

iven the latest extreme weather conditions, it's clear that more investment is needed in Southern Africa's water infrastructure sector. Engineers will often identify a "soft target" in a system that, when optimised, will lead to greater efficiencies throughout the system. In this case, the soft target for better financial management in the South African water sector is our nine (soon to be eight) water boards.

There are other implementing agents in South Africa where such interventions would be effective, including the Trans-Caledon Tunnel Authority, various district municipalities, as well as local water user associations (which frequently manage their own infrastructure).

Across all the above-mentioned water services authorities (WSAs), the need for funding applies. Financial assistance is out there for the taking but good





proposal writing is vital to ensuring the money goes to where it's most needed.

Over and above efficient WSA management and well-written funding applications, getting project funding right means cutting corruption out of the equation. Clean governance is key



to acquiring funds and effective WSA financial management.

#### **Economies of scale**

According to Nezar Eldidy, executive director, Sobek Engineering, the most prominent marker of efficiency in utilities is when they operate according to the principles of economies of scale. "It's a simple equation really: when you input the exogenic and endogenic factors of utilities, it is possible to rate them on their efficiencies and then compare them."

Endogenic factors include all factors intrinsic to utilities, such as asset rent rates, labour rent rates, and the cost of

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raw water. Exogenic factors refer to external factors affecting a utility, such as the market where it operates, the market's socio-economic characteristics, its culture and governance.

"Talking about big utilities, and I suppose a good example is Rand Water, miaht not alwavs associate these with efficiency. However, they efficient are because of the economies of scale they

achieve. Look at the parallel example of Pick n Pay. Pick n Pay is efficient because it has many outlets but a relatively small number of staff. In the same way, utilities are efficient when they employ a small number of staff relative to the number of connections overseen by the utility," Eldidy explains.

He cautions that subsidies and grants make it difficult to measure utilities' efficiency because a company or organisation, according to textbook definitions, needs to be able to manage its own finances in order to approach a state of efficiency.

Eldidy also points out that the aforementioned endogenic factors of labour and assets impact on one another, which is why record keeping becomes so important for measuring labour rate ratios compared to asset characteristics. Keeping track prevents the cost of one overtaking the other, a state that brought South African utilities to the brink of financial failure in the past (back when there were 16 utilities).

### No really, economies of scale!

Kim Adonis, economist, Climate Resilient Infrastructure Development (CRIDF), remarks that funding organisations such as the one she represents make finance available, but when funding proposals are too narrow in scope they miss out on funding earmarked for large-scale projects.

"CRIDF has a project pipeline of about different infrastructure projects, all of which are multidisciplinary in nature and drawn from SADC's priority lists. Most of the projects are

> drawn from the SADC Regional Infrastructure Development Master Plan projects, and that amounts about \$15 billion for 24 projects. CRIDF has been operational for nearly four years and, in assessing these different projects, there have been a range of lessons learned," Adonis explains.

Adonis stresses the need to tap into economies of scale as one of the crucial lessons CRIDF has learned

on its financing journey.

"Implementing agents need to package projects so they can be scaled up and replicated. This is something we learned relatively late in the life cycle of CRIDF but it is so crucial to tap into these economies of scale. The example that we have at CRIDF is a trans-frontier conservation area called the Kavango Zambezi Transfrontier Conservation Area. It's the world's largest conservation area, with 36 national parks, game reserves, game management areas and community conservancies. It spans five different SADC countries and CRIDF initially started off with three to five pilot projects in the area. Essentially, the intervention was structured around 'livelihoods' funding, because it provides water supply to rural communities. What we discovered is, if you look at these projects in and of themselves, there is limited ability to tap into alternative types of finance to move beyond purely grant-based finance as there is very little return on an individual-project basis," explains Adonis.

"However, when we scaled up our approach to incorporate all five countries and implement a much larger and more holistic project, we were suddenly able to unlock different types of finance - for example, climate funds. These require projects to be of a certain magnitude









# FAST FACTS

### R160 billion

**Approximate** amount per year **South Africa** loses from its economy due to fraud

## 2.4 million

**Number of** houses that could build per vear if local fraud losses are recovered



Fraud is a major source from which criminal syndicates get their funding for drugs, human trafficking and money laundering

# \$3.7 trillion

Amount we lose globally due to fraud about 3.7 rugby fields full of stacked bills

"The average organisation loses up to 5% of its revenue due to fraud and corruption. In government, that amount can be quite staggering."

> Jaco de Jager. CEO, Association of Certified Fraud South African Chapter

and economies of scale need to be achieved in order to tap into these funds. Additionally,

project implementers are now able to approach potential commercial vestors and private equity funds that have a focus on, for example, livelihoods projects," she adds.

Other lessons learned include the need to build relationships with financiers in order to understand what their criteria for project funding actually are. Also important is starting to work with potential funders from the outset of a project rather than only after the scope has been established.



Finally, and most importantly, getting rid of corrupt individuals who deprive communities of efficient, sustainable water supply is critical.

Jaco de Jager, CEO, Association of Certified Fraud Examiners South African Chapter, notes that tip-off lines from inside organisations are typically the most effective way to identify fraudsters and ensure they face penalties. This is imperative owing to the scale of the problem.

> "The average organisation loses up to 5% of its revenue due to fraud and corruption. In government, that amount can be quite staggering.

If we apply ratios international from case studies, that means South Africa loses approximately R160 billion per year from our economy due to fraud and corruption.

What does that look like? That's about 2.4 million houses that could have been built. People forget that fraud is the source from which syndicates get their funding. Drugs, human trafficking and money laundering - any of those illegal activities is funded through fraud and, globally, we lose US\$3.7 trillion due to fraud and corruption. About 3.7 rugby fields full of stacked bills - that's how much money is lost," he explains.

"Internationally, the best way of catching fraudsters is through tip-offs. So, I ask you, if you are in the water industry, do you have an internal tip-off hotline for your organisation? Internal auditors are the second most likely means of catching fraudsters, followed by management reviews and external auditors," says De Jager.

Up to 64% of fraud happens with internal assistance, and De Jager's research indicates that as many as one in three professionals could potentially commit fraud.

#### **Conclusion**

When water is financed inefficiently, it is the communities left without water who suffer. As each month clocks in as "the hottest month in living memory", it is time to get serious about funding water projects before there isn't enough to go around.

An important fact about water project funding is that fraud is not only being committed in government. There are many guilty parties who are taking water that does not belong to them. Farmers are over-abstracting water, for example. And 10% of non-revenue water is lost through illegal connections. It's time that South Africans collectively start protecting water as a precious commodity - before it's too late. 35

