

The politics of water delivery in the Phatheni District, Richmond

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A thesis dissertation submitted in fulfilment of the requirements for the admittance to the degree of Masters of Development Studies in the School of Built Environment and Development Studies; University of KwaZulu-Natal (Durban).

25 June 2017

As the candidates supervisor I have/have not approved this dissertation for submission.

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Declaration

I declare that this research is my own work and has not been used previously in fulfilment of another degree at the University of KwaZulu-Natal or elsewhere. The use of the work of others has been noted in the text.

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Acknowledgements

First and foremost I would like to extend a huge thank you to Catherine Sutherland for her enduring words of encouragement, her guidance and her humility which kept my motivation alive from start to finish for this dissertation.

Secondly I would like to thank Mvuselelo Ngcoya for sparking interest in me in the field of Development.

I would also like to thank my former Regional Manager Mr Loliwe for the constant words of encouragement of pursuing a Masters Degree and essentially making it possible for me to attend classes while working.

Lastly, but by no means least, I would like to extend thanks to my parents who have forever supported my academic endeavours financially, with God at the centre of it all, of course.

List of Acronyms

CMA - Catchment Management Area

COGTA – Cooperative Governance & Traditional Affairs

DM – District Municipality

DWA – Department of Water Affairs

DWAS - Department of Water and Sanitation

FBW – Free Basic Water

FBS – Free Basic Services

IDP - Integrated Development Plan

MDG - Millennium Development Goals

MIG – Municipal Infrastructure Grant

MSIG - Municipal Systems Improvement Grant

NGO - Non Government Organisation

OECD – Organisation for Economic Cooperation and Development

RWSN – Rural Water Supply Network

RDP - Reconstruction Development Programme

RLM – Richmond Local Municipality

UMDM – Umgungundlovu District Municipality

WCA - Water Catchment Area

WSDP – Water Services Development Plan

WSA – Water Service Authority

WSP – Water Service Provider

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Abstract

Water security and the provision of water services is a critical issue, particularly in rural areas of the developing world. Understanding water management and the technical provision of water has been the major focus of research in the past. However, more recently there has been a shift towards adopting a more integrated and critical perspective on water provision using a political ecology approach. The concept of the hydrosocial cycle has been introduced by scholars as a means of revealing the interconnected relations between water and society. Rather than merely focusing on the elements of the system that make up the hydrological cycle, the hydrosocial cycle analyses the complex relations and politics in water service provision recognising that water is as much a social and political construct, as it is a technical one. This thesis uses the framework of the hydrosocial cycle to explore the relations between the different actors in the production and provision of water services in Phatheni in Richmond. This study explores how these progressive national policy and practices of water governance play out in Phatheni, Richmond with a particular focus on water politics.

Phatheni is a poor rural settlement in the ‘periphery’ Richmond Municipality. It is located in the southern part of uMgungundlovu District Municipality, approximately 38 kilometres from Pietermaritzburg. Phatheni has high levels of poverty and unemployment, and poor delivery of services and facilities. It is governed by both the Richmond and uMgungundlovu Municipalities and the Traditional Authority and hence falls under a system of dual governance. In 2014 a number of water projects were designed and implemented in Phatheni. This thesis explores the politics and issues related to the implementation of these water projects by identifying and analysing the policy and legislative frameworks shaping water service provision in South Africa, the actors involved, the practices of implementation and the politics and relations between the actors that shaped the outcomes of the projects.

CHAPTER 1: INTRODUCTION

1.1 Significance of the Study

South Africa is currently grappling with the issue of water service delivery to impoverished rural communities. Local government in collaboration with numerous other pertinent actors in the water arena have been committed to ensuring that the water needs of these communities are realised. Water service provision has been and still is predominantly part of the pro-poor agenda. However, there are significant backlogs that require government's urgent and undivided attention amongst the poor at this point in time. In light of this, there is a dire need for collaborative efforts to effectively manage government's programs in order to meet these needs. Embedded in hydrosocial cycle architectures or frameworks are tensions and conflicts which often distort and compromise the achievement of the pivotal objective of the fair and affordable provision of water. Accordingly, this study will identify tensions around water provision in Richmond and how these are addressed. Furthermore, it will identify the main politics, interests and agendas of the actors in this respective domain. With a growing body of knowledge arguing that there has been reform and re-institutionalisation in the water governance structure, as a means of enhancing service delivery to the impoverished, this study will explore the extent to which this is being translated in to successful action on the ground. This study explores how these progressive national policy and practices of water governance play out in Phatheni, Richmond with a particular focus on water politics.

The detrimental effects of climate change and poor management by humans have compounded the problem of access to clean water for communities around the world. This has consequently raised a call for inclusive development approaches and good water governance strategies to address inequality and the lack of availability of safe potable water. Many of the strategies employed by government in addressing the many of the problems embedded in the hydrosocial cycle of each region or locality have to address the lack of adequate funding for service delivery and some of the compounding unfavourable political conditions, which hampers efficiency and efficacy in municipal services. Municipal water bills and rates and taxes are the common means of encouraging households to use water more sparingly. Other tax methods that encourage the usage of water sparingly in rural communities include the common value added tax (VAT) as well as provincial groundwater tax. The Municipal Infrastructure Grant is a common source that helps to fund sustained water provision in rural communities. MIGs assist by providing money for the provision of water services from national to local government. However these sources of funding are

