Water demand management's shadow side: Tackling inequality and scarcity of water provision in Cape Town

EMG Water and Climate Change Research Series

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Abstract

In South Africa, the level of water service is symbolic of class; those who have taps, baths and flush toilets are socially and geographically divided from those who walk to collect water of dubious quality in a bucket. Even those who move into formal housing with piped water are in for a shock. As a water scarce country, further threatened by climate change, South Africa needs demand-side and conservation strategies. However, poor households are the main target of city-led water conservation and water-demand management strategies, which are often experienced as punitive and unjust. They are heavy-handed debt-recovery strategies in disguise. Technical interventions are favoured over more nuanced social responses, eroding the already dysfunctional relationship between citizens and local government. This presentation describes the experience of people living on the wrong side of Cape Town's water policies. Through action research, Cape Town-based NGO Environmental Monitoring Group and its civil society partners are exploring possibilities for re-imagining water demand management with people and water at the centre, and engaging with local government and decision makers to find just, humane solutions. The advantages include reducing inequality, supporting participatory democracy, building responsible citizenry, ensuring water for all, saving water and building resilience to climate change.

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Acronyms

CEJ Coalition for Environmental Justice

DWA Department of Water Affairs

EMG Environmental Monitoring Group

SAHRC South African Human Rights Commission

WCWC Western Cape Water Caucus

WDM water demand management

WMD water management devices (also known as *ufudo* or blue-top)

Introduction and who we are

Over the past five years, the City of Cape Town has rolled out water management devices (WMDs) through poor areas of Cape Town. By the end of 2010, 45 000 had been installed. Popularly known as the *ufudo* or 'blue-top', the WMD is a type of smart meter that limits the amount of water a household receives in a day. *Ufudo* is isiXhosa for tortoise, so named because these devices 'hide in their shell and we can't see what's going on inside'. Their installation has met with growing levels of resistance across the City. In Makhaza, Khayelitsha, residents have organised themselves and built alliances with NGOs and civil society networks to educate themselves around water and seek ways to address leaks and high bills without getting *amafudo.* Environmental Monitoring Group (EMG), a Cape Town-based NGO, is helping to facilitate a multi-stakeholder process with the residents of Makhaza to address leaks, high bills and citizen engagement with water services. This paper presents a case study of ongoing work in this area.

As water activists EMG works through a loose grouping of NGOs and CBOs called the Western Cape Water Caucus (WCWC), which is affiliated to a more formal membership-based structure called the Coalition for Environmental Justice, active in the Western Cape, and to the South African Water Caucus, which operates at a national level. EMG is a non-governmental organisation, registered as a Trust, and is an active member of all of the above networks. It contributes to strengthening them through facilitation (broadly defined), coordination, research and training. In the case of Cape Town water services, EMG has contributed its understanding of environmental issues, participatory governance and the relationship between climate change and water provision. At the core is a belief that people empowered with knowledge, confidence, recognition and support can make a great difference in their own lives. Part of EMG's approach and ethic includes regular written reflection reports by members of staff, which allows for structured learning and helps to surface and address issues that might otherwise remain hidden, for example on subtle power dynamics between NGOs and CBOs.

This paper draws on our water-activism work, presenting a case study of community water struggles in Makhaza, situating the problem within the context of the imperative for water demand management that is socially just and affordable, and reflecting on what that means for governance, ecological integrity, household water security and equality.

The introduction of water management devices in Cape Town

In 2007, water activists in Cape Town were alerted to the fact that the City of Cape Town was rolling out a new kind of meter that they were calling the 'water management device'. The South African Municipal Workers Union (SAMWU) was quick to issue a press statement condemning the installation of these meters (November 27th 2007):

> The 10 000 members of the South African Municipal Workers Union in Cape Town have decided to strongly oppose the City's plan to install "water management devices" in poor communities. It is an utterly disgraceful initiative from the City that relies on peoples' vulnerability and desperation... The Union is working with the SACP, NGOs, and the "Water for All" Campaign, which includes communities...

From the outset, these devices aroused deep feelings of mistrust within many communities and members of civil society. They were viewed as 'prepaid meters in disguise', an accusation that carried a lot of weight given that SAMWU had successfully led a campaign to declare a moratorium on pre-paid meters in Cape Town in 2005, and that the *Phiri case* against prepaid meters in Soweto was being heard before the High Court at the time. Most of the arguments against pre-paid meters seemed to apply to WMDs – they targeted poor households, they limited households to their free basic allocation (unlike houses on credit, top-ups were only possible through pre-payment (prepaid meters) or negotiated agreement with the City) and they imposed physical restrictions that could not be quickly reversed in the case of emergencies. The City responded in defence of the WMDs, countering the claims that they were pre-paid meters:

> The water demand management device is neither a prepaid meter nor a punitive tool. It is a device that assists individual households to manage their water consumption on a daily basis, save water and reduce their monthly water bills. It will help the City to manage debt. It also helps to speedily identify a leak... (Zolile Basholo, 'Meters Adjust to Usage', Letter to *Cape Times*, 20/12/07).

