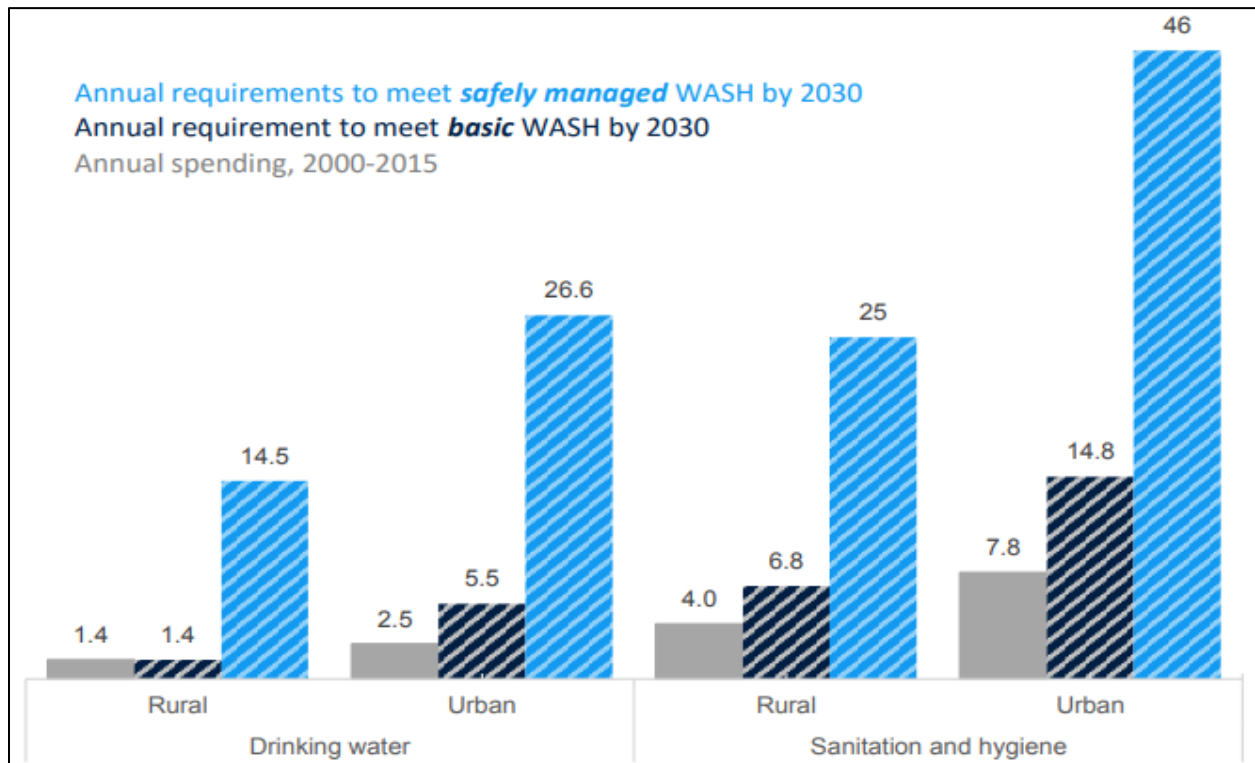
Water and sanitation play additional roles in securing dignity through access to clean and adequate facilities and in providing safe access for women and girls who generally collect water in developing countries.

Other than the intangible contributions water and sanitation make, the WHO explains that economic benefits include a gain of 1.5% of global GDP and a \$4.3 return for every dollar invested in water and sanitation services due to reduced health care costs for individuals and society and greater productivity and involvement in the workplace through better access to facilities.<sup>3</sup>

International data show the need for WASH around the world, which has resulted in a call for increased financing. Even though funding for WASH has increased three-fold, water official development assistance has remained constant at 5 per cent as a proportion of the total ODA disbursements. In 2016, water ODA disbursements had increased to \$9.0 billion from \$7.4 billion in 2011.

The recent Sector Position Paper on sanitation (IDKC August 2018) shows the annual requirements to meet basic WASH by 2030.

**Figure 1: Estimating the SDG Financing Gap (Billion \$)**



Source: DBSA Sector Position Paper - Sanitation, IDKC August 2018

<sup>3</sup> [http://www.who.int/water\\_sanitation\\_health/monitoring/economics/en/](http://www.who.int/water_sanitation_health/monitoring/economics/en/)

The needs for Africa are not any less concerning. In November 2018, the Infrastructure Consortium for Africa (ICA) released their Infrastructure Trends Report 2017. They estimate the infrastructure needs as follows:

**Table 1: Infrastructure financing needs in Africa by sector**

(\$bn unless otherwise indicated)	Financing need (low)	Financing need (high)	Six year average commitments	Minimum financing gap	Max financing gap	% financing need shortfall (low case scenario)	% financing need shortfall (high case scenario)
Transport	35	47	32	3	15	8%	31%
Water	56	66	11	45	55	81%	84%
Energy	35	50	27	8	23	24%	47%
ICT	4	7	2	2	5	50%	72%
Multi-sector	-	-	3	-3	-3	-	-
Other	-	-	0	0	0	-	-
Unallocated	-	-	2	-2	-2	-	-
<b>Total</b>	<b>130</b>	<b>170</b>	<b>77</b>	<b>53</b>	<b>93</b>	<b>41%</b>	<b>55%</b>

Source: ICA (2018)

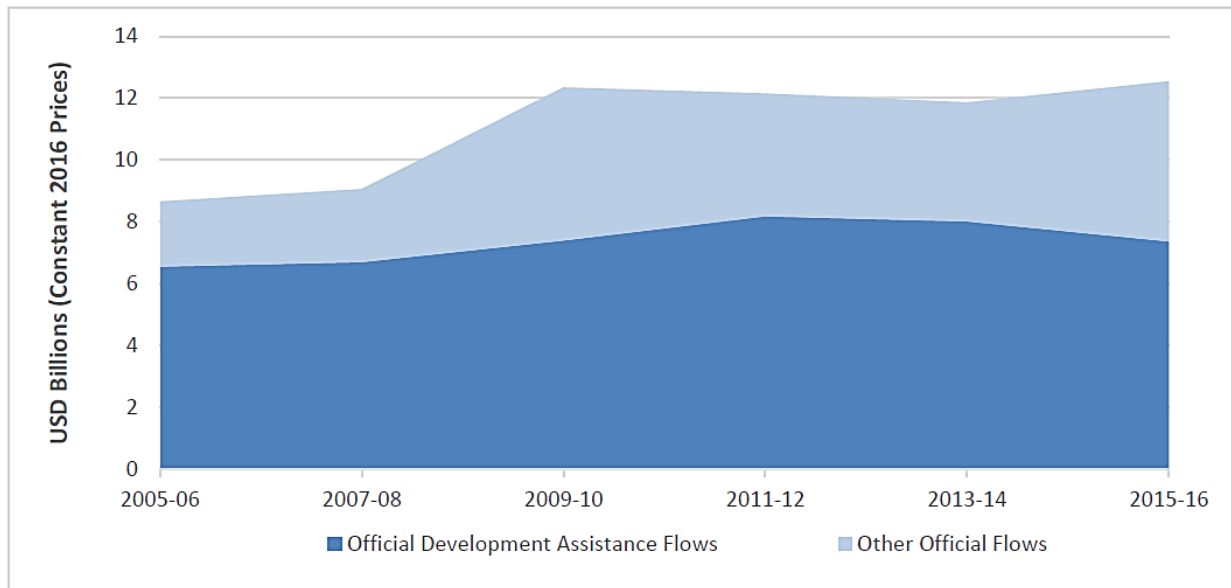
Table 1 clearly shows the predominant need of the water and sanitation sector in relation to all the other sectors on the continent and globally (see Figure 3 below). Every effort needs to be made to attract all possible sources of finance into this sector that has the potential to create significant social and human degradation if the fault lines are not corrected through additional finance and better resource management strategies.

At the November 2018 meeting of the OECD Roundtable on Financing Water that focused on the use of blended finance for the water and sanitation sector, the meeting determined that the ability of the sector to attract blended finance, depends on the following:

- The extent to which the investment supports development objectives; and
- Whether the risk-return profile of the investment can be designed to attract commercial finance.

Figure 2 below, shows the traditional dominance of Official Development Assistance and other official flows in the water sector. The latter category includes other flows that do not meet the OECD's concessionality requirements.