sometimes compromised by hidden political agendas of certain stakeholders in some regions. This accordingly impacts on the hydrosocial cycle architecture which compromises service delivery and spawns tension amongst stakeholders. The provision of sufficient water to communities is important as it contributes to the creation of an all-inclusive nation, which brings about a sense of shared growth and belonging. Government, as a result, has a pivotal and facilitative role to play in ensuring the progress of water provision for all. There is a wealth of literature on the water domain; and this reflects and stresses the importance of and commitment to water governance by multiple actors in the water sector. However, the politics and struggles over water hamper the timely completion of many initiatives. Supporting this position as evidence reveals, water systems in South Africa are largely state run, and yet millions of impoverished rural communities do not have good and fair access to water (Berkowitz, 2009 Tissington *et al*, 2008 & Smith, 2008). This research adopts and uses the hydrosocial cycle approach to explore the critical issues in water governance at a regional scale by focusing on the town of Richmond, with particular attention to the area of Phatheni. The hydrosocial cycle is defined effectively as a concept that emerges from a political ecology standpoint. It incorporates the socio-political relations in a particular water configuration (Linton & Budds, 2014). Linton and Budds, (2014) further assert that this respective cycle places emphasis on water's social nature, and essentially how the interaction between water and people remake one another over time. The hydrosocial cycle was a recommended framework for water's political ecology (Linton & Budds, 2014).

This dissertation will assess the manner in which the actors' complex interactions interweave and shape each other thus producing the 'hydrosocial cycle' of Phatheni. According to Sutherland et al (2015), universal access to clean, safe water has become a fundamental goal of international development organisations. This goal is enshrined in the Millennium Development Goals (MGD's) and the Sustainable Development Goals (SDGs). The right to access water is further enshrined in the Constitution of the Republic of South Africa under Act 108 of 1996. South Africa's water governance strategic framework is poorly implemented, decision-making is centralised, government schemes are poorly funded and there is a crucial element of corruption. Given this background, it comes as no surprise that politics firmly entrenches itself in the 'hydrosocial cycle' architecture. Local municipalities are mandated with the task of facilitating the provision of water and sanitation and so decision making around access to water and sanitation is decentralised to the local level. The national government has devolved this responsibility to Water Services Authorities, many of which are district or metropolitan municipalities. This study explores water governance in Richmond which forms part of the Water Services Authority (WSA).

The legacy of both colonialism and apartheid has resulted in Richmond's poor water infrastructure and inequitable water distribution. The systematic exclusion of certain groups in relation to water and sanitation provision produces a specific hydrosocial framework for Richmond. The area of Phatheni is located on the rural periphery of Richmond and as a result of its spatial segregation it has been excluded from many service provisions. The fact that Phatheni's location is on the rural outskirts presents geographic and infrastructural challenges when one is addressing service provision thorough water piping initiatives (Sutherland, et al, 2015).

1.2 Problem Statement

The water crisis in South Africa is escalating and is putting added pressure on local government and institutions to increase tariffs; moreover municipalities have to contend with the undue hardship of having to deliver water services to the poor in rural areas with a very limited budget and in the context of water scarcity (Smith, 2009). At this point in time, municipalities face the added challenge of having to address major backlogs in water provision in rural areas around South Africa who are in dire need of having this problem addressed (Berkowitz, 2009). Statistics affirm that there are approximately 21.3% of the rural population in South Africa who do not have adequate access to water (DWAFF, 2010).

This crisis calls for inter-sectoral collaboration of numerous stakeholders. The vanguards that are commonly mandated to address these monumental socio-economic challenges are the municipalities. These respective institutions are typically confronted with financial challenges which often hamper their means of tackling these water challenges. The Department of Cooperative Governance and Traditional Affairs (COGTA) (2009) in support of this position, affirmed that government institutional arrangements frequently overlook the fact that different municipalities have different capacity constraints with respect to function, financial capacity and the powers conferred to them by the respective national departments. Cameroon (2010) asserts that local government's tax base is insufficient and simply cannot address the wide range of socio-economic and infrastructural challenges facing poor communities in South Africa. Challenges that have been commonly cited as inherent in these respective institutions are poor financial management skills and lack of transparency. Politics, within these respective settings, cannot be overlooked as they play a crucial role with respect to the manner in which services can be delivered, as the Constitution affirms that these are people's rights (COGTA, 2009). Inter-sectoral collaboration of all relevant actors is important for successfully implementing and sustaining fruitful changes to the rural poor in this hydrosocial architecture. However, these collaborative efforts do come with their challenges, which

emanate from the divergent interests and agendas of the various actors involved. Abrams, (2001) asserts that if conflict within the hydrosocial cycle is not controlled, it has the potential to escalate to alarmingly high levels, the friction emerging amongst the actors through the varying agendas if not addressed in early stages, can lead to conflict or protest, resulting in the discontinuation of the projects and ultimately water service delivery. The mismanagement of funds and lack of clarity with respect to actor roles and functions within the hydrosocial cycle framework are the frequent causes that are an impediment in service delivery and which fuel conflict. If these emergent problems are not meticulously managed, this might lead to an unfortunate situation whereby the community's water needs are not realised, thus trapping them in poverty cycle (Abrams, 2001).

1.3 Aims and Objectives

The aim of this research project is to analyse the politics of water in Richmond, particularly in the Phatheni area. Within this study there are four main objectives:

- 1) To identify the critical issues in terms of the water quality and quantity in Phatheni.
- 2) To map the main actors in the water arena.
- 3) To identify tensions around water provision in the area and how these are addressed.
- 4) To identify the main politics, interests and agendas of the actors in the water arena.

This research project will make use of the theoretical framework of water governance to analyse the resultant hydrosocial cycle architecture, as a means to map out the main actors, the critical issues and agendas and interests of the actors.