Managing water on a daily basis was a tall order, given that the WMDs were locked and had an opaque lid, making it impossible for households to read the meter and know when or whether their daily allocation would run out.

Meanwhile, a broader group of civil society, including NGOs EMG and Wildlife Society of South Africa (WESSA), met with SAMWU and decided that they needed to do independent research into the WMDs and peoples' lived experiences of them before condemning them outright. Meetings were held between the WCWC and the City Water Demand Management Department, where the new meter was presented and explained. With input from social science researchers at UCT, a questionnaire to determine the impact of WMDs on households was developed and in 2009, EMG interviewed people living with WMDs in Kuils River, Mitchells Village and Witsand (Atlantis). These interviews confirmed that there were serious problems with the WMDs, including a high incidence of technical failures leading to cut-offs, recurrent leaks leading to the allocated 350 litres per day running out quickly, a poor (or non-existent) consultation process, and slow response times from the City when people reported problems. Importantly, this research showed that the WMDs were not evil in and of themselves, but that the way they were being implemented, and the attitudes and assumptions behind their installation, were deeply problematic.

The WMDs were a way for the municipality to shift the burden of problems such as recurrent leaks onto poor people, with very little in place to support those people in dealing with this burden – for example: no education or engagement, no leak-fixing training, locked meter boxes meaning no way for people to read their own water meters, confusing bills, terrible customer service, etc.

With the initial findings of this research, as well as testimonials from other areas as evidence, the WCWC made a submission to Parliament calling for a moratorium on the installation of WMDs. A Department of Water Affairs (DWA) inquiry into the devices ensued, led by Regional Director Rashid Khan, which recommended that the City urgently address the operational problems experienced by communities, and 'work with civil society groupings to include their voice on these issues' (Regulatory Declaration by DWAF, 2009). Civil society repeatedly asked to see the findings of an evaluation that the City claimed to have done following a 'pilot' period of installation. This was never made available and the basis of the decision to move from pilot study to full-blown roll-out was never communicated.

In Witsand, near Atlantis, the community, with support from the WCWC, invited the City to meetings to deal with the high incidences of technical failures of WMDs in their area. Eventually a team of City technicians from 60-kilometre distant Wynberg visited the area, fixed leaks and replaced some faulty meters. The local Atlantis office had been unable to respond, due, we were told, to there not being a vehicle available. This intervention exposed another systemic flaw: local municipal offices

are not able to respond adequately, or in good time, or even at all, to service delivery problems in their areas.

In late 2009, EMG in partnership with international NGO Oxfam held climate change hearings in Cape Town, where people shared testimonials about the ways in which their already marginalised livelihoods were being threatened by climate change. Representatives from the WCWC and Witsand community testified at these hearings that the WMDs, and other punitive water-demand management strategies implemented by municipalities, threatened poor peoples' access to water, a trend that could be exacerbated with future water scarcity as a result of climate change.

Despite being made aware of these concerns, the City continued to roll out the WMDs, announcing in 2010 that they were aiming to install 5 000 per month. By the end of 2010, 45 000 had been installed in households across the City in Protea Park, Saxon Sea, Delft South, Wesbank, Macassar, Mfuleni, Klein Vlei, Witsand, Phillippi and Scottsdene (Cape Town WSDP 2011/12–2015/16).

Throughout this period of lobbying for a moratorium on the installation of WMDs, members of the WCWC organised and supported ongoing community workshops aimed at deepening people's understanding of water services, equipping them for empowered action and building solidarity. These included workshops on the water cycle, how to read a bill, understanding tariffs, being aware of how much water a household uses, etc. They built on knowledge and experiences from the earlier WCWC water leaks project. This project was initiated by the WCWC in 2005 in an attempt to partner with the City to resolve high leaks and high bills by training community-based volunteers in basic leak fixing and broader water awareness. Despite political support for the project from City councillors and numerous meetings with senior officials, it never gained traction in the City, which instead developed a leak-fixing policy conditional on the installation of WMDs. In late 2011, at one of these community meetings in Mitchells Plain, water caucus members from several areas were motivated by the stories they heard of water services struggles to start running awareness raising workshops on water services in their own communities. Nokuzola Bulana from Makhaza was at this meeting and she took the idea back to her community.

The Makhaza case study

Makhaza, a suburb of Khayelitsha that made headlines during the ‘Open Toilet’s saga of 2010/11, is an area characterised by high levels of poverty. It consists of a

mixture of informal housing and serviced brick houses. In research compiled by the South African Human Rights Commission (SAHRC) in 2011, as a follow up to the SAHRC's ruling that the City of Cape Town should enclose the toilets it had erected there, it was found that although 98% of households in Makhaza had access to water and sanitation, the qualitative nature of this access was compromised in many ways (SAHRC 2011). On the positive side, Makhaza is also home to a lot of constructive community activism, particularly in the area around the Khayelitsha Wetland Park, an important meeting place and source of pride for local residents.