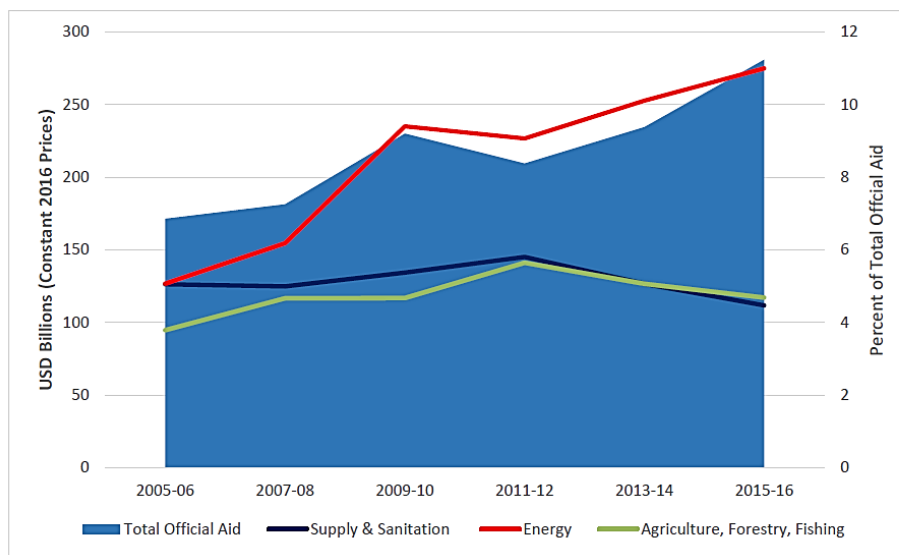
**Figure 2: Trends in official aid to water and sanitation (2 year average commitments)<sup>4</sup>**



Source: OECD, 2018

Figure 3 below, shows how both forms of ODA have increased but the contributions to the water and sanitation sector, as well and the agricultural, forestry and fishery sectors, have declined while the energy sector has become the preferred sector. The former two sectors are water reliant while the latter has become more popular as green energy (solar and water) has become popular with development partners.

**Figure 3: Sector wise trend in official aid (2-year average commitments)**

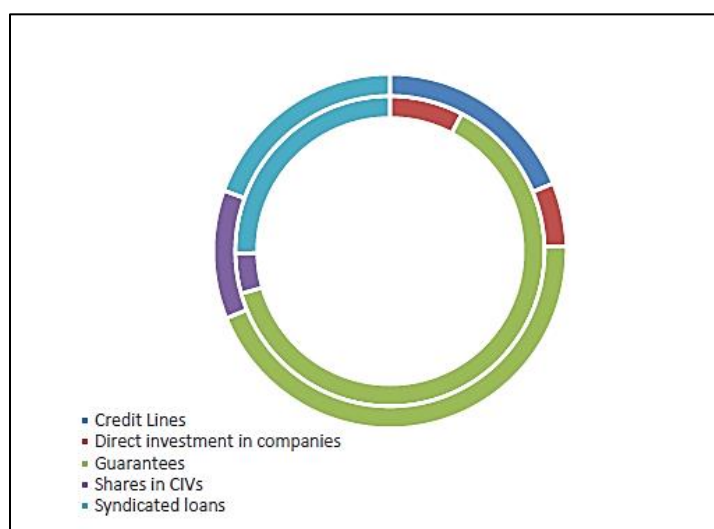


Source: OECD, 2018

<sup>4</sup> <http://www.oecd.org/water/Background-Paper-3rd-Roundtable-Financing-Water-Blended-Finance-for-water-related-investments.pdf>

The OECD Roundtable Report (2018:8)<sup>5</sup> informs us that private sector finance in the water and sanitation sector has remained low at 7% in developed countries and only 0.5% in sub-Saharan countries. Figure 5 below depicts evidence that the water sector is dominated by guarantees (the inner circle) while the outer circle shows the finance types for all sectors.

**Figure 5: Private finance mobilised by official development finance interventions in total, and water and sanitation, by instrument in 2012-15**



Source: OECD (2018)

## Financing transboundary water

River basin authorities are tasked with the management of transboundary and river basin resources. The River Basin Organisations' (RBOs) capacity to perform their role is dependent on the fees and other sources of income from member countries, users and development partners. GIZ produced a study in 2014 that looks at the different sources of income but their report does not cover the cost of projects identified in those regions. Project finance would still need to come from investors or governments who finance shared water projects. This section highlights the costs of some of the RBOs in Africa and explores their financing plans.

The GIZ's report on the financial sustainability of international river basin organisations (2014) provides an overview of 23 River Basin Organisations (RBOs) in Africa, Asia and Europe. Most RBOs are financed through regular budgets that are financed by member countries' contributions. The larger RBOs are financed through project finance.

For many RBOs member contributions provide finance for day-to-day operations. The GIZ study identifies four indicators for financial sustainability:

<sup>5</sup> <http://www.oecd.org/water/Background-Paper-3rd-Roundtable-Financing-Water-Blended-Finance-for-water-related-investments.pdf>



- The sufficiency of funding – the agreed regular budget suffices to fulfill the defined and agreed regular or minimum functions of the RBO;
- The degree of self-financing of the regular budget (member state contributions and other continuous sources of funding such as fees and charges)
- The reliability with which the continuous funds are actually paid
- The resilience of the organisation to cope with unforeseen short-term financing needs and delays in payment.

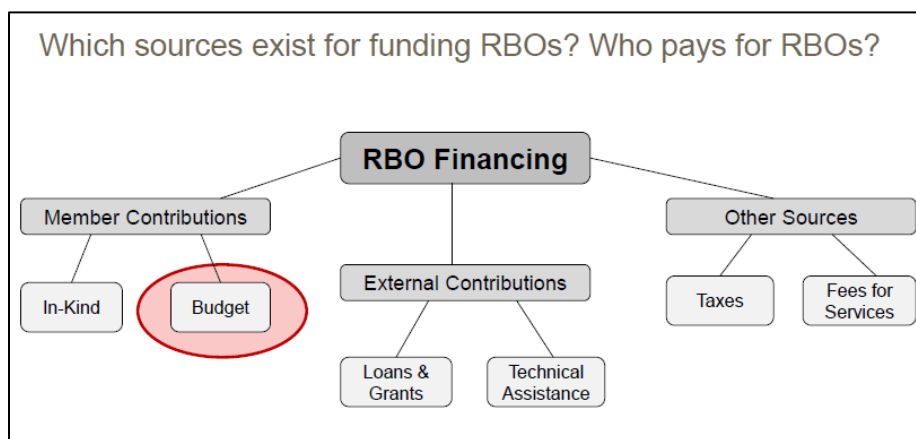
The study also distinguishes between three types of RBOs:

- Coordination oriented without a secretariat (JWC, Sabi/Buzi and PJTC, Kunene in Southern Africa)
- Coordination oriented with a secretariat (LIMCOM, Limpopo; OKACOM, Okavango; ORASECOM, Orange-Senqu; and ZAMCOM, Zambezi).
- Coordination and implementation oriented (CICOS, Congo; LCBC, Lake Chad; LVBC, Lake Victoria; NBA, Niger; and NBI, Nile).

### Nile Basin Initiative

The Nile Basin Initiative (NBI) Secretariat underwent priority-setting, estimation of financial needs and formulation of a goal for self-financing. They identified a core budget of US\$3.8 million that will be fully member-financed by 2017/18. The GIZ and the German International Climate Initiative have undertaken to support the NBI by providing a Euro 6 million institutional capacity building grant to strengthen the management and governance of water resources in that region. The programme is scheduled to run from 2015 – 2020.<sup>6</sup> Sources for river basins are generally constituted as in Figure 6 with variations on the model dependent on the development partners involved, the strength of the institution and the willingness of members to pay fees.

**Figure 6: Funding mechanisms for RBOs – Sources of finance**



Source: GIZ<sup>7</sup> (2014)

<sup>6</sup> Blumenstein, S., Pohl, B., Tänzler, D. (2016). Water and Climate Diplomacy. Integrative approaches for adaptive action in Transboundary River Basins. Adelphi, Berlin.

<sup>7</sup> Schmeier, S. (2014). Second Workshop “River Basin Commissions and Other Joint Bodies for Transboundary Water Cooperation: Technical Aspects”

## Financing water in Africa

Water as an infrastructure sector fares relatively poorly in relation to accessing financing compared to energy or ICT. There are a number of asset categories and instruments that are used for infrastructure projects generally that water accesses to a limited extent. Table 2 below gives an overview of the infrastructure financing instruments available. This section of the report also provides analysis on which products water has accessed in the past and the possible gaps that could be filled.