As a means to accurately identifying and mapping out the critical contentious issues of the main actors and their interests, this study will accentuate the usage of non-hierarchical interaction as this will foster the idea of mutual learning. For the purposes of this dissertation in this water context, a non-hierarchical interaction essentially refers to the break down of responsibilities and power from national government to local government. At this point, much of the dialogue is effectively between the client community representative, the delegated municipal officials and the service provider or implementing agent (Jones et al. 1997; Moss 2002; Bondi 2003). This approach can very beneficial when operationalized in a political context as it helps to reveal political conflict and enhances transparency. Its main advantage is embedded in its proximity and attentiveness to detail in the manner in which it addresses the research questions and the data collection methodology. Moreover, this

methodical approach also does not lose focus on the potentially existing unequal power relations between research ethics, positionality and the researcher (Jones et al. 1997; Moss 2002; Bondi 2003).

1.4 Thesis outline

Chapter 1 of this thesis presents the significance of the study which sheds light on the role the local government in collaboration with other actors in the hydrosocial cycle on their interactions. In particular, it will focus on the area Phatheni in Richmond and accordingly identify the politics, interests and agendas of the different actors in the implementation of water projects to see how development through the lens of water is instituted through governance. Secondly, this chapter presents the introduction which presents the outline on the importance on the factors that could potentially hamper service delivery, the current water situation in Phatheni and the pivotal role of the actors involved and how these need to at times overlap as a means of ushering in the next phase of implementation of these water projects. Lastly, the introduction sheds light on the foundation upon which the hydrosocial cycle framework of Phatheni will be built, which primarily is its geographical position in relation other affluent areas of Richmond. The problem statement places sharp focus on the broader water crisis in Richmond and also sheds some light on water in South Africa. It also looks at critical areas of water management in government in terms of financial governance, water rights of the impoverished, the roles and functions of actors in the water sector and the potential role that water taxes might have in stemming the problem of unsustainable water usage during drought and scarcity of access to water. Lastly the chapter briefly outlines the aim and objectives and methodology used in the study.

Chapter 2 defines and outlines the hydrosocial cycle framework. Additionally, this chapter will provide the different contexts in which the hydrosocial cycle frameworks exist and consequently how the emerging discourses differ across these respective contexts. Secondly, this chapter will shed light on the dominant discourses both from a global and local standpoint on water governance, and also show how these essentially change over time thus affecting the various agendas that surface from within the various hydrosocial cycle. Next, this section will touch on the assortment of actors that are commonly found in the various hydrosocial cycle frameworks along with a detailed analysis of elements such as inequality, social exclusion and social injustices which typically resonate within hydrosocial cycle frameworks in developing countries, and are deserving of immediate attention. Lastly, this chapter of the thesis will dissect and analyse the following critical issues; governance amongst the multiple actors within the various hydrosocial cycle frameworks across the globe

and locally, whilst at the same analysing the parallels and the politics of water and the challenges that emerge a result of the interactions amongst the actors thereafter.

Chapter 3 presents the context of the case study, which is namely water governance framework in the Richmond area. In doing so it will also present the water service provision framework of the country and the parallels it has with those of Richmond. Furthermore, with regards to Richmond, this segment will serve as a window into the guiding processes for the appropriate procedures of instituting and running water projects in rural areas. Thirdly, this section will look at the suitable government support mechanisms that aid in the appropriate implementation of water projects. Lastly, and most importantly this section will provide Richmond's situational analysis from a geographical, economic, social and political point of view and in doing so will provide a foundation of how the water agenda is likely to play out, with respect to the implementation of the various water projects in Phatheni and the actors within its hydrosocial cycle framework.

Chapter 4 provides an overview of water provision in South Africa. It presents the main processes and practices for water provision and outlines the relations between the different spheres of government in relation to service provision. It also reflects on water governance and water security both globally and in South African thereby providing the broader context within which water politics can be explored in Richmond and Phatheni.

Chapter 5 outlines the methodology adopted for the thesis. Qualitative methods were used to identify the main water issues in Phatheni and Richmond, to identify the critical actors and to explore the relations between them. The range of methods used to collect data for the study, including a transect walk, interviews, focus groups and personal engagements are described. The positionality of the researcher is also reflected upon given the qualitative nature of the study.

Chapter 6 presents the results of the study, identifying the critical issues shaping water security in Richmond and Phatheni, the main actors and the relations between them. In this way the hydrosocial cycle of Phatheni is illuminated. The conclusion of the study is presented in Chapter 7.

CHAPTER 2: CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter presents the theoretical framework for this thesis. It will explore the dominant discourses in water governance which are present in both the international literature and in South Africa. Water governance is defined given that this study reflects on the water governance configuration that has emerged in Richmond. The hydrosocial cycle is used as the main theoretical framework as it allows for an analysis which includes the social and political relations in water governance and water provision. The first part of this chapter presents and defines the hydrosocial cycle framework; thereafter it will shed some light on the dominant hydrosocial cycle frameworks, by examining the dominant discourses which influence agendas that some stakeholders might have. Thereafter it will illuminate some of the discourses that have a direct bearing on communities that influence conflict and shape certain circumstances which help in environmental preservation. This will subsequently be followed by a discussion on the discourses that are in existence globally and the common ones in South Africa, This will then be followed by a discussion on the actors in the water arena. Lastly it will be followed by a discussion on social exclusion, inequality and social justice in the water arena in the developing world that mirror current cases in South Africa.