One group formed under the banner of Prevention in Action, a national organisation dedicated to preventing gender-based violence. The Makhaza chapter of Prevention in Action is involved in a range of community-building activities, including raising awareness about domestic violence, crime, rape, water, food gardens and the environment. They started a food garden in 2009 as part of their campaign to improve people's health through eating well. In 2010, they joined a small-scale farmers' protest march to Parliament, organised by various groups including Surplus People's Project, SAFeAGE, Coalition for Environmental Justice, Women on Farms, Masikhule Farmers Union and others. The march was a response to a number of experiences and struggles such as farm evictions, access to water for irrigation by small-scale farmers, WMDs in Cape Town, water cut-offs in the Winelands area, etc.

In the process of mobilising communities and different constituencies, Makhaza women who had just started a food garden were informed about the march, and attended a workshop on food sovereignty and against genetically modified organisms prior to the march. The Prevention in Action group from Makhaza showed a lot of enthusiasm and interest and brought a large number of people to the small-scale farmers protest. The potential for working together was recognised. That was the beginning of the relationship between the Makhaza community and EMG through the Coalition for Environmental Justice (CEJ). With the support of CEJ, this Makhaza group has been involved in an extensive campaign to protect the wetlands in their area, doing clean-ups, educational workshops and planning for the ongoing protection of this valuable resource. They have now expanded their focus to also look at water services, following the CEJ meeting in Mitchells Plain in late 2011 where the idea of running local water services workshops took root.

In early 2012, EMG was invited by Makhaza's Prevention in Action group to facilitate a strategic discussion on water services challenges. About 15 people met at the Makhaza Wetland Park. The the following issues surfaced:

1. Most 'formal' houses in Makhaza have an outside flush toilet and an outside tap. There are very serious leaks at many households and large volumes of water are wasted, for which households are charged. People do not fix these leaks, either because they do not know how to, they cannot afford to, or they are not aware of the importance of doing so.

2. There are complications with billing because title deeds have never been properly transferred from the people on the original housing list to those who actually live in the houses. Therefore most people receive bills addressed to a name other than their own. There is also confusion because there were no water meters in the beginning. Even once they were installed, residents did not receive bills for two years.

3. In Makhaza, as in many other areas in Cape Town, households receive very high municipal bills on a monthly basis, which they are unable to pay. This is due to a number of issues, including leaks, inherited debt from previous owners, and many people using a household's water.

4. Most residents don't know about their water rights and the indigent policy of the City of Cape Town. Some are aware that they receive a free basic amount of water but do not understand the complicated rebate system and what it implies for them.

5. Residents are afraid to go and negotiate with the City to make arrangements for settling their debt because several of them have found that when they do go forward, they are told that they must pay immediately, or they receive letters advising of an impending disconnection of supply. Residents say it is better to remain invisible than to go forward to the municipality, but they then live with the anxiety of their high debt.

6. Residents are also concerned that they will only have their debt cancelled by agreeing to have *amafudo* installed at their houses, as this is the City's policy at present. This community does not want these devices installed as they are aware of the many problems experienced by other communities where they have been installed.

Makhaza residents present at this initial discussion expressed that they were not opposed to paying for water but they needed more information, clear explanation, involvement and informed participation in decisions about this payment. They were willing to pay for what they *actually* use, but not the completely unaffordable amounts that are due to leaks and inherited debt. They wanted leaks fixed, their

debt scrapped, no WMDs, and the chance for a clean slate – to 'start fresh'. As a way forward, it was agreed that volunteers from this meeting would conduct door-to-door interviews, using a very simple interview sheet, to find out details about people's water bills. This would be used as evidence in our engagement with the municipality.

This commentary, written at the time of the initial discussion, captures the mood, anecdotes and impressions from that meeting:

> Everyone has debt... and no-one pays. It is surely in the City's interest to support people who want to take some responsibility for their bills and pay what they can afford. I was struck by the absurdity of these amounts of money, speaking to a grandmother who owes over R80 000 – it is just a nonsense amount, the City will never ever get that money. And yet, when she went to the municipal offices to try to pay R20 per month (which is roughly what her actual monthly bill is, because she receives indigent rebates) she was told that she was going to be in trouble if she didn't pay the full amount she owes. She now warns others not to go and make an arrangement, to stay invisible rather. There is no trust.
>
> People expressed their reluctance to share their own bills, or to ask others in the community about their bills – to unfold those pieces of paper and let those overwhelmingly large numbers see the light of day is very scary, I think. Even though people are not getting their water cut off, receiving bills for amounts they can never pay is a horrible experience. We know this from previous work, but it was reinforced for me last week. There is always a sense that they *could* get cut off at any point; there is a sense that they don't have a leg to stand on if they have a complaint or a problem, and they would rather stay invisible to the City... [Pereira, 2012]

After that first meeting, the group who had volunteered to conduct door-to-door interviews were quick to complete 50 surveys. The findings of this initial research were as follows:

1. R60 256 is the average sum owed by each household to the municipality (the lowest being R64 and the highest an astonishing R831 919).
2. On average, each household uses almost 50 kilolitres per month (ave: 49.54kl, max: 402.2kl).
3. On average, each household is charged R440 per month for their water use (max: R5 090).

