Community Resilience in Cape Town (CoReCT)

A transdisciplinary research project on water-related issues in low-income areas

As part of an AXA-funded research project on urban water governance, researchers from University of Cape Town's African Climate & Development Initiative (ACDI) have been engaging with Environmental Monitoring Group (EMG) to identify and support community activities focused on water-related urban issues. Through this process, it became clear that the Western Cape Water Caucus (WCWC), a community organization based in several informal settlements and townships in Cape Town – which EMG supports and helps co-ordinate – could be a suitable partner.

WCWC expressed a wish to learn how to conduct a study to collect data that can support their work on water-related issues in low-income areas. This led to the creation of the CoReCT project, that uses a transdisciplinary approach to co-design and execute research. In doing so, the WCWC has been able to both build internal capacity and gain research experience among several members, as well as produce new knowledge about its core issues based on fieldwork in the communities where its members live. The project aims to build knowledge about the lived experiences of water access, water services and water issues at a household level. This is done using a tool called SenseMaker, which allows respondents to share their experience in a narrative form and also indicate the meaning of their story. SenseMaker software tools makes it possible to compile and present insights from large numbers of stories.

Methodology

Ziervogel and Enqvist approached SenseMaker experts, John van Breda and Luke Metelerkamp from the Centre for Complex Systems in Transition (CST) at Stellenbosch University to help run the study. WCWC appointed twelve members (referred to here as "citizen scientists") with support and facilitation from the EMG staff. The study has included two phases, both supported by 4-day workshops, namely: 1) design and story collection, and 2) story sense-making and return.

In the first workshop, held in July 2019, WCWC and researchers worked jointly to develop a questionnaire and interview technique to capture qualitative and quantitative information. Simply put, this involves asking respondents to share an experience of when they tried to address a water-related issue, and then fill in a standardised set of multiple-choice questions. The second step lets the respondent "signify" or give meaning to the story they have shared. This includes information about the story in terms of what has driven their actions, where they turn to for help, the role of government versus citizens, etc. The goal is to understand people's experiences and subjective opinions on the topic, rather than just collecting evidence on the performance of water services. After the first workshop, the twelve story collectors were given three months to collect stories from their neighbourhoods, using paper questionnaires or a SenseMaker app on their smartphones. In total, 311 stories were collected from Mitchells Plain, Du Noon, Makhaza, Joe Slovo, Green Park, and several other areas (Figure 1). All stories were uploaded for processing in the SenseMaker software by ACDI and CST researchers.

Figure 1. The project collected 311 stories from six primary study sites and several additional communities in and around Cape Town.

In the second workshop, held in October 2019, WCWC members and the researchers analysed the data and identified key findings with relevance for WCWC's work. A close reading of collected stories helped participants identify

narratives to be used as part of a strategy for communicating finding back to the studied communities. The workshop also included discussions with invited City of Cape Town representatives on how to best share the study in order to improve how the City operates.

After the second workshop, in November, WCWC members organised and hosted story return sessions in Du Noon, Mitchells Plain and Makhaza. The findings were shared with invited community members through role-playing typical stories, and by using posters with the quantitative findings. This was followed by lively discussions. This served as an additional important learning step and opportunity to reflect on the emerging results.

The nature of this project meant that the study has been conducted primarily by WCWC members. Stories were collected and returned to communities in English, isiXhosa and Afrikaans, depending on the neighbourhood. ACDI and CST researchers provided support and expertise. Moving forward and with permission from WCWC, the the collected data as well as observations from the collaborative process will be used for scientific publications.

Transdisciplinary research, reaching across not only academic disciplines but also the boundary between academia and society, is difficult and messy. Challenges have included developing research questions and approaches for data collection that meet scientific rigour while also being appropriate for story collectors and respondents, and meet norms for ethical conduct. This project included ample time during two 4-day workshops in order to prepare participants for their tasks; it also made room for needs-based "care days" during fieldwork in order to resolve emerging issues and debrief around fieldwork experiences.

Findings

Of all the stories shared, 45% were about bills and pricing, 35% about water management devices (WMDs), and 32% about leakages. By comparison, problems with water restrictions (16%) and pressure (14%) are relatively uncommon – which is remarkable considering the city's recent drought and related efforts to minimise water use through restrictions and pressure management. Further analysis of the qualitative and quantitative information shared by respondents reveals several themes:

Frustration

The most prevailing message is that people are frustrated from not being able to resolve problems. As one respondent explains:

> *My water bill comes sky high even though I have a water device. I'm sick and tired of going to the City and getting no solution. … Sometimes we sit without water for days, but our bill still comes out high. Where can we go for help?*

A clear majority of respondents (64%) state that their problem is still ongoing. Only 14% of respondents said that they usually get help when they try to address service delivery problems (Figure 2). People's frustration is mostly directed towards the City of Cape Town, which is ultimately responsible for water services, or the local Ward Councillor, who is supposed to represent the community. In some cases, stories express frustration with community members who misuse water or cause other problems.