2.2 Defining the hydrosocial cycle

The hydrosocial cycle essentially merges the physical or technical management component of water through hydrological mechanisms to deliver water services to the people, with the socio-economic aspects (Linton & Budds, 2013). Moreover, in the process of doing this, this framework draws in the environmental aspect. These elements, including the relations between the state and its citizens, the states' response to water and the everyday lived worlds of ordinary people are explored within the hydrosocial cycle (Linton & Budds, 2013). However, weaved into this hydrosocial cycle architecture is the element of politics which is essentially about power relations and who gets to engage in the decision making processes and who has the power of authority from this angle in this framework. Water's importance from a social and political stance makes it especially essential and relevant to human existence and reveals the importance of the hydrosocial cycle as it also weaves itself into human organisation and also as a tool for political control for powers that be (Linton & Budds, 2013).

The definition of water as a resource is complex as it varies widely. Different people, ascribe different meanings to it based on their relationship with it. According to Boelens (2014), this

important resource is a representation of certain elements; such as power and potential. Throughout the world water has been a source of conflict and collaboration, depending on the agendas and interactions amongst the stakeholders in the hydrosocial cycle configuration. In a case study carried out in the Andean highlands, water has been illuminated for its use from a metaphysical standpoint, as a means of demonstrating its supernatural powers and also as a means of scrutinizing its governance methods and its respective politics (Boelens, 2014). From the analysis that emerged from the Andean hydrosocial cycle it becomes evident that water also has a spiritual and cultural base which helps to usher it into the realm of cultural discourse.

Often elements such as cultural disposition, stakeholder agendas and the region of origin of people serve as determinants of the discourses that will often emerge in a hydrosocial cycle framework (Boelens, 2014). Typically, in developed countries of the north, discourses of power and corporate management arise. As a corporate discourse, water from this angle commonly surfaces when there is high reliance on its technical efficiency with its unique function in irrigation. Here it is implied that there is increased productivity with minimum water consumption (Urteaga and Crovetto, 2014). Technically defined, a corporate discourse is one that essentially examines business communication practises through the assessment of how business entities interact with individuals and communities with respect to a particular commodity, which in this case is water. A hydrosocial cycle in its common form merges the economic, environmental and socio-political aspects of an area and its people with the use and understanding of water. However, as stressed earlier, this framework varies with contexts also depending on what the stakeholders' agendas are.

2.3 Global and South African discourses of water

There are numerous discourses that frame water governance globally. Five dominant discourses have emerged which frame approaches to water governance in development (i) Water is an economic commodity (ii) Water is a social right (iii) Water being a discourse for social learning (iv) Water being a scarce good and (v) Political tool (Sutherland et al, 2015). From an international standpoint within the water governance arena also emerge numerous important discourses which have a direct bearing on the hydrosocial cycle framework. These include the use of water as a corporate discourse, legal discourse, political tool, water as an abundant and scarce resource, a cultural representation, technical discourse, farmer's discourse and as a social practice (Urteaga-Crovetta, 2016).

Both internationally and domestically, tension has emerged concerning the discourses of water being a human rights issue and water being an economic good. According to Sutherland *et al* (2015), inclusive development is systematically undermined through the lack of participation of all actors in water provision. The identification of the main actors and their relationships are critical to understanding the governance regime, Actor maps help to reveal the relationship between the state and the community (Sutherland *et al*, 2015). Appreciating the importance of the fully developed discourses in integrated water resource management helps to illuminate the issues that inform development initiatives, in addition to helping portray the world as it is (Urteaga-Crovetta, 2016). In shedding light on the aforementioned international discourses it is important to highlight their relevance in their respective context. These discourses also help to shape development initiatives whilst at the same time helping to reflect on its broader social aspects (Urteaga-Crovetta, 2016). With water acting as an economic commodity within the international domain that falls under the development discourse, it is important to see it sector that can potentially improve the well-being of nations. The second discourse that the UN covers is that of water as a human right, thus making it a social or human right good. The next and newly emerged discourse is that of water acting as a socio-ecological good. This talks to the idea that socio-economic and cultural and environmental rights should not be compromised, thus the current generation has a responsibility to effectively protect this important resource and its value in broader ecosystems for the sustainability of the earth. Proponents of this particular discourse echo the rhetoric that nature too has a voice. Lastly, there's the discourse of water acting as a political tool. Typically, in these situations water is used by those in power to sway the minds of voters and gain political influence through promising the delivery of this commodity.

As a result such underlying and incremental problems evoke a dire need to be effectively addressed as a means of addressing the challenge of service delivery. The fact that poverty is rife in underdeveloped world poses a huge challenge for water service delivery institutions as large numbers of people need service delivery, which automatically means that the budget also increases for the projects to be appropriately instituted (Clever, 2005). Consequently, this creates a huge backlog and it slows down service delivery, as it makes initiatives aligned with poverty relief costly.

As a result of these challenges water service provision institutions have to deal with severe technical and financial constraints which compromise their ability to ultimately engage in water governance practices which effectively address the needs of the poor. Severe weather, including drought, and environmental conditions additionally play a critical role in

compromising the capacity of water service provision institutions in providing water to the poor. Such conditions include lack of rainfall, exceedingly low levels of ground water and stream flow, coupled with non-productivity of natural resources. The lack of these respective essential elements leads to undesirable effects to the hydrosocial architecture and affects sustainability.

As a means of fast tracking water service delivery to the rural poor, numerous countries have adopted several tactical approaches. Cited amongst these are; decentralisation to the lowest and most basic level of management and community involvement at every intervention phase (World Bank, 2004). Though marginally more time consuming these methodical approaches have established themselves as effective and efficient means of cost-cutting and actually delivering the projected services. The Water Supply Scheme (WSS) is another strategic approach that is reasoned out to be effective in the role out of service delivery. It is appropriately instrumental when it comes to cost-cutting and it also embracing all the principles of effective and comprehensive water service delivery model.

