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WATER QUARTERLY NEWS, JANUARY 2022

SMART METERING AND WILLINGNESS TO PAY

Quarterly news on the water sector in both Denmark and South Africa





WATER QUARTERLY

JANUARY 2022

THE FUTURE IS CALLED SMART METERING

By Teodora Damian

Non-revenue-water (NRW water lost in leaks or water delivered and not paid for) in Denmark is 7.8% on average, compared to many countries, which lose as much as 30 to 60% of their treated water before it reaches its consumers. This is not only a waste of clean water, but it is also a waste of the resources that have been put into extracting the water, treat it and distribute it. The question now is - How did Denmark reach such low NRW?

There are multiple reasons for why Denmark is so good at keeping and getting paid for keeping drinking water in the pipeline grid. One of them being that, since 1994, utilities with a water loss of more than 10% have been required to pay a penalty fee to the state. Additionally, since 1996, all properties connected to public water utilities have been required to install water meters. These reforms have pushed the utilities towards more efficient digitalized operations, allowing them to measure and register water consumption and to quickly identify even the smallest leak.

Smart metering allows an ongoing monitoring of the consumption and, compared to the old days of billing total water consumption based on a once a year meter check, smart meters give you time-of-use water consumption information. In this way, the exact consumption of every user and the precise volume supplied to different supply areas and sections is available. The real time data access has significantly enhanced water leak detection and hence water conservation efforts.

Reduction of NRW is only one of the benefits smart metering has brought to Denmark: to give another example, the decreased level of customer complaints is another aspect to consider, as utilities are now able to provide fact-based informations. Or being able to build data-driven strategies on how to optimize the use of water resources for the benefits of communities, ecosystems and the whole planet is another aspect to not underestimate.

In conclusion regulation, strict threshold for NRW of 10% and mandatory domestic metering combined with technology, smart metering and reliable and real time data, can be a very effective measures in improving water conservation efforts.

A WORD FROM THE CONCELLOR

By Jørgen Erik Larsen

We cannot underestimate the importance of collecting a full cost recovery price on water. The current situation in South Africa is a classic illustration of how bad it can go if we do not. A downwards spiraling crisis where the root cause is underpricing, lacking revenue collection, water loss and over consumption. All for the very real logic that if funds do not flow upwards, then water will stop flowing downwards. The system simply runs dry, first from finance and then from water. The argument raised is that the low and no income part of the population that unfortunately still comprises that majority cannot pay or will not pay. But what happens when the public water supply collapses or becomes intermittent because of the above mentioned root causes? Then the private water vendors step in, and their services are not for free, and yes, their clients have both ability and willingness to pay. And for the indigent: Don't give the water as a subsidy – give the subsidy to the indigent so she can pay for the water and thereby is motivated to save water to save money. There is no such thing as a free liter of water and there is a willingness to pay for this very important resource.

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WILLINGNESS TO PAY AND COMMUNITY OWNED SELF-SUPPLY

By Nsuku Nxumalo

South Africa faces significant inequality among its citizens with over 50% of the population living below the national poverty line. This translates to inequalities in access to quality basic services such as water, sanitation and electricity. Furthermore, the country experiences significant effects from climate change and biodiversity loss particularly as a result of increased temperatures, droughts and intermittent water supply. Residents in rural areas are thus the most vulnerable to these effects in an already water scarce country.

The reality is that while it is indeed a social good and a human right, and can therefore be argued to be free, water services still require financing. Be it from water users or from government, financing is needed for infrastructure construction and maintenance, treatment and labour costs. Therefore, if revenue is not flowing upwards, it is very difficult for good quality water to sustainably flow downwards. This begs the question of to what extent are citizens willing to pay for the sustenance of good quality water services and for the improvement of services where poor services exist.

Willingness to pay is obviously complex in practice, it is influenced by many factors and primarily constrained by the ability or means to pay. An interesting context where consumers in low income areas exercise their willingness to pay to unlock the power of cooperation is in community owned self-supply solutions (CSS).

The notion of self-supply is neither new nor unknown to South Africa. Although public service coverage has been increasing since 1994, many rural citizens are still reliant for water supply on their own initiatives. An example of such initiatives in South Africa is the case study of Tshakhuma in Limpopo, where different pathways to provide for water in local communities have been running throughout the years and what keeps all of them in common is that, while these schemes are open to everyone, an initial investment is required to join and in some schemes, the users are asked to contribute each month to their local communities. Hence, users that are not willing or able to make these contributions can be excluded.

While conventional supply may be the ideal, elements of self-provision may be necessary to achieve universal coverage, especially among scattered and remote communities.

CSS approaches are not without their challenges. These can be related to technical expertise, acceptance, quality control and the problem of exclusion where some community members are unable to contribute to the scheme. These issues can be resolved through the intervention of public and private sector actors. Early involvement of government and development agencies to provide the necessary skills, structure, subsidies, quality assurance and accountability can set up CSS initiatives for success.

As has been suggested by other water scholar, we should consider a supported form of community owned self-supply as one of multiple solutions to achieving universal supply.

A PREMISE...

Progress towards achieving the Sustainable Development Goal (SDG) for water supply and ensure availability and sustainable management of water and sanitation for all, has been steadily increasing in South Africa. Despite this, the journey towards universal basic water services by 2030 is still deemed to be advancing too slow.

Despite the rapid extension of public service delivery since the end of Apartheid, many rural citizens in South Africa still rely on their own initiatives and infrastructure to access water. They construct, improve, operate and maintain infrastructure of different complexities, from individual wells to complex collectively owned water schemes. While most of these schemes operate without legal recognition, they provide essential services to many households.

In this article we will see the case study of Tshakhuma in Limpopo.

Source:

https://www.researchgate.net/publication/351241451_The_emergence_of_collectively_owned_self-supply_water_supply_systems_in_rural_South_Africa_-_what_can_we_learn_from_the_Tshakhuma_case_in_Limpopo

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