4. The average household size is seven people.

This confirmed what people had reported about the high debt owed by many Makhaza residents, and also showed that households were consuming large volumes of water each month – due, we suspected, to the extensive leaks we had witnessed. With this evidence in hand, we decided to invite high-level officials from the City of Cape Town's water and sanitation department to a dialogue on the leaks and debt in Makhaza.

In mid-March 2012 EMG attended the SAHRC public hearings on water and sanitation, and spoke about the indirect ways in which people's access to water is denied or threatened, for example through WMDs, leaks etc. This proved a fruitful exercise as several of the officials and politicians whom we had invited to the dialogue were present at these hearings and we had a chance to personally invite and lobby them to attend. Furthermore, researchers from the SAHRC took an interest and have maintained contact and engagement over the ensuing months. This has the potential to raise the profile of our work in Makhaza and put additional pressure on the decision makers.

On the 19 March 2012, a community meeting in Makhaza was attended by over 300 people. At this meeting, it was decided that the community would start a petition calling for the opportunity to 'Start Fresh', through the scrapping of their old unaffordable debt, the fixing of leaks and then payment for the water they actually use. The group of volunteers went door-to-door and quickly collected over 1 000 signatures to this petition. A statement was issued and the details of this meeting and petition were forwarded to the officials who had been invited to the dialogue:

> The dialogue seeks to find a workable solution to the challenges faced by both the city and the residents in regard to water services debt, billing, water leaks fixing, tariffs system, meter reading, water demand management devices, understanding bills, free basic water, indigent policy etc. Prevention in Action, members of the Western Cape Water Caucus and the Coalition for Environmental Justice are coordinating a community education campaign and now this has led to a need to sit down with the city and share what the residents are saying about these issues and how they would like to be involved in the decision making processes concerned.

Concerns about previous City engagements were also raised:

> In our initial conversations with the city official, at first they were excited by the idea of the dialogue including a water leaks fixing blitz in Makhaza, where they even committed to contribute their workforce, materials and tools to fix

leaks on the 17th March 2012. The official at this stage also undertook to visit the area to assess how much and what kinds of leaks exist and what materials and tools will be required to fix them. Out of the blue, the city became mysterious, when water demand management device was said to be one of the subjects for the dialogue, and instantly changed attitude, and later back-tracked on everything that it had committed to, and told us to speak to the city political leadership.

It is likely that the profile generated from this community meeting convinced City officials to attend the multi-stakeholder dialogue on water services in Makhaza on World Water Day, Thursday 22 March 2012, at the Khayelitsha Wetlands Park. In attendance were representatives of the Makhaza and Silvertown communities, CEJ, senior officials from the City of Cape Town's water and sanitation and water demand management departments, the regional and national Department of Water Affairs (DWA) and the National Department of Housing. The findings of the 50-household survey were shared as well as the 'Start Fresh' petition. Representatives from the City's water demand management department responded that the City's policy was to fix leaks and scrap debt on the condition that people had a WMD installed and lived with the WMD on a daily allocation of only 350 litres per day for one year. CEJ and community members at the meeting raised their concerns about the WMDs and objected to the 'impossible choice' between debt/leaks and WMDs. Several community members indicated that they would refuse to have WMDs installed at their homes. The officials indicated that they were just implementing a City policy – that of conditional leak fixing – and that if we wanted this policy changed, we needed to work through the correct political structures. A representative from DWA (who has supported WCWC's work in the past) spoke out in support of the community, saying that their right to water was being compromised and that the City should take their situation and their request for an ongoing dialogue seriously. By the end of this meeting, it was agreed that a committee be formed, which should include councillors and sub-council, to take up these issues and to explore ways of settling this debt in a sustainable and mutually satisfactory way.

Our next port of call was a meeting at the Sub-Council 24 office in Delft. We invited the sub-council manager, the councillors from all three wards comprising Makhaza – wards 95, 96 and 97, of which only the councillor from Ward 96 attended – as well as the City officials who had been tasked to sit on the 'Makhaza leaks committee'. The meeting was also attended by a group of community members and representatives from CEJ.

At the outset of this meeting, the councillor and sub-council manager were very suspicious and defensive. They insisted: 'We are going to talk about the leaks and nothing else'. They were wary that we might be promoting WMDs, and were very clear that they did not want to be associated with any decision that lead to the installation of WMDs.

After lots of posturing and talking in circles, we managed to agree on a site visit to Makhaza to see what we were really talking about. A few days later, this site visit took place, attended by the sub-council manager, the councillor for Ward 97, and city officials from water demand management. The City's head technician from water demand management department agreed to fix a serious leak at the house of one of the women,but was adamant that this was just a 'gesture of goodwill' and that if others in Makhaza wanted their leaks fixed, they would have to agree to have a WMD . The councillor for Ward 97 reiterated that people were not happy with WMDs, and he didn't want to be associated with them. He also explained the complex situation of 'x' houses, which have not been properly transferred, saying that another reason people do not pay their bills is that the bills are not addressed to them. Some of the tensions between local politicians and city officials began to surface at this meeting.