2.4 Social exclusion, inequality and social justice

Social exclusion has long existed in societies around the world. In this context it specifically refers to the systematic exclusion of certain communities and ethnic groups. Exclusion is a result of differing economic, social to political opportunities in countries. Socially excluded communities, globally, typically exist primarily on the basis of caste, ethnicity, religion, gender, age, economic status, geographical location, disease as well as ability (Rogers and Hall 1996).

Common cases existing within the South African context see exclusion in the misguided and inglorious form of ethnicity which is directly correlated to religion and economic status. The apartheid and the post-apartheid era to still bear witness to how the issue of race serves as a currency of white privilege (Durheim, Mtose and Brown, 2011). In the present day many male headed households in the rural areas afford Africans the privilege to be a beneficiary of the patriarchal system. The main reason behind the weaving in of this statement is to provide a historical narrative behind which many of the dominant water discourses in Phatheni will emerge; and to support the idea about how it is important to include women in the projects of Phatheni at all stages of implementation and institution. The compelling notion behind this school of thought comes as a result of seeing the importance of comprehensiveness and inclusion of all genders as a means of appropriately addressing the water problem and other development and social issues because of the nature of reality in rural areas and the critical

input that women bring in the betterment of their lives and ultimately their families. There certainly has been a change for good for the past two decades in South Africa, however social exclusion of certain groups is rife, where it has now changed in to a systematic exclusion on the basis of political affiliation (Durheim, Mtose and Brown, 2011). Deep-rooted structural differences in South Africa especially in rural areas have progressively grown as a result of ongoing patriarchy, feudalism and ethnic differences. Though, there has been the introduction of civil society into the development arena; South Africa again in particular, has been riddled with the issue of corruption by government officials which remain rampant, with the abuse of power, where the rich get richer and the poor get poorer. This essentially calls for a special kind of governance, a system that is all encompassing. A system of governance is required that appraises the laws, policies and regulations in existence relating to development programs or in this case the water programs or the existing hydrosocial cycles both locally and internationally.

Water, as a source of social exclusion has had far-reaching consequences for the poor. As a means of social control, water or the lack thereof has reinforced the existence of structures that are incapable of service delivery, thus maintaining the existence and progression of institutional weaknesses in government (WaterAid, 2016). Having these systems in place would in effect make rent seeking not a form of entrepreneurship and effectively render it obsolete. At this point in time even the so-called leaders have displayed utter disregard to the suffering of the great majority who have to constantly contend with many other forms of underdevelopment including poverty and lack of opportunities. In support of this position Rogers and Hall (1996), note that agencies such as the United Nations (UN), multilateral development banks (MDB), research institutions and non-governmental organisations can play a pivotal role in sufficiently facilitating the hydrosocial cycle's financial aspects and provide support. Given that leaders from developing nations have a somewhat strong affinity for corruption, where they are driven by the unbridled pursuit to utilise state resources for private gain, there is always risk associated with the provision of basic resources and services.

2.5 Defining Governance

Governance models can be operationalized through numerous platforms and at various levels (Tortajada, 2010). Governance supports an effective system which addresses many of the processes and linkages inherent in organisations from both a national and international standpoint. It is furthermore said to talk to the challenges that occur across sectors from a domestic standpoint from rural areas all the way to urban areas (Troop, 2007). This all-

encompassing concept of governance is not bound by government law, as its form and function further extends to both civil society and private sectors, and incorporates their respective activities into its complex configuration. Governance refers to a wide ranging set of systems, namely; the social, economic, political, administrative and the notable environmental component or aspect (Jimenez & Faguet, 2010).

Emanating from these crucial aspects that help to provide a concrete definition of the water governance concept, several key questions emerge. The first question that is perhaps of pivotal importance is “which specific voices help to influence the decision-making process?” Secondly “who is the decision maker with regards to whom, when and how do the affected receive this important commodity? (Troop, 2007: 213). Twenty two years into what appears to be a fully fledged democracy in South Africa, many impoverished communities still do not enjoy their rights to free basic services, water being central, as viewed by a democratic South Africa through democratic elections.. Tortajada (2010) asserts that variables such as accountability, participation and transparency on behalf of the state and its citizens is key in having a state where there is optimal realisation and achievement of this fundamental right, as noted in the South African Constitution adopted in 1996.

Many countries have recently adopted national water reform strategies as a means of improving governance in this stressed sector. As a means of institutionalising and firmly entrenching these approaches, these nations have accordingly adopted and put in place legal and administrative frameworks which will act as a support base or platform for water provision (Gomez and Ranborg, 2011). These initiatives have been utilised as a means of enhancing the state of service provision in efforts to ensure that the relevant people are aligned with the appropriate governance systems that talk to their respective needs including public participation and decentralisation of certain systems. Bardhan and Mookherjee (2006), Faguet (2002) and Dickovick (2005) assert that in numerous surveys that were conducted these respective efforts have worked well, whilst in other countries there have been inadequacies at both a practical and policy level.

Accordingly sector reform policies should place emphasis on the idea of uniformity in water service delivery across communities as a means of adequately addressing issues of dissatisfaction amongst the various rural communities which are receiving water projects . Methodical approaches, for this reason which embrace institutional requirements, characteristics and capabilities should be applied as means of meeting the people’s need for water on the ground. Biswas & Tortajada (2010) further argue that tactical water governance

strategies need to be accounted for by their relevance in the respective setting in which they operate, and as a means of being effective they need to be specific and sufficiently detailed.