**Table 2: Available financing instruments for infrastructure projects**

Modes		Infrastructure instruments		Market vehicles
Asset category	Instruments	Infrastructure project	Corporate balance sheet/other entities	Capital pool
Fixed income	Bonds	Project bonds	Corporate bonds, Green bonds	Bond indices, bond funds, ETFs
		Municipal, sub-sovereign bonds		
		Green bonds, Sukuk	Subordinated bonds	
	Loans	Direct/Co-investment lending to infrastructure project, Syndicated project loans	Direct/co-investment lending to infrastructure corporate	Debt Funds (GPs)
			Syndicated loans, Securitised loans(ABS), CLOs	Loan Indices, Loan Funds
Mixed	Hybrid	Subordinated loans/bonds, mezzanine finance	Subordinated bonds, convertible bonds, preferred stock	Mezzanine Debt Funds (GPs), Hybrid Debt funds
Equity	Listed	YieldCos	Listed infrastructure and utilities stocks, Closed-end Funds, REITs, IITs, MLPs	Listed Infrastructure equity funds, Indices trusts, ETFs
	Unlisted	Direct/Co-investment in infrastructure project equity, PPP	Direct/Co-investment in infrastructure corporate equity	Unlisted infrastructure funds

Source: OECD (2015)<sup>8</sup>

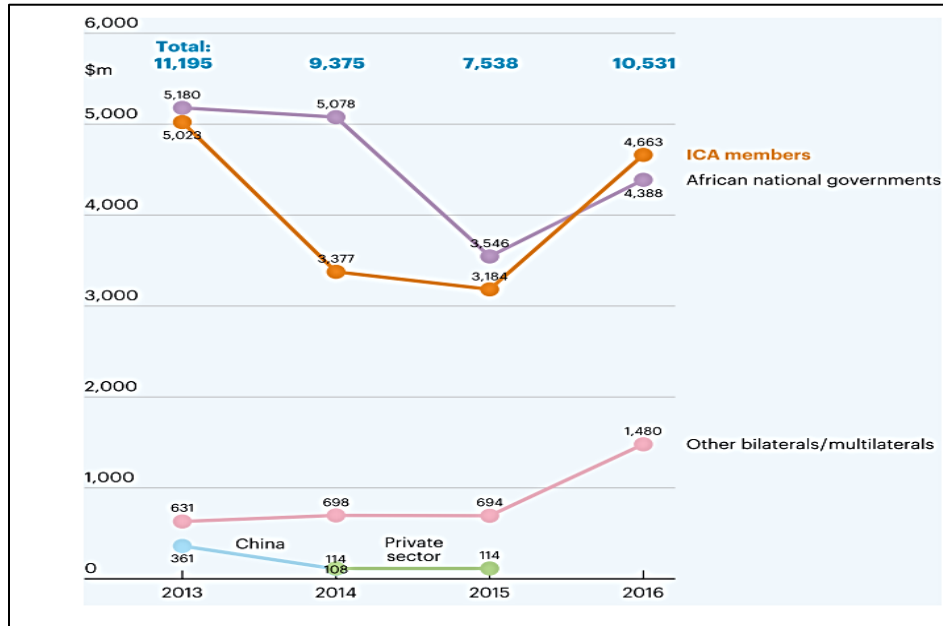
The Infrastructure Consortium for Africa's report on Water Financing Trends (2017) shows that over 85% of the funding for the sector came from ICA members and African national governments. Water commitments increased to \$10.5 billion in 2016 and African national spending increased to \$4.4 billion while ICA commitments rose to \$4.7 billion.

[https://www.unece.org/fileadmin/DAM/env/documents/2014/WAT/04April\\_9-10\\_Geneva/presentations/3.1\\_Schmeier\\_Presentation\\_JBWorkshop\\_RBOFinancing.pdf](https://www.unece.org/fileadmin/DAM/env/documents/2014/WAT/04April_9-10_Geneva/presentations/3.1_Schmeier_Presentation_JBWorkshop_RBOFinancing.pdf)

<sup>8</sup> [www.oecd.org/g20/topics/financing-for-investment/Infrastructure-Financing-Instruments-and-Incentives.pdf](http://www.oecd.org/g20/topics/financing-for-investment/Infrastructure-Financing-Instruments-and-Incentives.pdf)

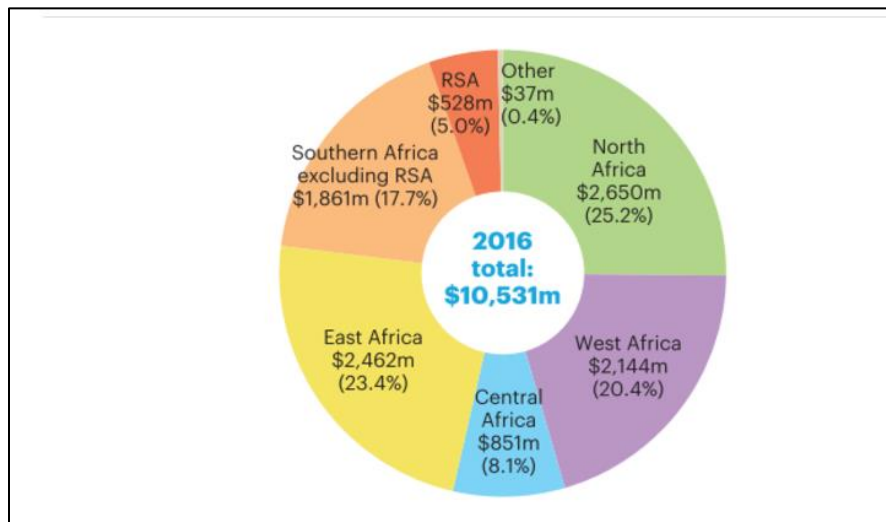
By 2016, ICA members committed \$10,531 million of their total commitments to water with the bulk of the commitments going to the top three regions, namely, North Africa (25.2%), East Africa (23.4%) and West Africa (20.4%). Figures 7 and 8 show the ICA financing trends in the water sector.

**Figure 7: Total water sector financing by source, 2013 - 2016**



Source: ICA Water Financing Trends<sup>9</sup>

**Figure 8: Total water sector financing by region 2016**



Source: ICA Water Financing Trends<sup>10</sup>

<sup>9</sup> <https://www.icafrica.org/en/topics-programmes/water/water-financing-trends/>

<sup>10</sup> <https://www.icafrica.org/en/topics-programmes/water/water-financing-trends/>

By 2018, the amount committed to the water sector by ICA members increased to \$13.2 billion. This was 16.2% of the total amount committed to infrastructure on the continent. None of those commitments came from the private sector.

## Water Financing Options<sup>11</sup>

Financing the water sector has always been viewed as a public sector responsibility. Recently, calls for private sector contributions to public goods like water have increased due to increased domestic demands for improved social services. This section explores various options for financing water that range from purely public sector models, private sector models and to a blend of both sectors. A recent United Nations SDG 6 Synthesis Report 2018 on Water and Sanitation<sup>12</sup> states that the financing gap in the sector amounts to US\$ 14 billion to achieve Target 6.1 (access to safe and affordable drinking water) and Target 6.2 (access to sanitation and hygiene and end open defecation). This financing gap does not include operation and maintenance, monitoring, institutional support, sector strengthening and human resources.

WASH sector partners identified three financial challenges:

- Lack of finance for strengthening the enabling environment and service delivery;
- Untapped use of repayable finance, including microfinance and blended finances; and,
- Resources inadequately targeted towards the poor and vulnerable who are unable to access services.

In an attempt to finance water, partners and member states have linked water to agriculture and water to climate change. The agriculture/water nexus has received much attention on the continent as agriculture makes up the majority of most economies in Africa.

## Official Development Assistance and Development Finance

The African Union Commission and development partners recently launched a US\$10 billion water fund for projects. The fund, also known as PIDA Water, under the auspices of the Programme for Infrastructure Development in Africa (PIDA), will finance transboundary water and hydro projects from 2019 – 2024 in support of regional economic integration. PIDA Water will provide project preparation funds, finance priority projects and foster a water-food-energy-environment nexus approach. Additional funding will be made available through the European Commission's Africa Water Investment Programme (AIP).

In their 2018 Development Cooperation Report, the Organisation for Economic Cooperation and Development (OECD) report that ODA to water and sanitation, transport and storage, energy and communications sectors was around 56% of total ODA and 20% of adaptation-related development finance in 2016.

## The public sector

South Africa's treasury allocations and tariffs finance the national water sector. Cornelius Ruiters (2015) identified seven governance models for the funding and financing of future water projects in South Africa, which includes the public sector and the private sector to varying degrees (see the Annexures).

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<sup>11</sup> <https://www.ircwash.org/blog/financing-universal-access-role-water-financing-facilities>

<sup>12</sup> United Nations, 2018. Sustainable Development Goal 6. Synthesis Report on Water and Sanitation.

In 2002, the European Union and the African Union established the EU-Africa Strategic Partnership on Water Affairs and Sanitation to contribute to achieving water supply, sanitation, and water resources management related to the Millennium Development Goals. The Africa-EU Water Partnership Project (AEWP) is an extension of the 2002 relationship and the Stockholm International Water Institute (SIWI) was appointed as an implementation agency.

The AEWP's mandate is to:

- Develop and finance sustainable water infrastructure
- Identify and prioritise infrastructure projects
- Advance the financial viability of 5 projects
- Provide capacity building for water sector governance, including capacity for project financing
- Identify capacity building needs
- Develop tools for integrated planning
- Manage knowledge on the water sector.

The SIWI team and partners will provide the following support to the water sector:

- Build a business case for great equity contributions by governments or donors into the capital requirements of water projects.
- Build a business case for a project's improved development impacts through addressing cross-cutting issues such as gender, poverty and human rights.
- Prepare applications for grant and blended financing to scale loans to support a larger number of communities and improve development impact.
- Assisting project promoters to develop preliminary, blended financial models with a focus on leveraging equity from government and grants for the social components.
- Undertake key assessments such as value for money including social/development impact components, options/scenarios, political-economy risk, environmental impact, stakeholder consultation, gender analysis and impact, indigenous peoples and vulnerable groups' impact, legal and regulatory frameworks, alignment of national and regulatory frameworks also related to transboundary projects, etc.