Soon afterwards, members of the water services volunteer group attended a large community meeting in Ward 96 where their presentation was well accepted by the community. The door-to-door campaign of collecting water bill information and signatures for the petition to scrap the debt was explained and the community and councillor were satisfied. However, in Ward 97, the councillor was starting to distance himself from CEJ and the water services volunteers, because of complications related to the DWA Adopt-a-River programme with which the same groups were involved simultaneously . There had been misunderstandings related to temporary paid work doing wetland clean-ups (there was unclear communication from DWA about who would be paid and when they would be paid), and this led to tensions within the community and suspicion towards the active community members (who were also involved in the water leaks work). The councillor, who had been wary of the buzz being generated in his ward by this group of volunteers, then publicly declared that he had nothing to do with them and that he was the only person the community should rely on for job creation. This was a setback, and it required a lot of phone calls and emails (and time to pass) before this councillor was open to talking to us again.

Meanwhile, another meeting of the Makhaza water services working group took place, attended by city officials, CEJ and community members. This particular

meeting happened outdoors at the Khayelitsha Wetland Park because the councillor had told us we were not welcome to meet at our usual venue, and he would chase us away if we tried to meet there!. At this meeting we decided that civil society and the City should come up with their own proposals for dealing with leaks and debt in Makhaza, and that these proposals should then be debated and negotiated. The City's head technician shared the idea of running a small pilot project, installing WMDs in a few households. People present at the meeting replied that this group was too small and not representative enough to make any decision on this proposal, and asked that the City put something in writing.

Soon afterwards, EMG hosted a civil society seminar to explore alternative debt-management strategies and then a meeting in Makhaza with the community group and CEJ members to discuss our proposal for the City. We talked about our best-case scenario and our worst-case scenario and agreed on a strategy of putting forward our 'wish list' and then negotiating from there. The civil society proposal we developed called for:

- fixing of all household leaks at the outset of the pilot period and fixing of serious leaks that arise during the course of the year as a result of poor materials or infrastructure;
- the freezing of debt and interest for one year, with an assessment at the end of that year as to how much water the households have used, whether they have had more leaks and whether they have been able to pay for their monthly water consumption;
- ongoing dialogue between the community, civil society and the City about how to deal with the outstanding debt, the problems of recurring leaks in low cost housing, and relationship building between communities and the City.

This proposal was sent to all stakeholders – the City, councillors, the broader CEJ membership – and then we waited. After almost two weeks with no response, and still no counter-proposal from the City, we sent an urgent request for a meeting to the Mayor, the Mayoral Committee Member for Utility Services, the Director of Water and Sanitation, the Head of Water demand management, and the rest of the officials and councillors we had been working with. This request elicited quite a prompt response, with the Director of Water and Sanitation indicating that they would meet us.

With this high profile meeting in sight, we eventually managed to secure a personal meeting with the councillor of Ward 97, to explain our proposal and ask for his

involvement in the dialogue. When we unpacked the proposal he responded positively, saying we wanted the same things as he did.

On 19 July 2012, the high-level meeting we had requested took place in Makhaza, attended by the 'top brass' from the Department of Water and Sanitation, several councillors and the sub-council manager, and CEJ and community representatives. Prior to the meeting, as we stood outside chatting to some of the officials, the researchers from the SAHRC arrived (in their car emblazoned with the SAHRC logo), causing a bit of a stir among the City of Cape Town contingent. At the start of the meeting, the City questioned our proposal, saying that we could not necessarily speak on behalf of the community when we said that people do not want the WMDs. To our amazement, the councillors (particularly the councillor from Ward 97, who a few weeks before wanted nothing to do with us) leapt to the defence of the proposal, saying this was their proposal too, and challenging the city officials for daring to suggest that the councillors did not know what their communities wanted.

This show of support from the councillors seemed to shift something because, at last, after years of stalemate on this issue, the Director of Water and Sanitation said that the City could in fact fix household leaks without installing WMDs – that there was provision for this in the Credit Control Policy. So, by the close of this meeting, there was an agreement that CEJ and the councillors would take our proposal forward via the political structures in the City – starting with the next sub-council meeting – and in the meantime, the City would undertake to fix leaks in Makhaza, with CEJ aiming to provide educational support to those households where this was done.

To date, some six months later, none of these agreements have been honoured and no leaks have yet been fixed in Makhaza. The City officials sent in consultants to do some sort of awareness-raising, without informing CEJ or the involved community members, and some community members expressed resistance to these consultants. Since then there has been absolutely no movement. The City officials have shut us out, and say that we must not speak to them directly but must work through the councillors to move the process forward. This has proved extremely difficult. While the councillors have all stated their support for this proposal, they are not often available or accessible to follow it up. Local power dynamics can often compromise the process. As a result, vast quantities of water continue to haemorrhage out of household leaks, poor people owe more and more money to the municipality and their only option to deal with this debt is to accept a punitive flow-restricting WMD.