2.6 Water politics

There is a growing body of international literature that asserts that the involvement of various stakeholders is bound to result in conflict of interests amongst actors, typically in the development domain with community and government involvement. With reference to this research project which has adopted a hydrosocial cycle approach, the following actors or stakeholders are commonly present: the local communities, civil society organisations (CSO's), community based organisations (CBO's), external support agencies (ESA), academic and research institutions, the private sector, media and government (ICS 2011-2016).

The fact that this valuable commodity is intertwined with politics implies in many instances that there is state control or involvement. This is typically the case in an assortment of developing countries. With this in mind, one has to take into consideration the fact that state governance is in fact a substance of political rule. In light of this thought-provoking perspective, consider this; there will be good and bad governance. Accordingly allied with this system, are concepts such as legitimacy, transparency as well as accountability, which are all politically inclined (Molinga, 2001). With respect to the water provision framework, an effective water governance model necessitates the need for good leaders in positions of authority, the public sector and government. Effectiveness across these three areas will ensure that government officials are able to effectively perform their respective duties in the public administration arena, address issues around participatory planning including decentralisation (Plummer & Slayer, 2007 Barbhan and Mookherjee, 2006)

Water governance challenges have been in part attributed to the nature of global politics (Mollinga, 2008). Problems aligned with these sorts of challenges include ideas like the privatisation of water systems and the nature of restructuring the water sector. This inappropriate transition in global politics with regard to this commodity has been shifted to the policies of developing countries, resulting in a very different focus that does necessarily talk to good governance approaches. As a result, a number of developing countries are thrown in to a state of conflict and dysfunction when they cannot account to the people they are serving (Plummer and Slaymaker, 2007). Jimenez & Perez-Foguet (2010) argue that emanating from this inappropriate and unfortunate state of affairs in a developing country context is the issue of conflictive political agendas which often leads the direction of

development astray. Cited as problematic challenges, which are often embedded in the hydrosocial cycle are issues of social and political unity or lack thereof, which have been seen to exist within individual contexts. Many of the technical problems are not viewed as a major threat to the system, however the social and political tensions and conflicts are.

The recent emergent forms of governance in the water arena have led the way for politics to be, in part, seen as a solution and not merely as an incremental problem that perpetuates dissonance within the system. Accordingly, this affords leaders the opportunity to make on their promises and can get them to be accountable to the people on the ground with respect to the services that they will be delivering. More recently, developing countries have adopted people centred approaches as a means of being accountable with their service delivery initiatives. They do this by engaging with citizens by providing a platform that essentially affords people the chance to voice their concerns and thoughts about the manner in which the available resources are to be managed effectively. In this way, utility can be optimised and people's needs can be adequately served (Bardhan & Mookherjee, 2006). The seemingly impenetrable challenges that are embedded in this hydrosocial cycle framework specifically in the water sector, such as community mobilisation, processes of stakeholder engagement, dialogue in particular and partnership formation are the encounters and processes that managers and decision-makers usually find challenging to confront and engage with. (Molina, 2008). Accordingly, service standards decline, and this results in a technical and technological focus rather than being a people centred initiative (Troop, 2007). This problem has consequently reinforced a non-progressive and misinformed thought process, which has supported an approach which focuses more on infrastructure development rather than actual service delivery of this important resource to the people.

Many of the impending and enduring problems with respect to the water services sector has focused on urban areas and have therefore illuminated water governance processes in cities in comparison to its rural counterparts. As a consequence, the current systems of governance are being reformed, however with minimal or no effect on improving the current rural water supply crisis.

2.7 Water supply challenges for the poor

According to OECD (2003), studies conducted in many developing countries suggest that there are low levels of accessible quality water source points particularly for the poor and the ethnically marginalised. Cited to account for these varying differences in water services delivery, is a lack of a coherent policy that adequately talks to people's needs on the ground.

A philosophy that demonstrated a lack of political will and legitimacy coupled with the seemingly irrevocable and on-going exclusion of affected groups further compounds this crisis.

There are many accounts of countries that take it upon themselves to regulate the role of water, and in each context these pivotal duties are dependent on a country's legislature and its specific politically inclined framework. These entities vary in form, and range from private, public, to mixed or cooperative entities. Accordingly, Plumber & Slaymaker (2007), assert that a direct correlation emerges, and exists between a majority of poor developing countries characterised by poor governance and countries that lack appropriate water services or water at all.

Many government driven initiatives in developing countries are typically corruption ridden, and many of the leaders in these respective countries engage in uniformed theatrics that do not serve their citizen's needs. The approaches that these leaders adopt tend to be more theoretical than anything and do not talk to stemming the escalating problem at hand, of actual service water delivery and management to the masses. In retrospect, it is thus critical that future efforts with respect to the governance model be re-engineered so as to address the social, economic and political crisis at hand in the water services sector by not shying away from the reality on the ground and from relevance. The notion of relevance talks to context tailored approaches that are aligned with the special conditions as well as requirements and expectations of that corresponding context (Biswas and Tortajada, 2010).

Accordingly, the only feature that water governance systems should have in common is the fact that they are context specific. Metropolitan areas and rural areas should have water governance systems that talk to the special requirements of the area, and the subsequent institutional approaches ought to be capability and characteristically inclined. This methodical approach will ensure that the people's needs on the ground are being met. Following thorough assessments, governance strategies should be therefore comprehensive so as to address the concerned area's needs (Biswas and Tortajada, 2010).

