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## **Addressing Failed Water Infrastructure Delivery Through Increased Accountability and End-User Agency: The Case of the Sekhukhune District, South Africa**

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**ABSTRACT:** Despite progressive policies and a legal framework that includes the constitutional right to sufficient water, there are still enormous problems with water service delivery in low income rural South Africa. To understand the factors responsible for the observed discrepancy between ambitious policies and disappointing water service delivery, we undertook an analysis of the implementation of these policies in Sekhukhune District, South Africa; we scrutinised the public service water delivery in that district using an actor-oriented approach. We found that during the four phases of public water services delivery – identification, planning, construction and operation – practices often deviated from the stipulated policies; we also found that accountability relations between service delivery agencies and end users were undermined by gatekeeping and patronage. We argue that there is no need for major policy changes; we concluded from our research that by mobilising mechanisms that are based on existing policies, accountability relations can be strengthened and service delivery improved. We describe an experimental approach which focuses on budget transparency and end-user-driven development; it is an approach which aims at strengthening the agency of end users while limiting possibilities for rent-seeking and gatekeeping by councillors and contractors.

**KEYWORDS:** Rural water service delivery, accountability, end-user agency, patronage, South Africa

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### **INTRODUCTION**

The end of apartheid in 1994 left the first democratically elected government with enormous racial and class inequalities in terms of water services for domestic uses. The World Bank (1994) estimated that only 43% of black people had access to piped water, while the white population had almost full coverage of water services (99.9%). Under the leadership of the African National Congress (ANC), a former movement for independence that became the ruling party, the commitment to eradicate these inequalities was formalised. In 1996, South Africa became one of the first countries in the world to provide their citizens with the constitutional right to health care services, social security and sufficient food and water (Republic of South Africa, 1996). Despite great progress in extending water services, 24% of rural

households still rely on unimproved water sources, that is to say unprotected dug wells and springs, tanker trucks, surface water such as rivers, dams, lakes, ponds, streams and irrigation channels, and bottled water or rainwater (Statistics South Africa, 2017); furthermore, the proportion of the population that relies on such unimproved water sources is again on the rise (Auditor General South Africa, 2016). While the state has undertaken enormous efforts to serve previously disadvantaged groups, the inequality in access to water services remains racialised and structural (Marcatelli and Büscher, 2019). So how is it possible that a country with the financial means of South Africa, and with a policy environment that is widely acknowledged to be ahead of its time, faces such difficulties in providing its population with sustainable basic water services?

To understand the underlying reasons, we scrutinise not only the policies of public water service delivery, but also the mechanisms that make the practice on the ground deviate from those policies. In this sense, this research deviates from work that restricts itself to naming problems and proposing policy changes (Smith and Green, 2006; Smith, 2009; Koelble and Lipuma, 2010; Hollingworth et al., 2011; National Treasury of the Republic of South Africa, 2011; Mbecke, 2014; van der Walldt, 2014; Liefferink et al., 2017); it joins a growing body of literature that aims to understand the underlying causes of poor service delivery (Bond, 2000, 2010; Pape, 2002; Smith and Hanson, 2003; Desai and Pithouse, 2004; McDonald and Smith, 2004; Dugard, 2010; Marcatelli, 2017; Bond and Galvin, 2019). Another contribution of our study is its focus on the predominantly rural Sekhukhune District, in Limpopo Province; this rural (rather than urban) focus contrasts with most critical South African water literature (Bond, 2000, 2010; McDonald and Pape, 2002; Smith and Hanson, 2003; Desai and Pithouse, 2004; McDonald and Smith, 2004; Smith, 2004; Smith and Green, 2006; Bond and Dugard, 2008; Dugard, 2010; Bond and Galvin, 2019).

We believe that the poor performance of public service delivery is not the result of flawed policies but rather of the way these policies are being implemented. We therefore raise two questions. First, what are the mechanisms that cause the discrepancy between policy and practice? Second, how can higher quality services in South Africa result from operationalising the experimental approach tested in the *Operationalising community-driven Multiple Use Water Services (MUS) in South Africa* project? To address these questions, we first outline the conceptual framework for the analysis and then analyse the current municipal procedures for delivering basic water services in Sekhukhune District in Limpopo Province; finally, we present an experimental approach and show how it might help to counter the underlying mechanisms.

## CONCEPTUAL TAKE ON FAILED SERVICE DELIVERY

### Three dominant discourses

There are three dominant discourses on the poor quality of service delivery in rural South Africa. One claims that both the apartheid and post-apartheid state failed to develop the technical capacity at municipal levels that would allow them to build and operate even basic water and sanitation services (Southall, 2006; Atkinson, 2007; Koelble and Lipuma, 2010; Koelble and Siddle, 2014; Weaver et al., 2017); in many instances, this discourse has been used even by municipalities themselves in order to justify the hiring of private service providers (Pape, 2002). The second discourse emphasises crippling levels of rent-seeking in the tender process, and state capture; this results in misallocation of public funds, self-enrichment, and delivery of faulty or incomplete water infrastructure at the village level (Atkinson, 2007; Marcatelli, 2017; Olver, 2017; Muller, 2020). The third discourse focuses on the neoliberal approach chosen by the government to deliver public water services (Smith and Hanson, 2003; McDonald and Smith, 2004); this approach has led to the commodification of, and thus unequal access to, water (Desai and Pithouse, 2004; Bond, 2006; Marcatelli, 2017; Bond and Galvin, 2019). Bond (2006: 4-5) defines the commodification of water as,

highlighting its role mainly as an economic good, attempting to reduce cross-subsidisation that distorts the end-user price of water (tariff), promoting a limited form of means-tested subsidisation, establishing shadow prices for water as an environmental good, solving problems associated with state control of water (...) and in the process, fostering the conditions for water privatisation.

In our study, we acknowledge the validity of all three discourses in explaining different aspects of failed water service delivery. To fully grasp the policy-practice gap, however, we need to open the black box of service delivery by scrutinising its underlying mechanisms through an actor-oriented approach.

### **An actor-oriented approach**

In trying to unravel the mechanisms behind failed rural service delivery we use an actor-oriented approach (Long, 2001) which is "philosophically grounded in a social constructionist view of change" (ibid: 2). It builds on the observation that similar structural circumstances can lead to different responses, the differences being largely the result of the actors' co-creation of the realities (ibid). Drawing on their own motivations, convictions and resources, social actors can make a difference by exerting agency which, according to Giddens, "refers not to the intentions people have in doing things but to their capability of doing those things in the first place (which is why agency implies power)" (Giddens, 1984: 9). This is not to say that actors make decisions free of structural constraints, since they do so "under circumstances directly found, given and transmitted from the past" (Marx, 1978 (1852): 595); however, "it is theoretically unsatisfactory to base one's analysis on the concept of external determination" (Long, 2001: 13), as is done by both neo-Marxist and rational-choice theoretical approaches. Actor-oriented analysis thus focuses on the actors' room to manoeuvre in exerting their agency, thus combining actor and structuralist approaches (Long, 2001).