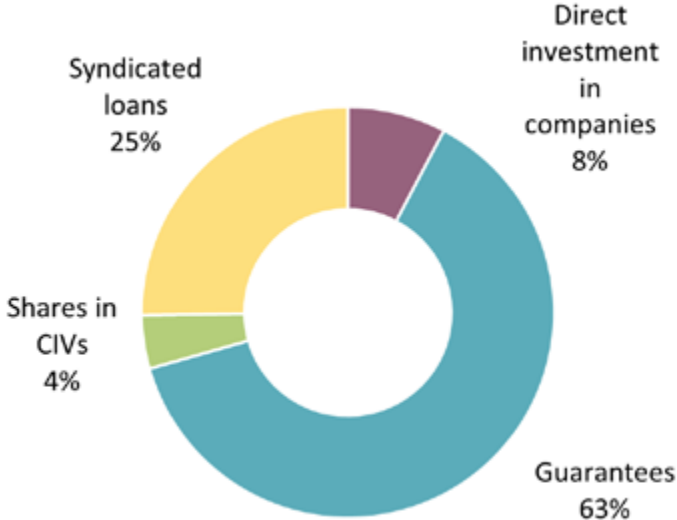
### The private sector

PWC released a report in 2018 on a potential private sector role in water projects. They argue that 'securing water will come down to effective collaboration with other uses in the water basin and when stakeholders come together, even with the best intentions to work together, they often have huge differing perspectives and demands'.<sup>13</sup> The OECD's 2018 Report also calls for the private sector to contribute more in the water sector. Figures 9 and 10 overleaf provide an overview of the role of the private sector in financing water globally.

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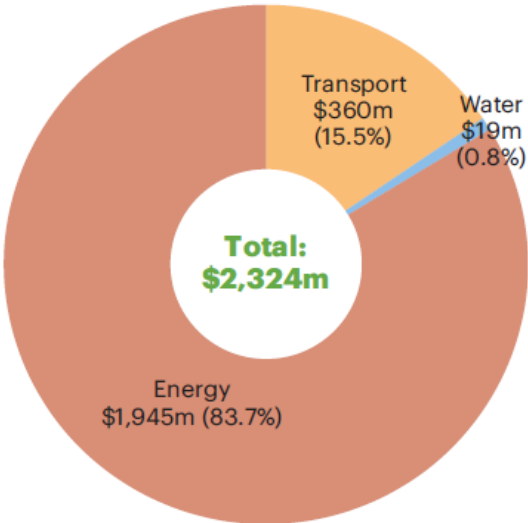
<sup>13</sup> PWC Collaboration: Preserving water through partnering that works'.

**Figure 9: Private finance mobilized by official development finance interventions to the water and sanitation sector, USD, 2012-15**



Source: OECD (2017)<sup>14</sup>

**Figure 10: Private sector financing in Africa by sector in 2017**



Source: ICA (2018)<sup>15</sup>

The PWC water report identifies Chile and China as leaders in private sector collaboration in the water sector. Chile became a leader in the full privatization of wastewater treatment but private sector involvement led to increased tariffs and less-than-adequate investments. China, alternatively offered PPP arrangements where private investors built water and sewage treatment plants and then received income

<sup>14</sup> OECD, 2017. Financing water and sanitation in developing countries, key trends and figures. OECD Publishing, Paris.

<sup>15</sup> [https://www.icafrica.org/fileadmin/documents/Annual\\_Reports/IFT2017.pdf](https://www.icafrica.org/fileadmin/documents/Annual_Reports/IFT2017.pdf)

for operating them. In South Africa, the Mbombela and iLembe municipalities have partnered with private sector companies to provide water and sewage treatment services. Johannesburg did not renew their initial PPP with a private sector consortium because of problems related to the limited supplies of water to low-income households.<sup>16</sup>

Water Financing Facilities have played an important role in financing water and sanitation across the developing world.<sup>17</sup> The IRC Wash programme identifies 3Ts as sources of finance, namely:

- Tariffs;
- Taxes; and
- Transfers (ODA/Grants).

The understanding is that the 3Ts could reduce the financing gap, not entirely, but significantly so and simultaneously reduce the need for transfers or ODA.

IRC asserts that Water Financing Facilities have a role to play because they facilitate the cooperation between utilities and projects and reduce risk. These Water Financing Facilities are successful in India and in Colombia.

**Table 3: Conditions for success of Water Financing Facilities**

Financial sector	<p>A favourable country credit rating</p> <p>The potential in-country to mobilise additional sources of domestic financing from institutional investors like pension funds or insurance companies</p> <p>Domestic Institutional investors in the country have experience with issuing bonds for several years and there is the potential to mobilise domestic financing from these institutional investors (like pension funds and insurance companies)</p>
WASH sector	<p>Clearly defined investment needs for water and sanitation</p> <p>Clearly defined and long term stable institutional and legal framework and separation of roles between regulator, local government and service providers</p> <p>Benchmarking and credit rating of service providers is done systematically and the service providers have the required management level</p> <p>There is a good pipeline of projects based on bankable proposals including the required level of guarantees for the payment of the debt service such that the loan providers have the required level of comfort to finance the service providers</p>

Source: IRCwash.org

<sup>16</sup> <https://www.businesslive.co.za/bd/opinion/2018-01-31-water-infrastructure-investment-an-opportunity-for-private-sector/>

<sup>17</sup> <https://www.ircwash.org/blog/financing-universal-access-role-water-financing-facilities>

Water financing facilities require strong financial markets and good project preparation, which is not characteristic of most of the African markets.

In an attempt to find financial solutions to the water financing problems, the OECD and GIZ held a conference in October 2018, which the DBSA attended. GIZ's Rolfe Eberhard<sup>18</sup> presented the following:

- Fixing the demand side – search for and support the core conditions for effective utility management, through smart use of grant money and technical assistance. This will enable the utilities to receive and use funds (including commercial funds) efficiently and with transparency.
- Fixing the supply side – create greater flexibility in the allocation of finance to better match the effective demand where these conditions exist, including better DFI coordination and linking TA with financing.

### The private sector

Bayliss (2013)<sup>19</sup> outlines a number of financing options for the water sector. She argues that the public sector should finance water services despite the rallying call for private sector interventions. Her rationale is that water is a public good that the private sector has been slow to finance and brings new challenges to the water and sanitation sector. These include a high cancellation rate of private sector contracts for water supply and high costs not related to direct project implementation (e.g. payments to expatriate staff with inflated payments to the parent company). Bayliss (2013) also claims that the efficiency rates between the private and public sectors are not as clear-cut as assumed.

The international conferences and High-Level Panels on water and sanitation have highlighted the need for a comprehensive and concerted push from all parties to ensure that the sector achieves its development goals. They aim to leverage public sector finance to crowd-in private sector investments. These private sector resources will then be blended with 'cheaper' public sector money and be offered to developers of infrastructure in the various sectors. In essence, public finance will de-risk the project through a number of initiatives.

Bayliss (2013) identifies a number of 'donor-backed schemes':

- Hedging products;
- Partial credit guarantees;
- Political risk insurance; and,
- Risk sharing products.

Following on from the provision of risk-cover, the private sector requires financial de-risking in the sector to facilitate the range of finance that it could contribute. Eberhard (2018) recommends that a financing eco-system based on blended financing be created to provide different sources of finance for the water sector:

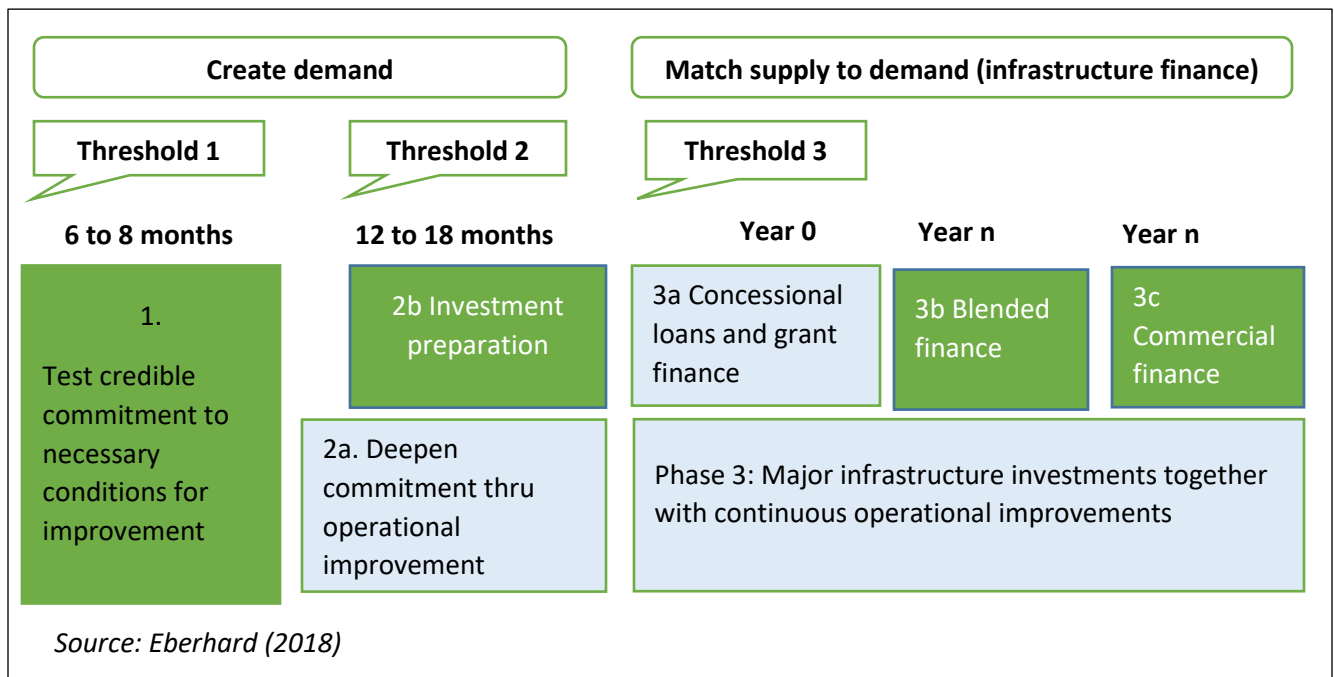
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<sup>18</sup> [https://www.slideshare.net/OECD\\_ENV/oecdgizconferencepresentationsrolfeeberhardedited](https://www.slideshare.net/OECD_ENV/oecdgizconferencepresentationsrolfeeberhardedited)