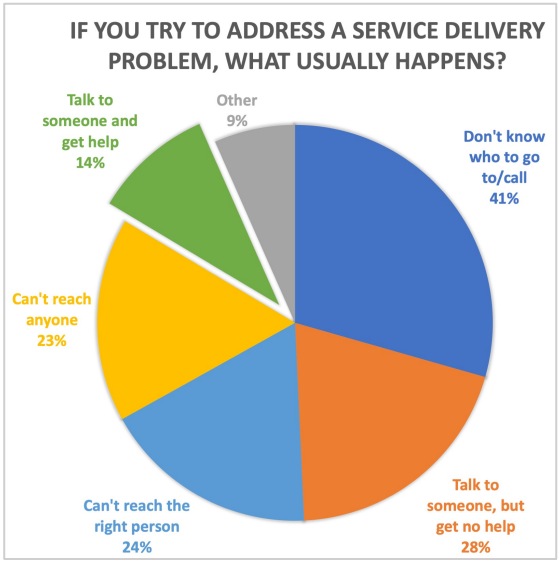

Figure 2. Very few respondents are usually able to resolve problems with service delivery.

Success stories

Only about 13% of respondents reported that their story resulted in a solution (Figure 3). While rare, their stories are important for understanding how the type of problems that people report are usually resolved. Of the 25 respondents that both shared a positive story, and coded it as such in the follow-up questions, the most common reason why the problem was solved was help from community members (9 stories). After this, the stories described help from municipality (7), self-help or hired help (5) and unclear reasons (4) for the solution.

Figure 3. Most respondents saw no improvement in the issue they described, and some only found a temporary fix.

This reliance on local capacity can be problematic. While the problem is addressed, it can lead to sub-standard quality of services and put strain on residents. One respondent exemplifies:

> *I have a problem with a drain that [keeps] blocking, and ... the smell comes straight into the house. No one has ever come from City of Cape Town [to help]. I end up [relying on] people from the community to come and help, even though they are not trained.*

In other cases, collaborating with neighbours to make one's voice heard can be empowering and can help build local capacity to hold authorities accountable:

> *Living in an informal settlement, we once as a community, asked municipality to put up a tap closer to our houses. The results were positive; we were asked to write a letter to the municipal office and have everyone affected to sign.*

Water management devices

The City of Cape Town introduced WMDs to detect unreported leaks, reduce household debt, facilitate demand management and guarantee access to basic water needs. However, in many stories, the outcomes seem to have been the opposite. Respondents with WMD issues were more likely than others to also have problems with bills as well as water restrictions (Figure 4). This is not evidence that WMDs *cause* those problems; it could be that devices are installed primarily in areas where these problems are more common. However, given that the devices intend to cut off daily water supply at 350 litres, it is unclear why many of these households are still receiving high bills when they have a device installed.

> *I am a single mother of two kids. I chose to have the water [management device installed] cause I couldn't afford to pay water bills. But nothing has changed for the better, it has gotten worse: there are days when there's no water. The water bills are sky high and I don't understand why. I have gone to the council to report but for two years no one has come to help.*

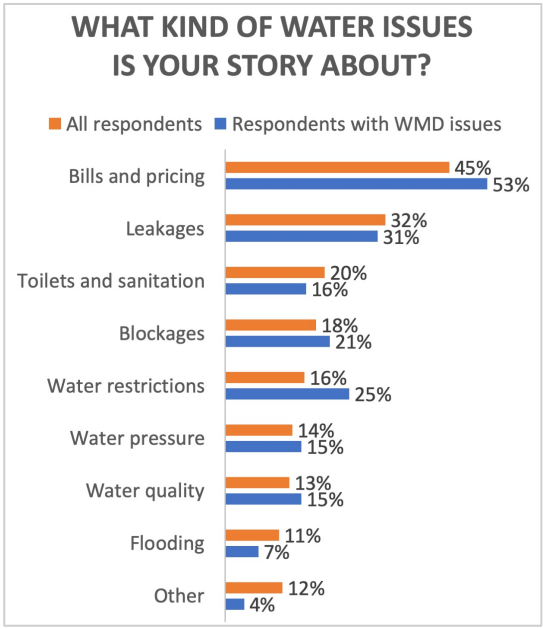

Figure 4. Compared to most respondents, those with WMD problems are more likely to have other water issues as well.