We make use of this approach since we share the notion described by Giddens (1984) that, by exerting agency, actors and structures co-constitute each other. Public service delivery is not simply the result of structures and policies; it also depends on how the involved actors interact within this structure and among themselves. In this article we focus in particular on a limited number of actors who are key to municipal water service delivery, including politicians, professional staff who are responsible for water and sanitation, builders and contractors who are involved in either new construction or repair of infrastructure, and water users of different ilk. It is important to distinguish the different governance levels in which these actors operate; from the bottom level up they comprise the governance realms of ward, local municipality, and district municipality.

### **Key concepts**

The main concepts used in this paper to scrutinise the differences between highly ambitious policies and poor public service delivery are gatekeeping, patronage and accountability relations.

While gatekeeping and patronage are two distinct concepts, they often occur simultaneously and have a lot in common; both describe relations between actors that tend to be asymmetric in a vertical sense (Weingrod, 1968), reciprocal (Arriola, 2009), voluntary (Eisenstadt and Roniger, 1980), and assumed (i.e. informal) rather than contractually defined (Robinson, 2007). Despite their informal nature, the resultant arrangements are often tightly binding. The asymmetry refers to the differences in access to power, capital, natural resources, knowledge, skills and technology that form the basis of these relationships, which are often also "opposed to [the] official laws of the country" (Eisenstadt and Roniger, 1980: 50). The difference between the two concepts lies in the motivation and duration of the relationships. Gatekeeping politics refers to the control by political or party leaders over access to resources and opportunities, and the way they use this to further personal and economic agendas (Beresford, 2015). Gatekeeping describes a distinct happening in time, while patronage refers to a continuous relationship involving the simultaneous exchange of resources whereby information, contracts and access to new infrastructure are exchanged for preferential treatment, kickbacks or votes.

In his analysis of South African politics, Beresford describes how these two mechanisms can enter a cyclical relationship,

[in] which resources and opportunities are distributed through patronage networks to regenerate the political power of the patron (or gatekeeper), and political power (access to state spoils) is in turn used to replenish the resources needed to maintain these networks and 'purchase' the affection of their supporters (Beresford, 2015: 238).

The third key concept applied in this analysis is accountability; this is one way to describe the strength of the relationship between two (sets of) actors. One actor is considered to be accountable to another if they have to face sanctions for not reaching clearly formulated goals or agreements (Dann and Sattelberger, 2015). It is widely recognised that the accountability of the service provider towards the end users is key to good service delivery. There are short and long routes of accountability. The short route describes the direct link between service providers and end users, while the long route describes the link between end users and service providers which holds policy makers and politicians accountable through electoral or contractual accountability or public protest (World Bank, 2003). A World Bank (2011: 95) study on water and sanitation service provision in South Africa concludes that both the short and the long route "are poorly developed and perhaps atrophying". In order to explain this lacuna, one has to understand how accountability can be obstructed or diverted by patronage and gatekeeping.

Patronage relations and, to a lesser degree, gatekeeping, create strong bonds between actors in public office, between the administration and individuals, or among groups of actors such as in a village or region. While this creates strong informal accountability relations for a few, it excludes others; it also weakens or undermines formal accountability pathways such as electoral and financial accountability. Electoral accountability is understood here as the ability of citizens to sanction or reward incumbents of public offices based on their performance (Hellwig and Samuels, 2008; Smart and Sturm, 2013). Since patronage is a politically motivated distribution of favours by a patron to his clientele (Erdmann and Engel, 2007), it distorts electoral accountability. Financial accountability, as it is used here, is what Ngwakwe (2012: 313) describes as "the effective and efficient management of public finance in a transparent manner in compliance with the national budget and plans that are democratically formulated to address public needs effectively"; as such, it is compromised by gatekeeping.

Finally, to understand the propensity of end users to operate, maintain and benefit from water infrastructure we refer to hydraulic property and access. Hydraulic property is a concept defined by Coward (1986a, 1986b) to describe how the co-creation and co-ownership of hydraulic property can result in responsible behaviour on the part of end users of water infrastructure; for small-scale, farmer-led irrigation schemes it has been established that co-creation of infrastructure strengthens user-based governance and incentivises users to take responsibility for the maintenance of hydraulic property thus created. 'Access' in this article is used according to its definition by Ribot and Peluso (2009: 155) as, "the ability to benefit from things", with water services being the "thing" of interest. Conceptualising access as ability and not as a right creates a focus on "the range of powers – embodied in and exercised through various mechanisms, processes, and social relations – that affect people's ability to benefit from resources" (ibid: 154).

In the case description below, we will distinguish four phases of service delivery: identification, planning, construction, and operation and maintenance; for each phase we will assess which mechanisms lead to failure or misallocation of access to water services. In the subsequent section we propose some counter-mechanisms, and go on to discuss their effectiveness; the conclusion then engages with the three dominant discourses introduced above.

## METHODOLOGY

This article first analyses the current public service delivery practices in Sekhukhune District; it then goes on to describe an experimental approach that aims to address some of the problems identified in public service delivery. The methodology for these two sections differs. The assessment of public service delivery is based on semi-structured interviews with 15 key local and district-level informants from the Department of Infrastructure and Water Supply (DIWS) for Sekhukhune District, 10 local politicians (ward councillors, ward committee members, and district-level politicians), 6 water sector consultants, and 7 officials from the provincial- and national-level Department of Water and Sanitation. A thorough review of relevant literature was also undertaken. Simultaneously, the main author of this paper was co-leading the implementation of an experimental approach to service delivery within a project entitled *Operationalizing Community-Driven MUS in South Africa*;<sup>1</sup> it was being carried out in a village selected by officials of the Sekhukhune District Municipality in collaboration with Makhuduthamaga Local Municipality (van Koppen, 2017). The lessons learned from that experimental process form the basis for the "transformative servicing" section of this article. The aim of this article is not to evaluate the project, but to show how certain lessons learned from the experimental approach can help to counter specific mechanisms responsible for failed rural water service delivery.

The data for this article was collected over 13 months in 2017 and 2018. During this time, the main author spent four months in different rural communities, organising and taking part in workshops with end users and the municipality, attending Integrated Development Plan (IDP) outreach meetings and participating in the Sekhukhune District water summit held in September 2018.