<sup>19</sup> Bayliss, K. (2013). Financing water in Africa. No.182, SOAS Department of Economics Working Paper Series.



Figure 11: A phased financing ecosystem<sup>20</sup>

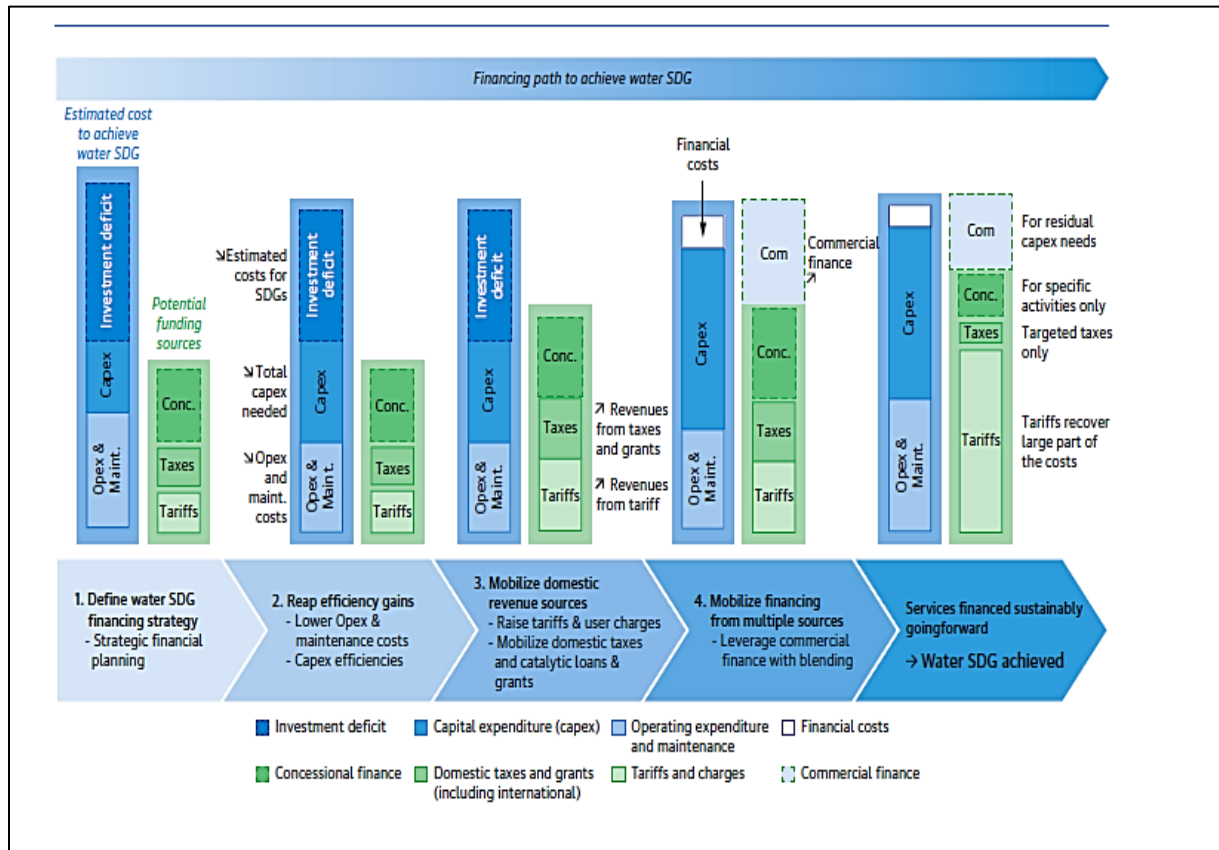


<sup>20</sup>Rolfe Eberhard (2018). Urban Water Utility Finance – Fixing a Leaking Bucket, presentation at the OECD/GIZ Blended Finance Conference, October.

[https://www.slideshare.net/OECD\\_ENV/oecdgizconferencepresentationsrolfeeberhardedited](https://www.slideshare.net/OECD_ENV/oecdgizconferencepresentationsrolfeeberhardedited)

A 2016 World Bank report offers financing options for the 2030 Water Agenda:

**Figure 12: A proposed financing path to break out of the unsustainable status quo to meet the water SDG**



Source: World Bank Water Global Practice (2016)<sup>21</sup>

Figure 12 above maps the financial value chain in the water sector with tariffs, taxes and concessional finance dominating resource mobilization. Once the sector, institution or utility is stabilized through the 3Ts, commercial finance can be crowded in. The assumption is that tariffs will continue to grow as consumers pay more for a more stabilized sector. In the South African context, this might require an information and education strategy to improve payment for services in the sector.

The World Bank's report (2018)<sup>22</sup> identifies different roles for water sector stakeholders (see Table 4 below). The stakeholders include national governments, service providers/local governments, development partners and private financiers. The policy/instruments include:

- Increase mobilization of funding sources;

<sup>21</sup> Financing options for the 2030 Water Agenda (2018). Joel Kolker, Bill Kingdom, and Sophie Trémolet with James Winpenny and Rachel Cardone. <https://openknowledge.worldbank.org/bitstream/handle/10986/25495/W16011.pdf?sequence=4&isAllowed=y>

<sup>22</sup> Financing options for the 2030 Water Agenda (2018).

- Improve performance and governance;
- Facilitate mobilization of domestic finance;
- Maximise asset value;
- Improve government policies and incentives;
- Advance research.

**Table 4: Recommendations to improve water sector efficiency and financing**

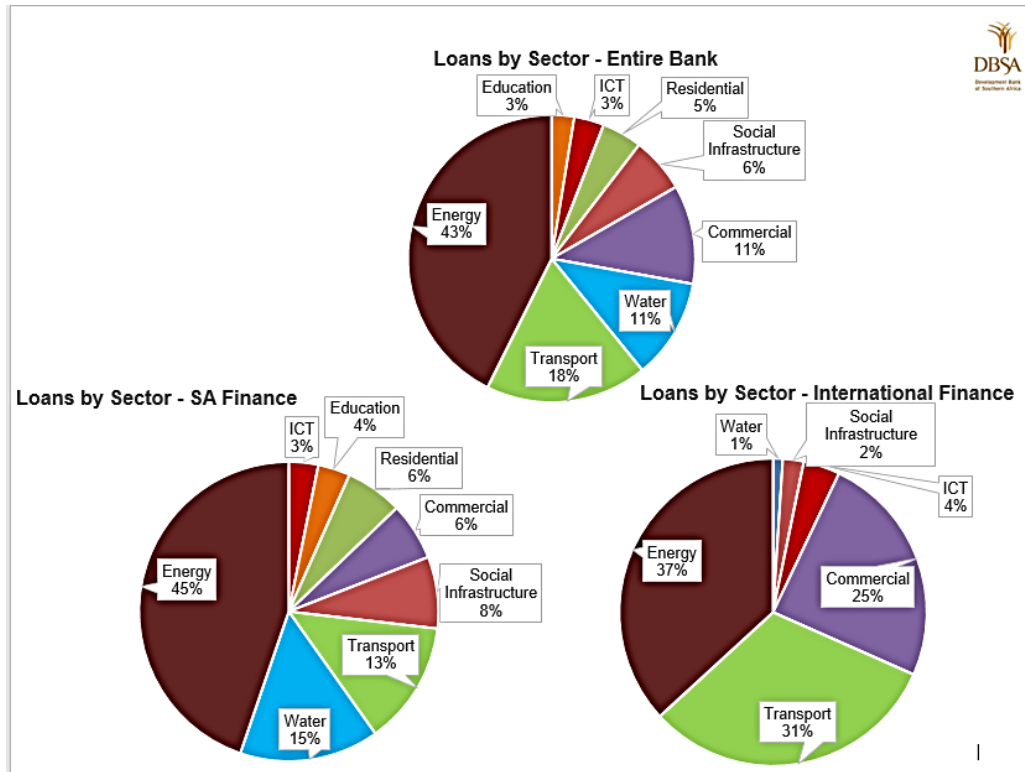
Policy/instrument	Stakeholders			
	National governments	Service providers /local governments	Development partners	Private financiers
<b><i>Increase mobilization of funding sources</i></b>				
Improve flows from user charges and tariffs				
Mobilise domestic taxes				
Increase access to concessional finance				
More effective use of international climate finance funds				
<b><i>Improve performance and governance</i></b>				
Improved efficiency and governance lead to creditworthiness				
Improve regulations				
<b><i>Facilitate mobilization of domestic finance</i></b>				
Encourage private domestic capital mobilization				
Use government and donor funds to catalyse commercial finance				
Improve finance architecture				
Maximise use of credit enhancements				
Make tax transfers predictable				
Expand household level finance				
<b><i>Maximise asset value</i></b>				
Improve project preparation				
Improve asset management				
<b><i>Improve government policies and incentives</i></b>				
Create incentives				
Undertake strategic financial planning				
Maximise public investment benefits				
<b><i>Advance research</i></b>				
Enhance analytical work				
	Leading role			
	Contributing role			