Makhaza in context

The Makhaza story takes place within a bigger story of water services and the availability of water for human consumption. Like many countries, the provision of water in South Africa follows a partial cost-recovery model in that those who use water are expected to pay for it and this payment should largely cover the cost of providing the water. Within its domestic water pricing strategy, South African policy makes provision for a certain amount of water (usually 6kl per household per month) to be provided for free and a stepped tariff system in which the unit cost of water rises the more a household uses. The aim of this stepped tariff is to cross-subsidise from high volume (assumed to be wealthy) to low volume (assumed to be poorer) users and to discourage water wastage, given that water is scarce. In practice, the tariff system doesn't work as neatly as in theory. Because water sales are an important source for revenue for municipalities, their imperative to maximise income overrides their imperative for equity or to target hedonistic water use. This means that they set high (often unaffordable) tariffs in the second tier, i.e. for water consumed above the free basic allocation. This disproportionately affects poor households, most of which cannot survive on the free basic allocation, and does little to affect the swimming-pool owning water-guzzlers.

The imperative to conserve water arises from three different understandings of 'water scarcity', namely economic, biophysical and social water scarcity. Different actors in the sector attach different importance (and therefore different strategies) to these aspects of scarcity. An extreme interpretation of 'economic scarcity' is that it results from incorrect pricing. In other words, water appears scarce because it is too cheap and so demand exceeds supply. To solve this, simply raise the price of water, which will either reduce demand or stimulate new supply (e.g. through desalination or waste-water reuse). In part, municipal tariff and water-restricting technologies are a response to this. However, water is not treated as a pure 'economic good' in South Africa; its allocation is determined through a mix of pricing, general authorisations and water permits. While water is arguably too cheap for some sectors (e.g. agriculture, industry), it is too expensive for many urban residents.

Biophysical scarcity relates to how much fresh water is actually available and the consequence to ecosystems of extracting it for human consumption. South Africa is a

semi-arid country and, with a thousand cubic metres of water available per person per year, is classified by the UN, using the Falkenberg Index, as a 'water-stressed' country. Chronic water scarcity kicks in if it falls below 1 000m^3 water per person. South Africa currently uses 98% of its surface water, meaning that too much water is taken out of most of our rivers, leaving them degraded and unable to function. The custodian for managing biophysical scarcity is the Department of Water Affairs. Unfortunately they lack the power and regulatory capacity to fulfil their role. Thus mining, agriculture and other industrial sectors have free rein to over-abstract and pollute water, thereby exacerbating the biophysical scarcity.

Social water scarcity refers to scarcity experienced by households when they do not have access to close sources of sufficient clean water, or water is too expensive for them. This is generally the result of institutional failure or bad economic and tariff policies. Government interventions to address economic scarcity (e.g. raising prices) or biophysical scarcity (e.g. limiting water use) will exacerbate social scarcity, if they are not applied progressively.

Makhaza is illustrative of many South African townships in which there is an interrelated crisis of water leaks and high household debt, whereby households owe the municipality tens, or in extreme instances, even hundreds of thousands of Rands. These debts have accumulated in part through high monthly charges for water 'consumed' (for which read 'leaked'), as well as years of compound interest. In a number of cases, households have inherited debt from previous owners or been charged for water consumed during the construction phase of a new development. The allocation and transfer of township property rights is extremely complex and often done through informal markets. In the case of Makhaza, the first occupants of the sites, many of whom built their homes (and who are therefore the *de facto* owners) don't own the title deeds, which were assigned via a housing list to people who might be unaware that they own a stand in Makhaza. It is to the title-deed owners that the municipal water bills are addressed.

Cities are at their wits end trying to figure out how to deal with the debt-leak crisis and in Cape Town have come up with a strategy that includes installing *amafudo*. The City knows that many of these household debts are irrecoverable and so will 'jump the fence' and fix leaks once-off on the household side of the water meter if the household agrees to have a WMD installed, and agrees not to use more than 350 litres of water a day (or 10.5kl per month) for one year. If the household lives on this restricted water, their debt will be scrapped after one year and they will be allowed to request an additional daily water allocation that they will then pay for. Any household applying for indigent status (and the resultant 'benefits' with respect

to debt management) is required to have an *umfudo* and a pre-paid electricity meter – both of which technologies are designed to cut off the service before a household runs up any more debt. Cape Town's approach is more generous than many other municipalities in that they have increased the monthly allocation of free basic water (FBW) from 6kl to 10.5kl for households with *umfudo*. The City sees *umfudo* as the perfect answer to solving both leaks and debt.

However...

The problem with leaks in many township houses is that they are *recurrent.* The plumbing has been built with such shoddy material and been so poorly installed that leaks spring up with great regularity. A once-off leak fix does not begin to address this systemic problem; all it does is shift the onus of poor workmanship from the City to the household, whose water is now cut off once the daily allocation has been used or leaked away. Is this reasonable? Probably not. In many instances, houses have been built by contractors to the City of Cape Town and been paid for their work. Quality control has not happened and so people are (gratefully) accepting houses that are defective. They have no recourse to the City or the contractors. They have been allocated a liability.