## SCRUTINISING FOUR PHASES OF SERVICE DELIVERY IN ORDER TO IDENTIFY MECHANISMS THAT CAUSE FAILURE

### Project identification

To overcome the historic injustice in service delivery, the South African government developed a process for creating Integrated Development Plans. The planning process is meant to be strongly democratic and to substantially enhance the responsibilities of the local government such that they are the key players in bringing about development (Binns and Nel, 2002). Since the implementation of the *Local Government Transition Act Second Amendment Act* in 1996, it became mandatory for all municipalities to develop such an IDP. While there is no precise procedure for generating creative and locally adapted solutions (Oranje et al., 2000), the planning process must be both inclusive and representative of all social categories (DPLG, n.d.). In Sekhukhune, the district municipality is responsible for the provision of water services; it holds two outreach programme meetings annually in which the officials who are responsible for drafting the IDP ask community members for their inputs (Sekhukhune District Municipality, 2016). These meetings are supposed to be ideal points of interaction for community members to influence the development priorities of the municipality; interviewed ward committee and community members, however, considered the link to be weak and their participation in the process a waste of time since the only input collected was a list of problems. They felt that decisions were still being taken by politicians behind closed doors.<sup>2</sup> This was confirmed by interviewees from the DIWS who stated that the IDP was

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<sup>1</sup> This project was funded by the African Development Bank (AfDB) and implemented by the Water Research Commission (WRC) of South Africa in collaboration with the International Water Management Institute (IWMI) and an NGO. This paper's lead author undertook project implementation and facilitation on behalf of IWMI.

<sup>2</sup> Interviewees here included a community member on 15 November 2017, one current ward committee members on 7 June 2017, one former ward member on 16 November 2017, two ward councillors on 19 August 2017 and 13 August 2018; there was also a focus group discussion on 15 May 2017.

generally not the triggering factor for investments;<sup>3</sup> it was also confirmed by other studies which found that IDPs exert a very limited influence on municipal budget allocation (Todes, 2004; Oranje and van Huyssteen, 2011; van der Waldt, 2014). Other scholars describe insufficient end-user participation in the formulation of IDPs; this was felt to be due to underfinanced processes and a lack of skilled personnel (Binns and Nel, 2002), and because the process was primarily perceived as a political pursuit (McDonald and Pape, 2002; Mukwevho, 2014) that involved already empowered groups (Cash and Swatuk, 2011). Everatt et al. (2007) also identified a lack of participation of young people and unorganised groups in Gauteng Province; this was attributed to transport problems, inappropriate use of English both in meetings and materials, and complicated technical terms being used to explain the process and plans.

Ward committees are a second official pathway for community members to influence the budget allocation of the municipality. These committees are chaired by the ward councillor; they comprise up to ten members and represent sectors and/or geographical areas of the ward. They were established in order to promote participatory democracy in local government (Republic of South Africa, 1998), which they did by, among other things, identifying needs and complaints related to service delivery and, if necessary, communicating them to higher levels of government (GTZ and DPLG, 2005). This link is considered by community members and local politicians to be weak and tedious mainly because of its dependence on many individuals at different levels of government in order to reach decision makers.<sup>4</sup> Case studies from different parts of the country confirm this view: ward committees only minimally influence the setting of municipal development priorities (Smith and de Visser, 2009; Moyo and Madlopha, 2016; Mtshali, 2016). This might be connected to the lack of legitimacy of these committees due to the fact that every municipal council decides independently on the election process for the ward committees in their area (COGTA, 2020). The *Municipal Structures Act* of 1998 demands that elections promote gender equality and representation of the different interests (Republic of South Africa, 1998: 73), and recommendations for such election processes do exist; there is, however, no standard process in place in order to allow for adaptation to local circumstances (GTZ and DPLG, 2005). Smith and de Visser (2009) describe the deep flaws in the nomination and election processes in many places. Ward councillors tend to nominate their favourite candidates, which "makes some ward committee members to become 'Mickey Mouse' of these councillors because they do not contribute, but are told what to do" (SA Local Government Briefing, 2005: 28, as cited in Smith and de Visser, 2009: 16).

Local officials of the DIWS are the municipal representatives that work most closely with communities on water services. The current procedure allows them to identify needs and to give recommendations; according to several interviewees, however, the assessments of these street-level bureaucrats do not substantively influence decisions.<sup>5</sup>

According to local politicians and officials of the DIWS from all levels, the main actors in directing infrastructure investments are district-level politicians<sup>6</sup> and investments are primarily directed in response to community protests and in order to maintain patronage relationships. This has been confirmed by Beresford (2015), who describes how communities turn to patronage relationships to access services; Buhlungu and Atkinson (2007) further observe that communities that fail to access

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<sup>3</sup> Interviewees included a leading official of the district IDP coordination of Sekhukhune District on 8 July 2018, a leading district-level official of the DIWS on 5 December 2017, a local official of the DIWS on 17 November 2017, and a leading official of the institutional social development unit of Sekhukhune on 5 April 2018).

<sup>4</sup> Interviewees included two community members on 23 July 2017 and 10 December 2017, and two former ward committee members on 15 November 2017 and 16 November 2017.

<sup>5</sup> Interviewees included four local officials of the DIWS, one on 17 November 2017, two on 29 November 2017, and one on 11 December 2017.

<sup>6</sup> Interviewees included one current ward committee member on 7 June 2017, one former ward committee member on 16 November 2017, two ward councillors on 19 August 2017 and 13 August 2018, two local officials of the DIWS on 17 November 2017 and 29 November 2017, two district-level officials of the DIWS on 29 November 2017 and 16 August 2018.

patronage relations often resort to protest. While in some communities even the threat of protest can trigger service delivery, other communities must take more drastic measures such as locking up local officials in their village or organising road blocks.<sup>7</sup>

### Project planning and financing

Once the area and nature of a project has been identified, the project needs to be officially recognised by the Planning Unit of the DIWS so as to start the planning process. As a first step of this planning process an implementation readiness study (IRS) is undertaken; this contains a pre-feasibility study which identifies the problem, a feasibility study which develops options for tackling the issue and then justifies the choice of one option, and a technical report which details how the chosen option will be implemented.<sup>8</sup> If the IRS is complete and the funding for the project has been secured, the supply chain unit issues a call for tender and hires a consultant to do the detailed planning. While all funding for basic service delivery comes from the national treasury, infrastructure projects can be financed through the Water Services Infrastructure Grant (WSIG) or the Municipal Infrastructure Grant (MIG).<sup>9</sup> Both the WSIG and the MIG aim at reducing the service delivery backlog in impoverished rural areas; the WSIG is specific to water and sanitation, however, while the MIG targets all sorts of service backlogs (Republic of South Africa, 2017).