Source: World Bank 2018

## Water in the DBSA

The DBSA has had exposure to the water sector with limited success. The figure below shows that the total loan book exposure to the water sector is 11%, with 15% and 1% in the then-SA Financing and International Financing Divisions, respectively.

**Figure 13: historical water financing in the DBSA<sup>23</sup>**



Source: DBSA (2017)

A 2016 water paper<sup>24</sup> proposed four entry points for the DBSA into the water sector:

Four possible funding instruments were identified for municipal lending:

- Traditional project based loans for direct implementation by the Client;
- Short-term bridging finance;
- Performance based lending for revenue-enhancing development activities; and
- Financing of private sector partners for BOTT and similar projects.

Two additional opportunities were presented for utilities and institutions:

- Limited recourse project funding
- Balance sheet structuring and funding of new WRM institutions.

<sup>23</sup> DBSA's Water Sector Strategy 2017/19 – 2019/2020 (2017). The paper was prepared by a cross-functional team.

<sup>24</sup> DBSA KMR Paper (2016). Issues and Opportunities in Southern African Water Security.

The Water Sector Strategy (2017)<sup>25</sup> highlighted the Bank's role in the water sector:

The Bank has provided support to the entire water sector value chain, covering the following:

- **Water resources management and development infrastructure** (dams, transfer schemes);
- **Bulk Infrastructure** (water and sewerage purification works, bulk potable water mains, pump stations and reservoirs);
- **Distribution infrastructure** (sewerage systems, water conservation and water demand management, potable water distribution and reticulation systems, revenue **enhancement** infrastructure and systems).

Historically, the above sub-sectors are financed through loans and grants, usually in partnerships with government and the other financing institutions. The Bank has invested more extensively in connector, distributor and service infrastructure compared to bulk treatment works.

The DBSA has also undertaken to support initiatives in the water sector, for example, the City of Tswane's Water Conservation Water Demand Management (WCWDM) programme. The programme has a number of features:

- Reduction of recoverable real losses (RRL) and ILI
- Reduction of over-consumption
- Improved cost recovery
- Strong support by politicians and management
- Phased financing and implementation approach
- Strong ability to monitor and verify benefits
- Sectorised supply zone (sub-project) implementation

Figure 14 below provides an overview of the programmes framework and the contribution and role of the DBSA and its financing partners. The proposal falls in with the general role of DFIs in that as the project risk is reduced through development finance, the private sector would become involved.

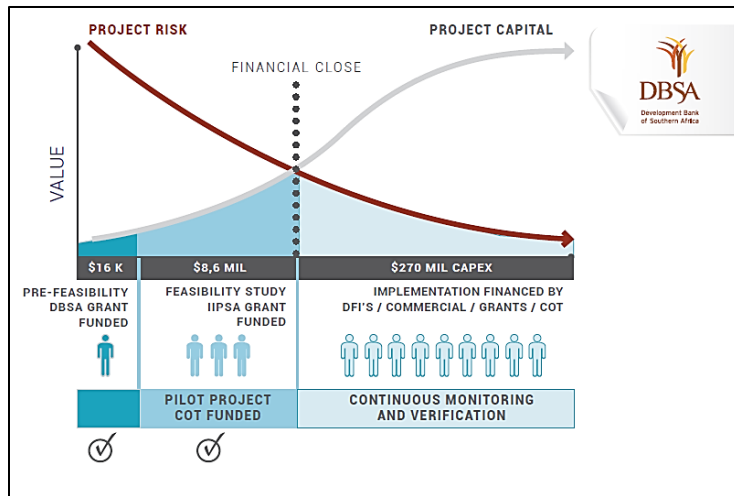
The programme has also identified critical success factors that are based on:

- DFIs' ability to influence;
- Focused use of limited grant funding;
- Collaboration between development partners; and
- Standardized project documentation.

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<sup>25</sup> DBSA's Water Sector Strategy 22017/19 – 2019/2020. The paper was prepared by a cross-functional team.

**Figure 14: WCWDM Programme Framework**



Source: DBSA (2018)<sup>26</sup>

A final example of the Bank’s new approaches to the water sector is the work being done by the Product Development Unit on end-user options to make clean water more affordable and accessible to users more widely on the continent and nationally. The team is currently working on different innovative options and will present their proposals in due course.<sup>27</sup>

### Concluding observations

The DBSA has traditionally supported the water sector with loans and grants. This support has been limited but continues under the new Bank strategy in new and innovative ways. The Bank will do well to look at new initiatives from its development partners who are active in the financing and supporting of the water and sanitation sectors around the world.

The opportunities both in South Africa and in the SADC region range from supporting municipalities in minimizing existing water losses and maximizing new financing models linked to climate finance, river basin supporting programmes and blended finance. The main regional focus though should be on river basin management particularly in the light of water scarcity across the SADC region.

This paper has underscored the direction in which the bank is going by highlighting existing models of financing in the water and sanitation sector. The future of the Bank’s role in the WASH sector will depend on its adoption of innovative models, preparation support of water projects and collaboration with its existing and new development partners, including the private sector.

<sup>26</sup> DBSA presentation on the City of Tshwane WCWDM Programme, Konstant Bruinette, OECD/GIZ Blended Finance Conference, 4 October

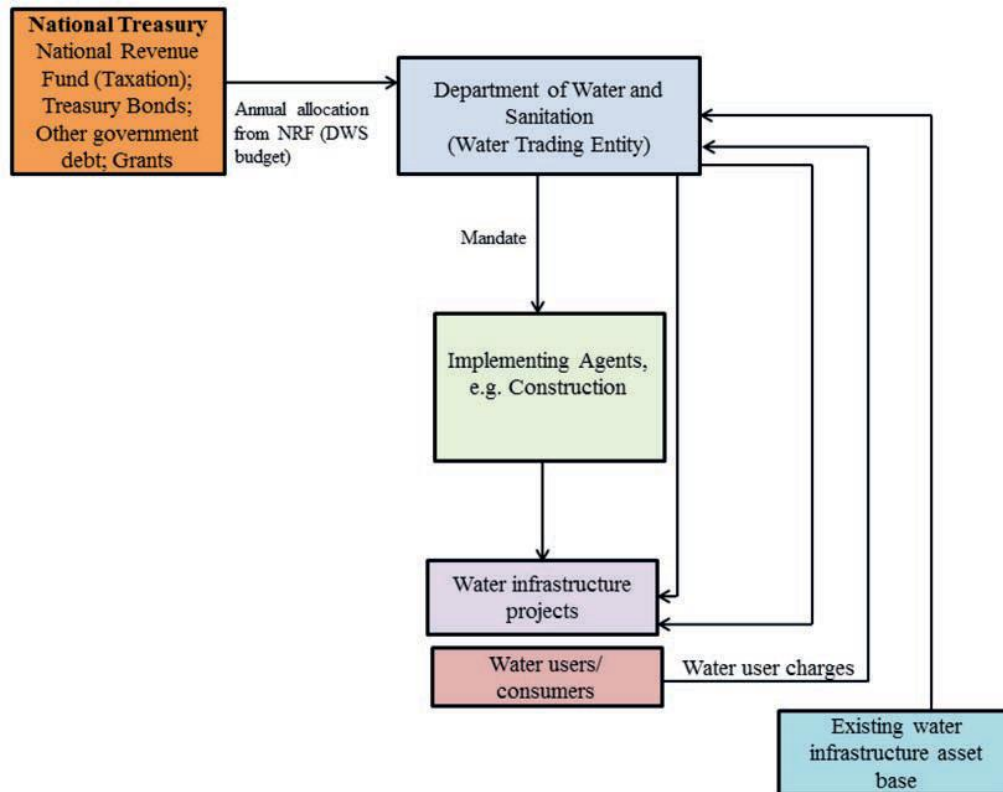
<sup>27</sup> Johann Lubbe is the lead of a cross-function team on innovation in the water sector.