The problem of leaks also exposes a more general institutional problem. If the City maintains the responsibility of poor workmanship by not installing devices, the responsibility sits with the *water* department and not the *housing* department, where the problem originated. But even the housing department might not be the source of the problem. There is insufficient capacity in the City to effectively monitor and regulate private building contractors. Reasons for this range from political will, to budget allocations, to corruption, to tender processes, to economic policies that favour private sector providers, to job key performance areas, and to a shortage of skills. All of this is inherited by the water department, which is tasked with providing water services and collecting revenue to match its costs. To do this, one of the key objectives is to reduce the amount of water delivered, but not paid for. Thus the target is households that are 'using' vast quantities of water (through leaks) but are not paying their bills. These are poor homes, with poor plumbing.

The inability of local government to regulate private contractors points to a larger problem of dysfunctional local government. There is severe inertia within local government and it is unable (or unwilling) to respond to concerns raised by people who live there. This is compounded in the water sector by a weak national department, which had no leadership for a number of years (due to a suspended Director General who wasn't replaced for over a year, senior staff leaving, etc.). DWA also seems unable to fulfil its regulatory oversight function.

The City of Cape Town's rationale for WMDs is twofold – first, to control irrecoverable debt, and second, for demand-side management. These are both economic instruments to tackle problems faced by the City in providing water for all. In the first instance, people in poor areas are not paying for high consumption, whether due to leaks, wasteful water use or lots of people accessing water from a single meter. In other words, the City is supplying (and paying for) vast quantities of water from which it is not recovering any money. This is bad for business! And so it seeks to minimise debt by cutting people's water to the prescribed free basic amount, which is paid for through transfers from national government and cross-subsidies from higher users.

Demand-side management is a common approach to managing a resource that is becoming scarcer, or whose use has negative consequences. In the case of water, there is no more fresh surface water available to meet rapidly growing demand; if supply is to increase, it will need to come from groundwater, waste-water reuse or desalination. There are numerous environmental concerns associated with each of these sources, and they are costly. It is far cheaper and more environmentally sensible to reduce demand. Cape Town's WMD policy is skewed towards debt recovery, rather than demand-side management, as currently only poor (non-paying areas) are being targeted for *amafudo*, rather than areas where people are using excessive amounts of water for which they are paying. This is in-line with neo-liberal theories of water as a 'business' and the principles of cost-recovery and user-pays. It also creates an internal conflict between the need to collect money as City revenue (and so sell *more* water) and the need to conserve water, and so sell *less* water. Most municipalities resolve this by trying to sell more water to people who can pay, and less water to people who can't, i.e. there is an in-built inequality in the very structure of cost-recovery.

A further important contextual element is the political profile that service delivery has, and the pressure on municipalities to perform. This is particularly true in Cape Town, where the ANC and the DA vie for political control and use poor performance to score points off each other. This turns issues that are essentially about rights into party political weapons. Performance indicators for service provision skew the picture further as they don't reflect reality on the ground. By focussing on the number of taps and toilets, it is impossible to know whether water is flowing from the taps and who has access to the toilets. Civil society organisations have played a crucial role in pointing out this disjuncture. Cape Town scores well on national surveys but the reality of an unequal and divided city remains.

Lessons and reflections

This case study is a snapshot in struggles for equal access to decent water services in post-apartheid South Africa. It moves in the space between street protest and court case, but everyone involved knows that those two options are available, always. The space is a tentative one, supported through a delicate building of trust and it is vulnerable to being closed by either party, or through misunderstanding. The energy of this space derives from hope that through building dialogue and strengthening relationships, the process itself reveals an answer that has traction in the longer term. The approach lacks cynicism and runs counter to 'the end justifying the means', assuming, rather, that the means determines the end. This is a precarious assumption and one that is often discarded as the full structural might of the 'status quo' is encountered. Yet it is also an assumption that allows an approach that brings confidence, creativity and confronts the fears of all parties involved. Through the process, everyone involved is changed, and if it is possible to change at this micro-scale, it becomes possible to see how a 'systems change' might come about.

On governance and partnerships

The Makhaza case study highlights the importance of standing together as civil society and building alliances with local councillors. Previous interventions by the WCWC, such as the Water Leaks Project, have failed in part by not understanding local politics well enough and by assuming that the merits of the argument will win favour. Building political intelligence and working with local power dynamics is critical. Yet local political power is highly transient and mercurial – we cannot rely on a single endorsement because these swing and loyalties shift.

It is also important to understand the different players inside the City bureaucracy and engage with them all. Talking to only the communications or public participation department will get us nowhere. But this is not an easy task as City officials in line functions are reluctant to talk directly to members of the public or public interest groups. They say they will take direction only from agreed policy and insist that lobbying goes through the often slow and cumbersome political structures. These are opaque to ordinary citizens. This 'can't-do' attitude stops officials from being agents of change and causes much frustration. It is these very line officials that we are trying to influence in terms of their approach and attitudes. They are also the people who know, first-hand, the challenges that the City faces. At times, individuals within government have taken initiative and shown that they are willing to push their colleagues in a more progressive direction. For example, a

senior City official has been actively campaigning to raise the quality of material used in leak fixing in order to minimise recurrent leaks.