Despite slight differences in the procedures and institutions that must approve the projects,<sup>10</sup> in all water infrastructure investments in Sekhukhune the full set of planning activities is outsourced to consultants.<sup>11</sup> This reduces the responsibility of departmental staff as decisions are made by external 'experts', but it also creates opportunities for gatekeeping politics. It is an open secret within the DIWS that many officials like to be in positions that allow them to exert influence on the awarding of contracts as long as they can do so from the corridors and cannot be held accountable for their actions. While the official explanation for the outsourcing of key steps in service delivery is lack of capacity and lack of mastery over certain computer programmes, officials agree that the planning of simple rural water infrastructure could be done in-house;<sup>12</sup> one leading official explained, however, that earlier attempts to plan and implement rural water infrastructure in-house failed due to pressure from politicians and higher departmental levels to award contracts to private service providers.<sup>13</sup> Other studies further confirm that politicians exert influence in the allocation of these contracts (Thornhill, 2006; National Treasury of the Republic of South Africa, 2015; Munzhedzi, 2016).

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<sup>7</sup> Interviewees included four local officials of the DIWS: two on 29 November 2017, one on 11 December 2017, and one on 16 August 2018.

<sup>8</sup> Interview with a district-level official of the DIWS on 5 December 2017.

<sup>9</sup> Interview with a district-level official of the DIWS on 12 December 2017.

<sup>10</sup> Municipal Infrastructure Grant funding is coordinated by the Department of Cooperative Governance (DCoG); every municipality gets assigned a certain budget in accordance with a formula that has been developed by the national treasury. These funds must then be spent according to priorities approved by DCoG, with the technical support of the relevant national-level department. Water Services Infrastructure Grant (WSIG) funding on the other hand is fully under the supervision of the Department of Water and Sanitation (DWS) and funds are allocated for specific projects which must be approved by the DWS. The Regional Bulk Infrastructure Grant (RBIG) is a third funding source for water projects but can only be used for bulk infrastructure (Republic of South Africa, 2017).

<sup>11</sup> Interviewees included ten officials from different levels of the DIWS; interviews were conducted on 17 November 2017, 22 November 2017, 29 November 2017, 12 December 2017, 16 August 2018, 19 September 2018 (two), 20 September 2018, 21 September 2018, and 22 September 2018.

<sup>12</sup> Interviews with two engineers of the DIWS on 19 September 2018 and on 14 September 2018.

<sup>13</sup> Interview with a district-level official of the DIWS on 14 September 2018.

Since there is no standard protocol in place for end-user participation, each consultant follows their own procedure,<sup>14</sup> marginalising expensive and tedious end-user input. Officials said that in most cases end users were aware of upcoming projects but that they were often only informed of the planned intervention once funds had been secured and the contractor appointed.<sup>15</sup> The dominant perception among district-level officials of the role of end users in the planning of infrastructure is that they should "understand"<sup>16</sup> or be "informed"<sup>17</sup> on what is being planned in order to "endorse the scope of works",<sup>18</sup> since planning is "using engineering principles that not everyone will understand".<sup>19</sup> This differs from the perception of the interviewed national-level officials of the DWS who see it as important that end users "are part of the decisions taken"<sup>20</sup> and are included in planning decisions to ensure ownership.<sup>21</sup> The prevailing practice also directly contravenes the legal framework of the *Municipal Systems Act* from 2000 and the 1992 ANC policy guidelines for a democratic South Africa. These documents clearly state that municipalities must create the conditions for local community involvement and must encourage community members to get involved in the affairs of the municipality (Oranje et al., 2000; Republic of South Africa, 2000a). The failure to involve end users also contravenes the global consensus among scholars and practitioners on the benefits of community participation (Claridge, 2004). The inclusion of end users in planning development efforts dates back to the work of Robert Chambers (1983) and community participation has since become the dominant paradigm in development. Extensive evaluation studies by the World Bank have shown how participation of communities in the planning of infrastructure increases the sustainability of these investments by ensuring that they are demand-driven (Sara and Katz, 1997) and by building capacity among community members (Narayan, 1995).

### Project implementation

Once finished, the detailed design is handed over to the supply chain management unit together with a recommendation from the consultant on the financial volume of the contract. The supply chain unit then must follow the regulations of the Construction Industry Development Body (CIDB) (Republic of South Africa, 2005). The CIDB is a public entity whose responsibilities are, among others, to define best practice procedures for procurement and to promote a uniform application of these procedures (Republic of South Africa, 2000b).

Despite these state-of-the-art procurement regulations and the high fines for non-compliance, the main reason given for the looming problem of incomplete and substandard infrastructure implementation is the low capacity of the contractors.<sup>22</sup> According to DIWS officials, the problem is not that there are no good and competent contractors, but that they do not receive enough work.<sup>23</sup> While

<sup>14</sup> Interview with a high-ranking municipal official on 21 September 2018 and with a leading engineer of the DIWS on 19 September 2018.

<sup>15</sup> Interviewees included five officials from different levels of the DIWS, two on 19 September 2018, one on 20 September 2018, one on 21 September 2018, and one on 22 September 2018.

<sup>16</sup> Interviewees included a high-ranking municipal official on 21 September 2018 and a leading politician on 20 September 2018.

<sup>17</sup> Interview with an engineer of the DIWS on 14 September 2018.

<sup>18</sup> Interview with a leading official of the project implementation unit on 20 September 2018.

<sup>19</sup> Interview with an engineer of the DIWS on 19 September 2018.

<sup>20</sup> Interview with a director of the Regional Bulk Infrastructure Grant (RBIG) and Water Services Infrastructure Grant (WSIG) funding bodies at the national Department of Water and Sanitation (DWS) on 26 September 2018.

<sup>21</sup> Interview with a member of the directorate for Water Services Macro Planning at the national DWS on 26 September 2018.

<sup>22</sup> Interviewees included district-level officials of the DIWS on 22 November 2017, 29 November 2017 (two), 5 December 2017, 7 December 2017, 12 December 2017, 19 September 2018, and 21 September 2018.

<sup>23</sup> Interviewees included a leading official of the DIWS on 5 December 2017, a project manager of the DIWS on 29 November 2017, and a local official of the DIWS on 22 November 2017.

most officials struggled to explain on record how the process could be so ineffective, and blamed flaws on the CIDB system and the strong influence of the Broad-Based Black Economic Empowerment (BBBEE) policy, off the record every single interviewee within the department mentioned that kickback payments and personal relations are the main drivers for awarding contracts to incompetent contractors. The latter practice has been confirmed by a series of corruption scandals in Sekhukhune that have been unravelled since 2019 (Ramothwala, 2019; Smith, 2020). Many officials do not seriously question the *modus operandi* of infrastructure construction, despite the fact that contracts are regularly awarded to contractors of which it is known from the start that they are not able to deliver.<sup>24</sup> Olver (2017: 108-110), in his study of Port Elizabeth, cites several examples of (housing) contracts being awarded to incompetent contractors who were part of the patronage network of key municipal decision makers. He describes how substandard work in housing and infrastructure has the added "benefit" of creating new opportunities "for 'rectification' with works usually assigned to the same pool of contractors" (ibid: 110).