2.8 Political landscape

In many countries the national state has the responsibility with respect to resource regulation and this state of affairs subsequently draws in the political aspect into that respective development initiative. Governance is commonly aligned with three political facets, namely; legitimacy, transparency and accountability. If these three dimensions are compromised then it can be suggested that the state is engaging in poor governance practices. However, should

the state reinforce and firmly entrench these practices, this will mean that it is engaging in good governance (Mollinga, 2008). With respect to the water provision services dilemma, ensuring that transparency, legitimacy and accountability are instilled requires good governance leadership and government institutions to engage in rigorous and far sighted dialogue that will ensure that sound policies are entrenched coupled with effective implementation practices that effectively talk to the people's needs on the ground. An effective model of governance should in effect communicate the presence of civil service reform and decentralisation amongst many other things. Many countries have wide ranging entities being involved in their legal and policy framework. These typically come in heterogeneous arrangements which include public, private to mixed entities, each with advantages and shortfalls. Dunn (2010) argues that publicly owned entities have some shortfalls, and the prime cited amongst these were the fact that these initiatives are often highly inefficient and ineffective. This interference in essence compromises capacity and results in productivity of labour being low. Critical aspects that in principal impart heavy compromise on public entity involvement in the water sector is lack of effective management practises and poor financing (WaterAid, 2009, Dovi, 2007). Publicly owned entities are characterised by a lack of capacity and accountability in their objectives to serve the impoverished. Poor institutional arrangements, stakeholder participation, trans-boundary setbacks and disparities in socioeconomic standings increase the problem of water service delivery to the poor on a global scale (Odeh, 2010). However, this is not to suggest that it is only the public entity that is riddled with conflict and challenges. The key point being raised and communicated here is that of political intrusion being a disconcerting factor that hampers synergy and progress in the water sector, as this particular thesis on water politics will reveal.

Numerous reasons have emerged for poor water delivery to the impoverished. Inequities in the water services delivery area for the poor have additionally been attributed to the problematic developments and distribution of finances around fund allocation, that today still require illumination, as there is a high lack of transparency. Transfer structures and systems in the area of finance are poorly defined and very rigid, and a result this condition leads to municipalities being unable to adequately plan and implement services effectively (Jimenez & Perez-Foguet, 2010). Consequently, this upsurge in neoliberalism through fiscal pressures compels many local government entities to direct less and less attention to service delivery and more on cost recovery. An array of the water administration institutions have been accused of operating mainly under the influence of politics, demand and need. Jimenez & Perez-Foguet (2010) assert that, accordingly, these problems translate into the following; larger rural areas and towns are at better chance of receiving a better quality water service

and are quicker too, as a result of having better connections and exerting political influence on powers that be.

The resultant challenges of poor integration networks that emerged as highlighted earlier are reasoned to be common occurrences in many developing nations (Dovi, 2007). However, Nel (2001) asserts that the chief superimposing problem in many rural communities is effectively that of poverty and inequality. Consequently, one has to look at the emerging and dominant discourses in this rural context. The first discourse that surfaces is that of water as an economic commodity. The second one is that of water is a social right, the third one is that of water being a discourse for social learning. Another discourse that also surfaces is that of water being a scarce good. Additional international discourses, within the water governance sphere that also emerge are those of the existence of water as a corporate discourse, legal discourse, political tool, water as an abundant and also water as a scarce resource, a cultural representation, technical discourse, farmer's discourse and as a social practise (Urteaga-Crovetta, 2016). As discussed above in South African and global discourses further elaborates on their meaning as shown in Chapter 2 under the above mentioned heading.

2.9 Conclusion

In conclusion, given the issues that have been raised, it is clear that appropriate policy development processes are lacking in many government sectors and other state owned entities. The issue of consultation with communities concerned is also a critical factor that has been somewhat overlooked; hence there is a series of coherent policy frameworks that are instituted. In most programs and community upliftment projects, the monitoring and evaluation element is also lacking. This has stifled development initiatives, as there are no steering mechanisms that would otherwise channel these initiatives in the appropriate direction that would ensure and encourage accountability. Questioning the nature of reality in these settings with respect to the hydrosocial cycle framework requires introspection and appropriate approaches in governance. Consequently, this calls for the following stakeholders, namely government bureaucrats, civil society, politicians and policy developers to sit down around a table and discuss issues that might potentially be detrimental to any initiative to be instituted.

CHAPTER 3: BACKGROUND - GOVERNANCE IN THE RICHMOND MUNICIPALITY

3.1 Introduction

This chapter will provide a comprehensive analysis of Richmond's and Phatheni's context and its water governance processes. As a result, it will be divided into several sections. Under the water governance system, the current governance process in existence and the main actors involved in its hydrosocial cycle architecture, and the consequential contentions that arise will be assessed and reviewed. This chapter will also present the historical and geographical context of Richmond in terms of its social, economic and environmental framework. However it is also important to outline the water service framework for South Africa and this is presented in the first section of this chapter.

3.2 South African water service provision framework

Access to water is enshrined in the Constitution as a "human right". Furthermore, as means of poverty reduction and improving living standards it is regarded as the first step towards the achievement of these benefits. By the year 2015, African leaders committed to doubling universal access to safe drinking water (Dovi, 2007). Tissington *et al* (2008), assert that a large fraction of rural communities are still trapped at the lower end of the water ladder with rudimentary water related services without any progress pertaining to the realisation of their water rights. With regard to the realisation of the Millennium Development Goals (MDG), South Africa has taken huge strides and has achieved significant progress in providing its rural communities with this commodity. With the introduction of the Free Basic Water Policy in 2000, South Africa has made notable progress with 88% of households of the total population having access to taps. There has been a significant increase in the proportion of households that are earning below the monthly salary aggregate of R3000 in having access to water. In opposition to this position Smith (2009) points out that 5 million people are still without water and an additional 15 million without basic sanitation services. People's right of access to sufficient water is enshrined in the Constitution in s.27 (1) (b). This statement in effect stresses the point that even the most impoverished communities should not be overlooked as government should be impartial and cater for all.