## Annexures

### South African options to finance the water sector<sup>28</sup>

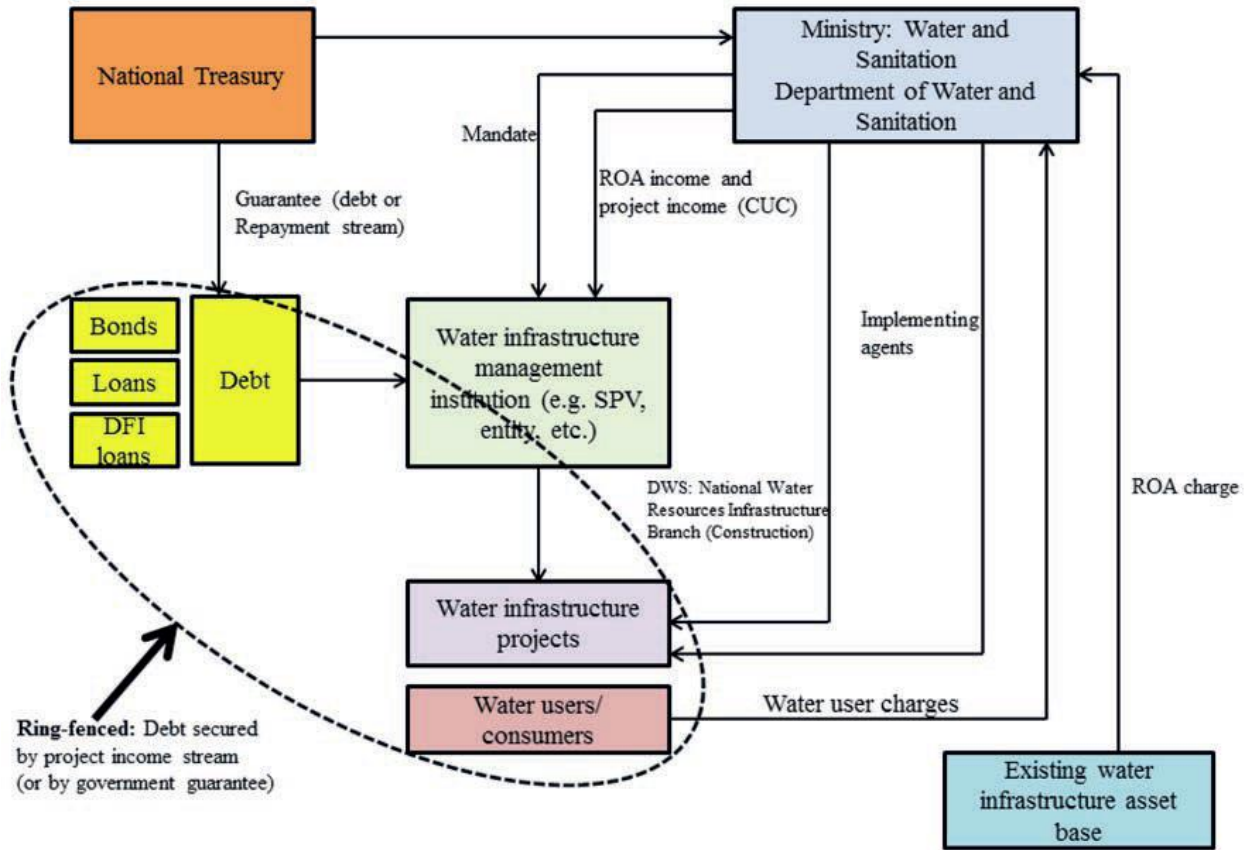
All the annexes are from a paper (Cornelius, 2013) focused on funding the water sector in South Africa. The paper provides different financing models for water.

#### Annex 1: Direct fiscal funding for infrastructure development and allocated budget from the National Revenue Fund



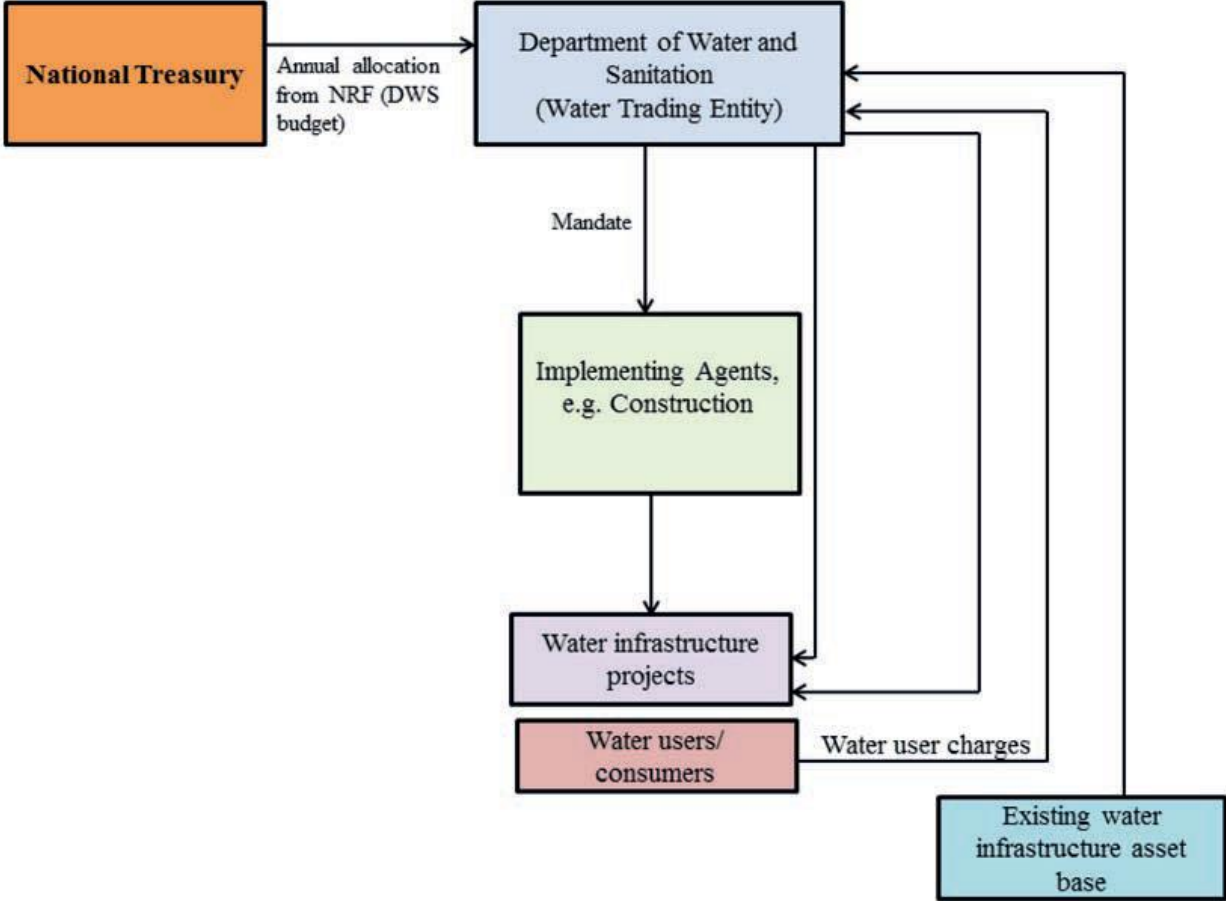
<sup>28</sup> Cornelius Ruiters (April, 2013), Funding models for financing water infrastructure in South Africa: Framework and critical analysis of alternatives, Water SA Volume 39

Annex 2: Ring-fenced special purpose vehicle (SPV) generating enough revenue for water infrastructure development