The end user's role in implementation is limited to the project steering committee (PSC); the PSC is supposed to represent them and is meant to be formed during the planning phase<sup>25</sup> but is normally only formed once the construction starts<sup>26</sup> and lacks any clear mandate beyond informing the community.<sup>27</sup>

Outsourcing full construction projects creates the opportunity to award large contracts, which again increases the opportunities for gatekeeping politics and patronage; this confirms another main point of this paper, namely that the reason for low performance of the sector is not the policy environment but the way policies are being implemented. Instead of suggesting new policies and regulations, the focus should thus rather be on developing a new *modus operandi* which strengthens end-user agency within the existing structure and builds acceptance for it through pilot projects, workshops and trainings (see below for further suggestions).

### Operation and maintenance

Adequate operation and maintenance are key to obtaining satisfactory services from investments over the planned lifespan of the infrastructure. Poor operation and maintenance practices, on the other hand, are likely to result in what Shah (2009) calls a build – neglect – rebuild cycle, and what Vermillon (2005) calls a construction, rapid deterioration and preliminary rehabilitation cycle. Over half of 77 water service managers interviewed by Everatt et al. (2007) blamed insufficient maintenance for the fact that earlier served communities were again affected by a lack of services and stated that the problem would keep getting more severe. Water users in Sekhukhune are also affected by poor operation and maintenance; 76% of villages with a piped water system are only irregularly receiving service (Sekhukhune District Municipality, 2015).

This situation is a result of both financial and technical/procedural issues. According to the 'back to basics' strategy, infrastructure maintenance is supposed to be assigned 7% of the total operational budget (COGTA, 2004); in practice, however, available budgets are considered too low by DIWS officials.<sup>28</sup>

<sup>24</sup> Interviewees included three district-level officials of the DIWS on 29 November 2017, 5 December 2017, and 12 December 2017.

<sup>25</sup> Interviewees included a leading district-level official of the DIWS on 21 September 2018, four district-level officials of the DIWS on 19 September 2018, 21 September 2019, 12 December 2017, and 14 September 2018.

<sup>26</sup> Interviewees included a district-level official of the DIWS on 19 September 2018 and 21 September 2019, an engineer of the DIWS on 19 September 2018, a district-level politician on 21 September 2018, a leading official of the DIWS Limpopo on 20 September 2018, and a leading official of the district municipality on 21 September 2018.

<sup>27</sup> Interviewees included a water sector consultant on 22 September 2018, and three district-level officials of the DIWS on 12 December 2017, 14 September 2018, and 20 September 2018.

<sup>28</sup> Interviewees included two local-level officials of the DIWS on 29 November 2017 and 17 November 2017, and two district-level DIWS officials 5 December 2017 and 11 December 2017.

O&M funds are often tapped to construct new infrastructure if the money is considered to be for emergency relief.<sup>29</sup> Underfunding of maintenance is a common issue in developing countries; it is a problem for both irrigation schemes (Gulati et al., 1994; Skutch, 1998; Vermillon, 2005) and Water, Sanitation and Hygiene (WASH) systems (Atkinson, 2007; Rodriguez et al., 2012; Fonseca et al., 2013; OECD, 2016). Besides the low availability of funds, the procedures by which local operation and maintenance managers access these funds are complicated; the multi-step procedures that are required delay the department's response and create a situation where it is not uncommon for communities to have to rely on existing patronage relationships or protest in order to receive assistance at all.<sup>30</sup>

The operation of existing infrastructure is facing similar issues. Due to low budgets, it has become common for rural water supply infrastructure to be operated by volunteers. In Makhuduthamaga Local Municipality, which is part of Sekhukhune District, there are currently 34 volunteer operators serving 189 villages.<sup>31</sup> The fact that these volunteers get appointed by the municipality without, or with only minimal, consultation with the affected community leads to a situation where they do not feel accountable to the end users; at the same time, the lack of financial incentive creates a very weak accountability relationship with the municipality. The poor performance of these volunteer operators is becoming an additional cause for breakdowns and irregularities in the service delivery.<sup>32</sup> Technical decisions taken during the planning phase add to the problem; for example, the instalment of diesel-powered pumping systems not only increases the workload for operators compared to that of an electrified system, it also increases the risk of fuel being diverted by unpaid staff.

The focus on the construction of new infrastructure can be interpreted as an attempt by municipalities to eradicate the enormous backlog (Fonseca et al., 2013) or spend the available grants (Smith, 2009); it can also be seen as a political decision aimed at optimising the opportunities for gatekeeping and patronage. The construction of new infrastructure allows for awarding large contracts and augmenting opportunities for kickbacks while providing certain clientele with additional services. These are both factors that foster gatekeeping politics and patronage.

New approaches for operation and maintenance of rural water schemes are being discussed within the department, with a focus on community-based organisations (CBOs) as water service providers (WSPs). Current policies already allow for such arrangements. In the 1980s, the use of CBOs to operate infrastructure had become a global panacea of water service provision (Schouten et al., 2003); however, the great optimism ascribed to this approach (Narayan, 1995; Sara and Katz, 1997) was quickly challenged by a wide range of critical scholars (Schouten and Moriarty, 2003; Harvey and Reed, 2007; Lockwood and Smits, 2011). The criticism has focused primarily on the need for communities to be both willing and able to take over the management, administration and operation of the water infrastructure in such a way as to make end-user management sustainable. While this approach has thus yielded many benefits, "in most countries around the world it has by and large failed to achieve the ultimate goal of reliable and sustainable water supply at scale" (International Water and Sanitation Centre, 2009: 1). Recent evaluations show that positive examples are only likely to materialise when communities are receiving external support, especially when technically complex systems prove difficult to manage on a volunteer basis (Lockwood and Smits, 2011; Chowns, 2015). Scholars therefore propose a more holistically supported version of community management; this is referred to as "community management plus" (Moriarty et al., 2013; Smits and Lockwood, 2015).

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<sup>29</sup> Interviewees included two local-level DIWS officials on 29 November 2017 and 17 November 2017, and a district-level DIWS official on 29 November 2017.