Creating a neutral space in which community members, public interest groups, councillors and City officials are able to engage openly, seeking to find solutions rather than to defend entrenched positions, remains a critical challenge in building participatory democracy. The culture of denial and fear needs to be worked with skilfully. It is unhelpful to trigger defensive behaviour, but equally problematic to accept poor practices through trying not to upset anyone. The media is a useful ally in raising the public profile of the issues, but this needs to be done in a way that keeps the space open for all parties to feel they are contributing to constructive solutions and not simply being run over.

Within civil society there are complex and difficult dynamics. Subtle and not-so-subtle power dynamics between individuals and organisations need to be recognised and worked with. These relate to real or perceived power in terms of gender, access to resources, education, social standing, etc. 'The community' is not a single being of one mind. Yet for the work to have integrity, it must be grounded, as much as possible, in people's lived reality. This is the starting point.

And Makhaza is a poor community in which most people need jobs and money. It is easy to manipulate people in this situation and to sow conflict. Even well-intentioned initiatives, such as payment for temporary work to clean up the wetlands, has led to mistrust and accusations, with lasting mistrust between different community groups. People coming into Makhaza from outside organisations (NGOs, government officials, etc.) aren't taking the same risks as the people who live there. This needs care. For example, it is easy for outsiders to feel they have the answers and superior knowledge (how to read a bill, how wetlands function, etc.) without recognising the critical knowledge held by people who live there, day after day. What has been amazing about Makhaza is that a local CBO has taken this information, offered by others, and converted it to their own needs. They have run awareness-raising workshops and done door-to-door data collection, recognising that information is power. Moreover, this work is not only for themselves, but supports larger efforts to improve service delivery and address water scarcity.

On resilience building

The community-led work in Makhaza, supported by like-minded NGOs and civil society networks, is a valuable contribution to building resilience and managing risk. It is a response to immediate challenges, such as urbanisation, economic

hardship, joblessness, etc., as well as the longer-term unfolding of climate change and its impacts on water availability. This process of engaging with a natural resource (water) in this way can help build cohesion and trust that goes way beyond just access to more water and is part of building engaged citizens.

Saving water through fixing leaks is good for everyone. It saves money for the City in that they no longer provide costly water for which no-one pays. It reduces social water scarcity and people's anxiety through reducing the likelihood that domestic water will be restricted by the City. Physical scarcity is also minimised through reduced wastage. This means that increasing water supply (e.g. through dams, desalination or groundwater abstraction) can be delayed, perhaps indefinitely, with positive consequences for ecosystems and other water users.

Communities and CBOs gain strength through links to NGOs and civil society networks. They are less isolated, less invisible. They gain confidence, access to media, to decision makers, to skills training, to computers and communication technology. They are more able to build solidarity and share experiences and tactics with others in similar situations in other parts of South Africa, or even the world. This mobilising and solidarity building is critical not only to local struggles, but at a larger scale to countering the power of government and capital.

The kind of work being done in Makhaza requires sustained pressure and attention, and lots of patient following-up. A lot of the support resourced NGOs like EMG offer is the mere fact of having time, phones and confidence – these processes depend upon a lot of phone calling, being put on hold, coming up against resistance and suspicion from decision makers but not being put off, having to remind people over and over again to attend meetings, to do what they have said they will do. It is extremely difficult for individuals from within communities to do this, because of practical limitations such as a lack of talktime, as well as internal limitations such as a lack of confidence or having the language to question those in authority.

On poverty and inequality

There is undoubtedly an element of discrimination in the way in which poor households are the targeted recipients of punitive water-demand management strategies. This is evident in Cape Town, as well as other South African municipalities. It is a discrimination built into the political economy of local government, where those who can pay are treated better than those who cannot. Cost-recovery itself is discriminatory in a country with such high income disparity.

Some city officials genuinely believe that the WMD is a 'holistic solution' – that it helps the City manage debt, saves water, helps people identify leaks quickly, and gives people a way out of debt, and therefore, presumably, a way out of poverty. But this reveals such a limited understanding of poverty and of what is required to overcome it. Apart from the many direct ways in which *amafudo* make people's lives worse by restricting their access to water and being a source of confusion and conflict, the very notion of using a piece of technology (complete with tamper-proof wires) to regulate and limit household water use reveals a short-cut mentality and one of control at any cost. It keeps people in a state of frustrated dependence. Having choices is a key element in overcoming poverty. By installing WMDs rather than engaging with the systemic problems of poor infrastructure, bad plumbing, inherited debt and disempowered people, the City leaves people with no choices to make, other than the choice between accepting the device passively and ripping it out of the ground.

By facilitating dialogue and proposing an alternative choice that is respectful of people and of the real limits (to water, money, and municipal capacity), new possibilities are opening up. We believe that this tentative social process holds the potential to build active citizenship and to address inequality, injustice and enhance participatory democracy. This will also help build resilience to climate change as it unfolds.

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