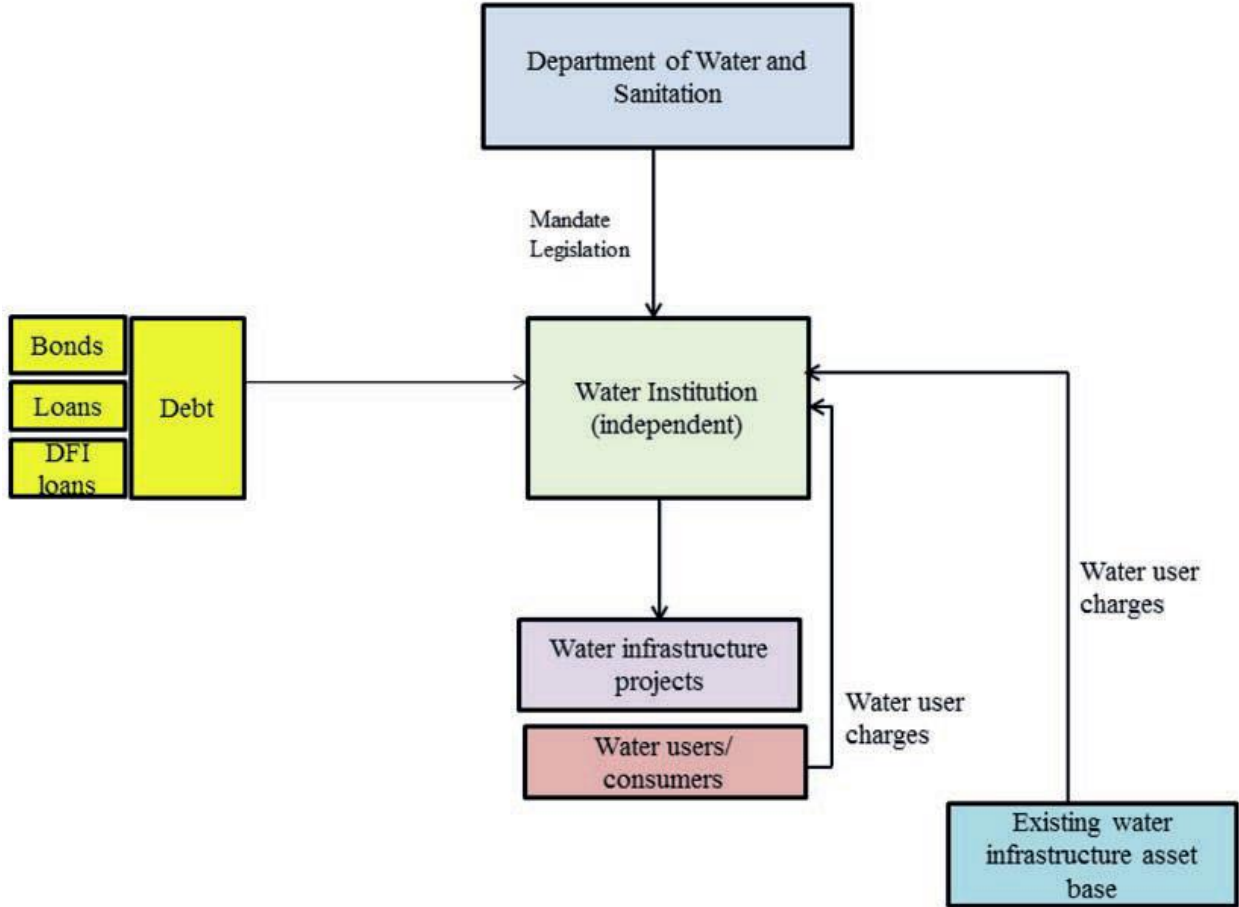




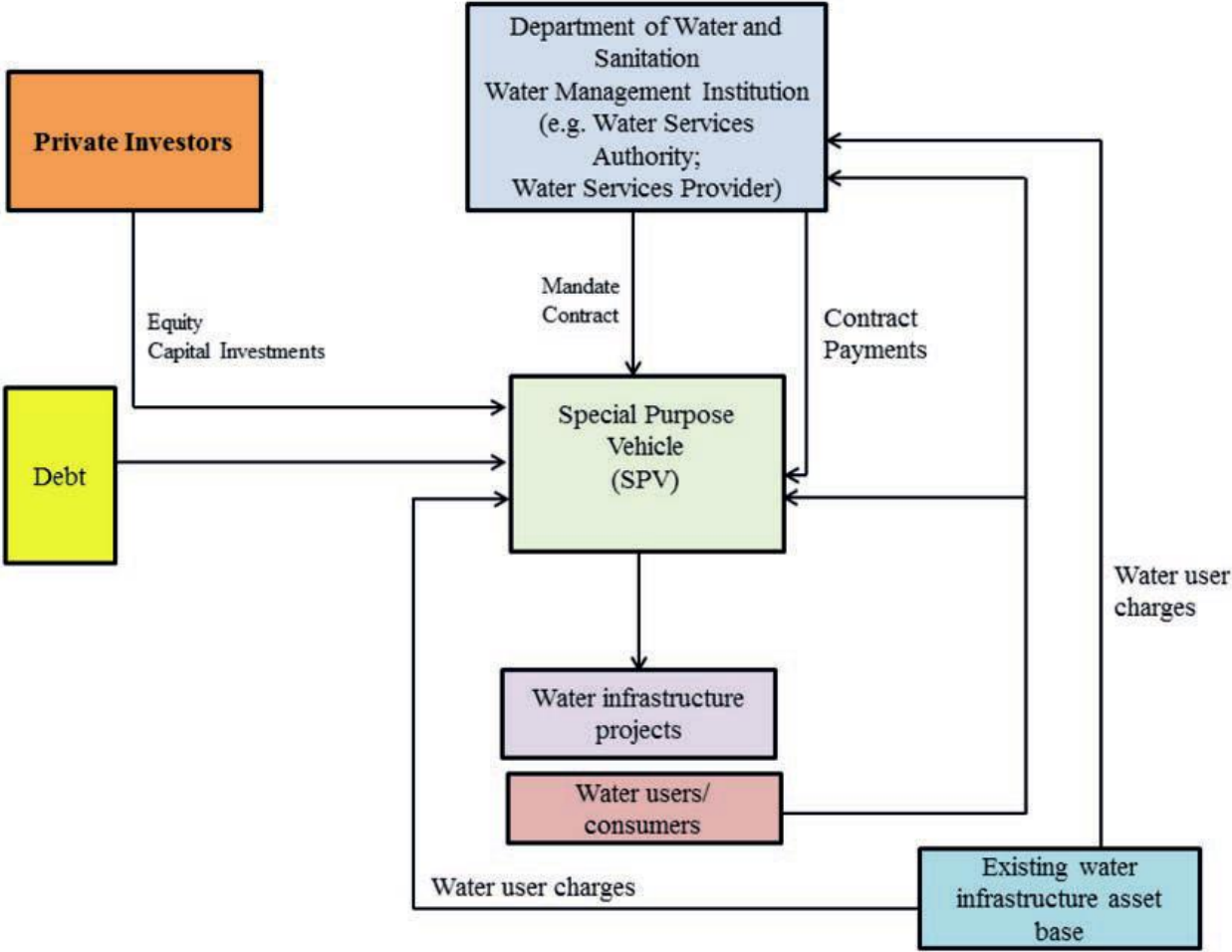
Annex 3: SPV housing dedicated water infrastructure cash-flows to finance critical water infrastructure projects



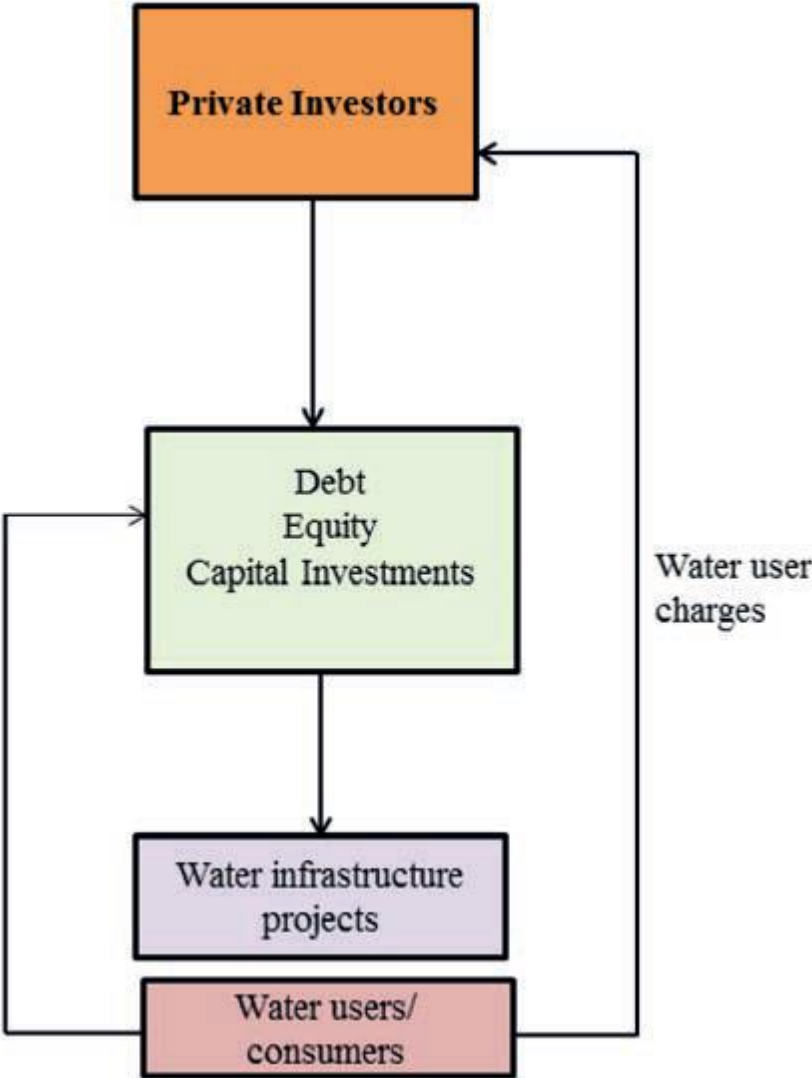
Annex 4: Stand-alone water institution with strong balance sheet for water infrastructure development



Annex 5: Public-Private Partnership (PP) with equity to be used for the implementation of water infrastructure development projects



Annex 6: Private development, through a well-structured privatization model, could be part of the water infrastructure development, operations and maintenance solutions



Annex 7: Private concession for the implementation and management of water infrastructure