<sup>30</sup> Interviewees included two local DIWS officials on 29 November 2017 and 11 December 2017.

<sup>31</sup> Interview with local-level official of the DIWS on 17 November 2017.

<sup>32</sup> Interview with local-level DIWS official from Sekhukhune District on 17 November 2017.

## TRANSFORMATIVE SERVICING – THE PILOT PROJECT IN GA-MOELA

The current modus operandi as described above not only produces unsatisfactory services, it also focuses to a large extent on the provision of minimal services; it does not support a process of transformation that is aimed at achieving a more equitable post-apartheid South Africa. This focus is the result of the enormous pressure on local governments from higher levels of government and from communities themselves to provide services as promised and as constitutionally defined. In this environment, the number of toilets and water taps installed and the number of kilometres of road constructed have become the main evaluation criteria for assessing the development efforts of local politicians (Oranje and van Huyssteen, 2011). The resulting concentration of effort on the achievement of basic service delivery standards is reinforced by grants from the national treasury that can only be spent on infrastructure for basic service delivery.<sup>33</sup> This propensity does not challenge the existing power structures and tends to reinforce inequalities that were established during apartheid by filling in gaps (ibid). To overcome the growing divergence between servicing and transformation, the provision of basic services could better be conceived as an incremental step towards the common goal of transformation.

In an attempt to explore possibilities for creating such a transformative process of water service delivery, the team that is carrying out the project entitled *Operationalizing Community-Driven MUS in South Africa* has developed an experimental approach; it focuses on strengthening end-user agency and creating a common vision for multiple water uses in a transformed reality. The main author of this paper formed part of the team that tested this approach in Ga-Moela, a rural village in a mountainous region of Sekhukhune District;<sup>34</sup> this author co-facilitated the described interactive planning process and followed the end-user-led construction as an observer. The lessons learned from this process form the basis of the following section.

The existing water infrastructure for this community of approximately 100 households comprised two communal boreholes; only one section of Ga-Moela, however, was served through a reticulation system that supplied street taps.<sup>35</sup> The unconnected households were getting water from shallow wells or from the tap points next to the borehole; this required the collection of water on foot, primarily by women, from a long distance. The idea behind the novel approach being discussed was the collective formulation of a step by step vision of the desired future situation regarding water use; available project funds would then be used to take a first incremental step towards the goal, followed by the identification of opportunities for further steps. The experimental process as described below follows a sequence of participatory diagnostics which define the scope of the project, envision water use in a transformed reality, and then design and construct the desired infrastructure in an end-user-led process.

After introducing the project to the traditional leader/s and presenting it at a community meeting where a committee of representatives was nominated, the process began with a participatory diagnosis of the current situation. The diagnostic phase was, on the one hand, essential for the facilitator to get an understanding of the existing infrastructure and community organisation; on the other hand, it was a key step towards starting the mobilisation of local knowledge, existing ideas for solutions, and trust. Tools used in this phase were aimed at engaging and including as many community members as possible. Community mapping was used to create a common ground for discussion and to raise the interest of community members in participating.<sup>36</sup> A map of the village and its water sources was drawn on the

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<sup>33</sup> The possible uses of these grants are described in the division of revenue bill (Republic of South Africa, 2017).

<sup>34</sup> A short series of videos produced as part of the project can give an overview of the setting and the process. See <http://stories.iwmi.org/voicing-water-visions/mus-south-africa/>.

<sup>35</sup> In addition to this section, there was a compound of three households of a religious congregation which had a yard connection from one of the boreholes.

<sup>36</sup> See available manuals for community mapping (IFAD, 2009) and case studies (IIED, 2006).

ground and then copied onto paper, and follow-ups were provided through transect walks.<sup>37</sup> Before starting a discussion on the desired future situation, the scope of the project was set; this helped avoid the unrealistic expectations that are automatically created when outsiders engage a community in such analytical activities (Chambers, 2006). We tried to manage expectations by ensuring a wide understanding of the procedures and creating maximum transparency on the available financial means provided by the project. Since this was a donor-funded project, it was possible to communicate upfront the available budget for the infrastructure investment. This was done at a community meeting where a list of local market prices of all relevant material was also distributed in order to enable community members to take informed positions.

The formulation of the vision of future multiple water uses was conducted through a sequence of planning meetings with small groups that engaged all the potential beneficiaries. During this process we avoided referring to 'the community', since communities are diverse groups of stakeholders without a standardised definition. To perceive them as a homogenous group could have led to the paradoxical situation where participatory processes in fact disempower residents (Levine, 2017). The main task for facilitators during this phase was to avoid elite capture<sup>38</sup> and to ensure the inclusion of young people, women and other traditionally excluded groups. To create space for the latter groups to get involved and to articulate their opinions, it was key to hold separate meetings; once these previously excluded groups had been given the chance to voice their opinions in separate meetings, they also started to articulate their views at general community meetings. During the diagnostic phase, the main tool used for developing the vision was large copies of maps developed with QGIS open source software, on which participants could directly place objects. This proved to be a very useful tool for fostering discussions since objects could be added, removed or moved around, and the large size of the prints enabled many individuals to take part. A key role was played by the facilitator who had to make sure that all community members got a chance to participate while, at the same time, facilitating neutral feedback on steps in the process and mobilising technical expertise from the NGO.

Once the common vision was completed and was accepted at a community meeting with the traditional leader, the facilitator added the objects that had been placed on the map to the QGIS image and handed over this plan to the engineer of the project. The engineer then charted the technical and financial constraints of the proposed intervention in such a way as to enable end users to take as many further incremental steps as possible. In the described example of the rural village in Sekhukhune District, the identified next step was the construction of a reticulation system with street taps connected to existing boreholes. The planning process showed that most community members understood the concepts of head loss and pressure; they were thus able, in a facilitated process, to develop a common plan for an intervention. This plan also included social aspects relevant to the local setting, such as putting the storage tanks in a location that would best enable security and reduced operation tasks. In order to reduce vandalism, street taps were also located in such a way as to ensure that they were shared among households belonging to the same family. The process also showed that the facilitator needs to have some water-related knowledge, since relevant issues like the possibility of groundwater depletion and the limitation of the strength of mechanised water pumps had to be explained. In the described example, the contribution of the engineer was limited to checking the feasibility and adding specifications for the materials needed.

Creating the ground for further incremental steps in this case meant that pumps and main pipelines had to be overdimensioned to the extent that the budget allowed. Reservoirs were constructed in locations that allowed for future extensions of the piped water network once additional funding was

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<sup>37</sup> See available manuals for transect walks by Bouris (2006) and Rufina (2006).