Citizens and the City

As shown in the findings above, the communication between local residents and municipal authorities often fails. This ranges from the frustration when people are not able to find someone to hear their grievances, to resorting to the local community for problem solving, to the perceived violation of disruptive WMDs. Many object to devices being installed without their approval:

> *I'm very, very angry. I have a WMD which was installed without my consent. Now I'm facing a huge water bill and leakages. I have no one to talk to.*

Others even doubt that the City is sincere about improving the lot of the least privileged:

> *I have no faith in the Council as my complaints fall on deaf ears. ... I have reported [my broken WMD] many times and was promised that it will be seen to. It kept leaking water and my water [allocation] would run out quickly. My husband asked a plumber in our area who charged us R200 to fix ... it so we can have water.*

These alternative solutions are notably common, even when they require bypassing the law. Fewer than 2 out of 5 respondents state that water problems can normally be solved by working within the law.

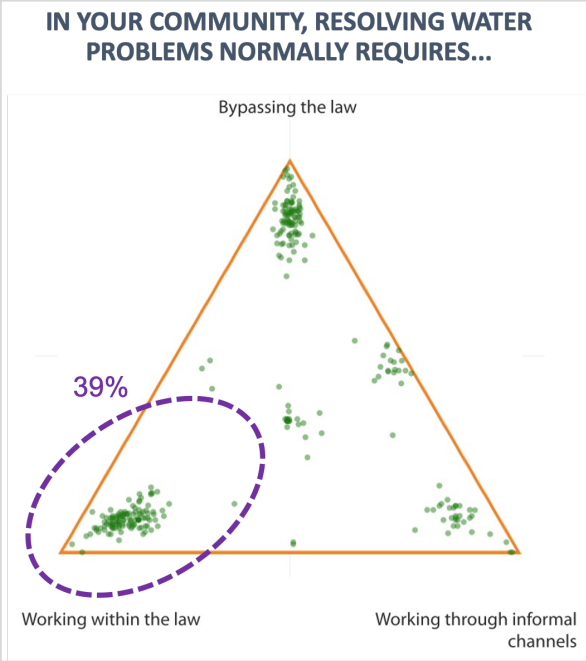

Figure 5. Out of 285 respondents, 112 (39%) think that working within the law normally suffices to solve water problems.

This lack of trust in the formal system can be a seen as a serious threat to gaining support for efforts to improve service delivery. However, a majority of respondents still hope that the municipal government will hear their story (Figure 6). People generally want the local government to take more responsibility for improving water service delivery, not less.

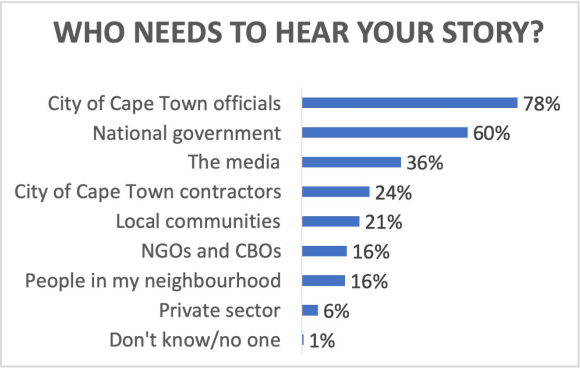

Figure 6. Respondents primarily shared stories that the city and national governments need to hear.

Informality

Many respondents are trying to navigate a system that is partly formal, partly informal. When settlements grow organically without central planning, problems can emerge that formal authorities are unable or unwilling to address.

> *My problem is a drain leaking inside my yard. My house has been built on top of a pipe, so I have to demolish my house in order to solve the problem. ... The Housing Department and they told me that it's not their problem: ... "The owner is supposed to hire a planner before extending the house." I can't afford all [this]; that's why I took short cuts.*

Two of three respondents see their water problem as linked to issues of housing and planning. It seems as if the structural limitations of their environments, paired with poverty and inability to reach public services, forces people to resort to informal and sometimes illegal alternatives to cope with their daily challenges.

Project outcomes and benefits

The findings of this project as well as the process itself speak to several needs. First, the WCWC benefits by acquiring data around the issues it works on to inform their action and advocacy. The process has also helped to build internal capacity and experience in how to collect and present evidence. WCWC's ties to the national South African Water Caucus as well as to other community-based organisations also provides potential for knowledge sharing.

Second, this approach allows community members to make their voices heard and acknowledged. Ensuring that a broad set of experiences are recorded and made part of the collective narrative is particularly important in a city with extreme inequality and traumas from ongoing stresses to service delivery and recent shocks from the drought. Third, the project showcases a tool for the City of Cape Town to better understand residents' lived experiences, and thereby improve service delivery.

Fourth, this project adds invaluable research insights about the city's most vulnerable communities. It pilots a co-design approach to Sensemaker that serves to inform and complement the AXA project's research on urban resilience and water governance.

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