<sup>38</sup> "Local elites are locally based individuals with disproportionate access to social, political or economic power; the term elite capture refers to the process by which these individuals dominate and corrupt community-level planning and governance" (Beard and Dasgupta, 2006: 230).

available; similarly, technical designs were made with a view to enabling a maximum number of households to connect to the system in the next step. Assessing similar systems in similar contexts has shown that users are very quick to either connect removable pipes to tap points or connect fixed household connections to the reticulation system. Working towards a vision thus meant that such initiatives had to be anticipated as part of the expansion of service delivery rather than being branded as illegal connections; this involved related design decisions such as the positioning of tap points and the size of reticulation pipelines; it also involved choosing pipe-connecting technology that reduced leakages more effectively than do conventional connection methods. To ensure that community members benefitted equally, it was important to start discussing issues like water-sharing regimes, payments, and rules on system modifications early on in the planning.

The design proposal developed by the engineer was then presented, explained, and discussed with end users in such a way as to enable an optimal learning outcome and to create the ground for further extensions. Once the final design was determined, user-led construction started under the lead of the local NGO; this implied that as much as possible the construction work was performed by the end users under direct supervision and paid for by the NGO. For the few tasks for which additional skilled labourers had to be hired, contracts and scopes of work were made transparent to the committee of community representatives and they were directly included in supervising this work. This mode of construction strengthened end-user agency and allowed for capacity building among end users. An important part of this approach was its investment in building the community's capacity for identifying and developing future opportunities for infrastructure extension and problem solving, and to enhance the community's ability to effectively operate and maintain existing infrastructure.

Since this approach was tested in a real life context, with team members having different opinions and being affected by different pressures, certain compromises were made in carrying out the original plan. The NGO representative who was responsible for facilitating the election of the committee thus decided to follow a locally accepted method of nomination. Any community member present at the community meeting could raise their hand and nominate another person who was present; if no one objected and the nominated person accepted, they became a member of the committee. While gender balance was assured, this nomination method compromised the representation of certain sections and was the reason that the members of the committee were not assigned a special role during the planning phase. Due to rising pressure to produce results, the NGO started to show an increasing reluctance to spend additional time on public meetings during the later stages of implementation; this meant that towards the end of the project the financial transparency was scrutinised exclusively by the committee, and certain changes to the original plan were also only discussed within the committee.

These compromises indicate the challenges of creating buy-in, since all actors must adapt long-practised procedures. Moving towards a public water service delivery approach that strengthens end-user agency will not be a quick fix but will be a process of building awareness and capacity among all actors. The described experimental approach should therefore in no way be seen as a blueprint; it should rather be seen as an attempt to learn from testing methods of infrastructure implementation that have been adapted through practice. In the next section, we discuss the effects of these adaptations as compared to the current modus operandi.

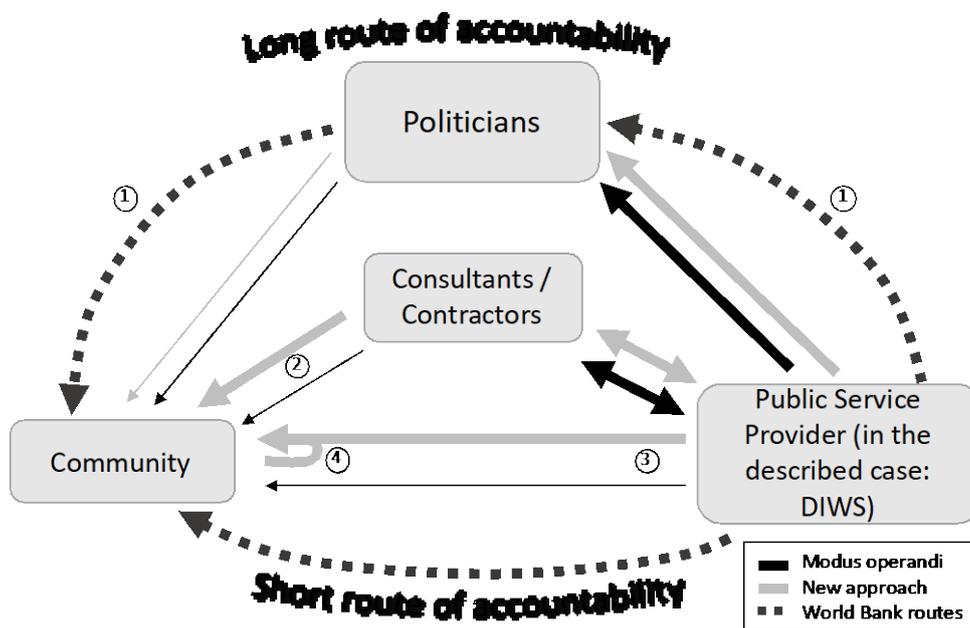
## **DISCUSSION: COUNTER-MECHANISMS INCREASING ACCOUNTABILITY AND IMPROVING SERVICE DELIVERY**

Analysis of governmental practices has shown how the mechanisms of patronage and gatekeeping affect the implementation of policies, and how gatekeeping and patronage result in low levels of service delivery and reduced potential for contributing to societal transformation. In this section, we present the potential benefits of the experimental approach described above; we show how it could improve service delivery and contribute to a more transformative development. Figure 1 shows the current accountability

relationships in black, and the new relationships created by the experimental approach in grey. Below we highlight four relevant aspects.

The figure shows how the new approach does not affect the long route of accountability (1); while departmental officials are highly accountable to the politicians who directly or indirectly appoint them, the link between politicians and communities is and remains weak. Patronage relations and state capture are difficult to check through electoral accountability alone since both mechanisms are about more than performance in public office. The weak ability of the electoral process to check on the performance of politicians was also pointed out by Theo Rauch<sup>39</sup> and Mark Oranje;<sup>40</sup> both identified this as the main reason for the limited influence of the IDP on the development of service delivery. While there are no effects on the long route of accountability, the new approach substantially strengthens the short route.

Figure 1. Accountability relations in the implementation of new infrastructure.



Note: Direction of the arrow means 'accountable to'. The notion of the long and short route of accountability is based on the accountability triangle presented in the World Development Report 2004 (World Bank, 2003). In this figure, we have adapted the World Bank framework by splitting the service provider into consultant/contractor and public provider; this was done in order to highlight the importance of strengthening the relationship between the communities and the public service provider to reduce the often-problematic role of contractors and consultants and to strengthen the inclusion of users in service delivery.

By assigning the end users a role in the oversight and approving of payments of consultants and contractors, the accountability of these private service providers to the end users is strengthened (2); it thus directly strengthens the agency of members of the end-user community. To tackle the risk of such processes being captured by local elites, all relevant information should be shared from the start with all end users and not only with a small selected group – the project steering committee – as is currently common in municipal infrastructure development projects. Transparency of project-relevant decisions and awarded contracts also contributes to a stronger accountability relationship between the

<sup>39</sup> The interviewee was a professor at the Institute of Geographical Sciences at the Freie Universität Berlin; the interview took place on 24 October 2018. In his earlier position at GIZ he was one of the leading facilitators of the creation of the IDP framework.

<sup>40</sup> The interviewee was a professor at the Department of Town and Regional Planning at the University of Pretoria; the interview took place on 25 September 2018.

departmental officials and future end users (3). Increasing the role of end users in both planning and construction of new infrastructure also creates many more interactions between end users and the departmental officials; this helps contribute to a more realistic view among officials of the current services delivered, and creates closer personal relationships; as Pape (2002: 185) describes it, it has the effect of, "enhance[ing] solidarity between municipal workers and communities". The final but important effect of this strengthened role for communities in the planning and construction of infrastructure is that it becomes no longer possible to simply direct the blame for failures towards outsiders. The end users become, in a way, accountable themselves (4).

Construction that is led by end users also creates capacities within communities for initiating and implementing future extensions and improvements of water infrastructure. This capacity building can lead to a formal recognition of various forms of co-investment in, and co-ownership of, water infrastructure. With the functionality of a project and a process having been already proven on the ground, many rural households may feel confident investing their own resources into infrastructure, or they may decide to expand or modify existing public infrastructure so that it will better provide the required services. This is further proof of how enhanced end-user capacity can allow for the exercising of agency in the realisation of a transformative agenda in water service delivery.

To include the end users in the planning and implementation of projects as described above is also a precondition to creating hydraulic property relations; these relations then become the basis for further collective action related to operation and maintenance (Coward, 1983 as cited in Boelens and Vos, 2014). Co-management – where the responsibilities for operation and maintenance are being shared between the municipality and the end users – can become a promising approach to reducing the time taken to respond to breakdowns. In 2015, in response to the service delivery protest and in order to tackle the susceptibility to patronage of the project identification, the Minister for Water and Sanitation launched new institutional forums for water and sanitation. These representative forums were supposed to assist with demand identification at all levels of government. Local officials were hopeful that this structure would ameliorate the situation, but since it has been implemented in a top-down fashion while facing a lack of funds, the benefit remains feeble in Sekhukhune District.

Other promising approaches have been developed which rely on similar mechanisms of transparency and the accountable delivery of services; these include competitive bidding with end-user developed proposals, benchmarking, and indirect investment. Competitive bidding, with proposals developed by end users, is an approach that the African Water Facility, which is managed by the African Development Bank, has implemented in a decentralisation-of-services project in Benin; project proposals are developed by end users and the best of these proposals is selected for funding by a technical committee. The experience collected in the course of this project has shown that communities develop not only capacities to plan projects; they also gain experience in mobilising funding (African Water Facility, 2012). Benchmarking, on the other hand, entails the comparison of local service delivery to a generically excellent model or to the performance of similar municipalities (Bovaird and Löffler, 2002). South Africa already has such incentive-based frameworks in place at the municipal level for drinking water quality and sanitation; according to this incentive-based approach, municipalities can work to achieve 'Blue Drop Status' for drinking water quality (Department of Water Affairs and Forestry, 2009) and 'Green Drop Status' for waste water treatment (Department of Water Affairs, 2011). Using such an approach to improving service levels within municipalities would enhance transparency and would therefore strengthen the long route of accountability for end users. Finally, indirect investment is an approach proposed by Coward (1986b) to create collective hydraulic property when supporting irrigation development; he recommends placing the allocation of funds in the hands of the future users and letting them – rather than external consultants and contractors selected by outsiders – make the investment. The described experimental approach capitalises on this insight.

## CONCLUSION

The analysis of the four phases of public water service delivery in Sekhukhune District shows how in several instances the quality and level of the services delivered has been compromised by rent-seeking and the lack of capacity both within the department and among the hired consultants and contractors. While improving access for end users can only occur by countering these two issues, we believe them primarily to be symptoms of the underlying mechanisms of patronage and gatekeeping.

We argue that the way to reduce rent-seeking is not by adding more procurement regulations, since willing officials will always be capable of undercutting them; nor do we believe it is only possible to improve capacity in municipalities only through state-financed initiatives such as the Municipal Infrastructure Support Agent (MISA) or the South African Local Government Association (SALGA). These programmes are important, but their effect will remain limited if municipal decision makers continue to rely on their neoliberal approach of outsourcing key planning activities and construction of communal water schemes to private service providers in order to create opportunities for gatekeeping and dispensing of patronage.

In terms of the three discourses explaining failed water services delivery, it may be clear that we agree to a large extent with the second discourse; this discourse emphasises the debilitating effects produced by forms of rent-seeking (gatekeeping and patronage). The way to counter it is by strengthening and changing accountability relations through increasing the agency of end users. This also taps into the first discourse, which explains failed service delivery as being rooted in a lack of capacity. We believe that an end-user-driven approach such as that presented here strengthens end-user capacity both technically and organisationally; we feel that this is a key precondition for increasing the accountability to end users of different actors in the water services delivery chain. The third school of thought singles out neoliberal policies and the process of commodification of water services as the root cause of failed water service delivery and rural transformation; we believe that this discourse may carry some validity with regard to explaining elite capture of water resources. We argue, on the other hand, that many forms of (indirect) co-investment in, and co-management by, end users of rural water infrastructure rely on certain forms of cost recovery, and that some elements of the commodification of water services supply are thus required. Since the present system of water service delivery in Sekhukhune is significantly undermined by public officials' misallocation of public funds to (incompetent) private contractors, focusing on structural change through decommodification of rural water services is not likely to improve access; we argue, rather, that there is a need to engage in a process that moves towards a public service delivery approach which strengthens collective action and co-investment by end users through making them active contributors and co-owners of rural water infrastructure.

As we stated from the outset, we are not in favour of new policies to increase access to rural water services; rather, we call for new strategies to strengthen accountability relationships towards end users within the existing structure. Due to the compromising effect of both patronage and gatekeeping on financial and electoral accountability, we propose an approach that minimises such opportunities for diverting public resources through focusing on the strengthening of end-user agency. End users are the only actors who have an intrinsic interest in a functioning water infrastructure; strengthening their position in service delivery will thus improve results. Assigning end users a key role in the planning and implementation of water infrastructure, as explored in the approach we describe here, is the basis for defining new forms of collaboration in operation and maintenance. In the identification of projects, end users must be better represented; either the credibility of ward councils must be strengthened through defining a common procedure for their election, or there must be a strengthening of water forums.

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