The South African water configuration is composed of a diverse assembly of actors that support and facilitate the process of water provision, thus contributing to unique and specific configurations of hydrosocial cycles in the various communities at local government level. At national level, there exist two main actors; these are the National Department of Water

Affairs and local government institutions which directly are involved in shaping the hydrosocial cycles of local communities. The interactions between these main actors result in contentions and differing agendas at times. Effectively, the DWS is the drafter of the relevant policy frameworks, or regulator, who has the responsibility of ensuring sensible administration of resources and supervision of activities. Administration and supervision at local level is cascaded down to local government entities. These are commonly the district municipalities and or local municipalities, depending on the infrastructural requirements those specific projects will be demanding. If the project is very demanding financially such as in large infrastructural development, as was the case with Phatheni, the matter is then escalated to the district level.

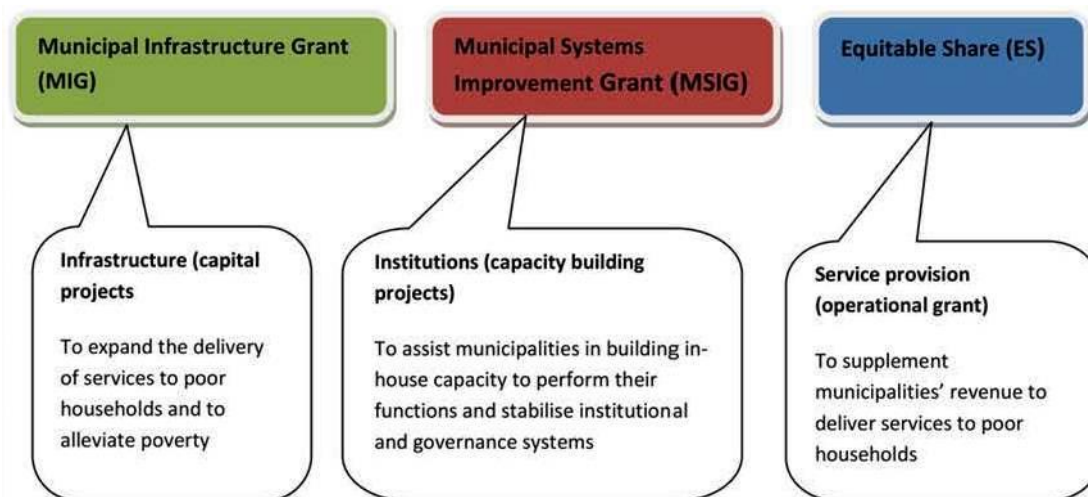
Both district and local municipalities are regarded as essential in effectively helping communities to have their water needs realised. They have several pivotal functions, these embrace the implementation of local by-laws, the setting of tariffs and monitoring the quality of safe drinking water. The Department of Water and Sanitation (2003) asserts that the Water Service Authorities (WSA's) under the administration of municipalities need to retain a water service infrastructure register as a management method for assets in accordance with a rehabilitation and maintenance approach. Accordingly, this specific approach must be aligned with the principle of preventative maintenance which should essentially be an integral part of the Water Service Development Plan (WSDP).

The Public Service Commission (2016) argues that government has the duty to promote exemplary conduct at all levels within the public service scope. According to the Constitution of the Republic of South Africa, in accordance with section 195(1) (a) under the PSCBC Resolution 1 of 2003 amendment regulation, there are corrective-disciplinary systems in place to address gross corrupt conduct within the public service framework. The values and principles that the PSCB document endorses are those of impartiality, development orientation and equitable growth and distribution of resources. The PSC (2016) furthermore advances its position on the 'values and principles' theme, by making note of the fact that people need's need to be responded to in a well-timed fashion, and that public participation should be encouraged in the policy-making process which should be accompanied by transparency. In effect, this document publicly notes that the relationship with the public should be based on the principles of unity, it should unbiased, non-discriminatory, be of empathy and most importantly fair and equitable to the deserving poor in its responsiveness. Unfortunately, many of the existing contentions in the field of development are driven by self interest of the political elite, coupled with poorly conceived ideas, which in many cases are

personal opinions of the so-called leaders, which are translated into public policies and ultimately government programs which fail.

3.3 Government support mechanisms

The facilitation of water services through the receipt of capital funding annually from government is illustrated in Figure 1 below. It is an expression of the various forms of grants.



Source: The Department of Cooperative Governance and Traditional Affairs 2007

Figure 1: Grant allocation to local government annually

With reference to the above depiction of grant types, the Department of Cooperative Governance and Traditional Affairs (COGTA) (2007) asserts that the municipalities should effectively cater for 25 litres of water per person per day on condition that there is presence of appropriate resources and infrastructure. This is in line with the Constitution as cited in s.27 (1) (b), which translates into a minimum flow rate which should not be less than 10 litres per minute and should not be more than 200 metres away from the household. At this point in time government has put mechanisms in place as a means of supporting municipalities in their abilities to better perform their respective functions of purifying, extracting and supplying water to the communities in the hydrosocial context.

3.4 Situational analysis

Contained herewith under the situational analysis of Richmond and Phatheni, is its geographical make-up from a social, economic and environmental perspective. In terms of its geography, the Richmond Municipality, coded (KZ227) is comprised of seven (7) wards and is classified as a category B municipality (IDP, 2014). Its location is on the southern part of the UMgungundlovu District Municipality (DC22). It is roughly 38 kilometres from

Pietermaritzburg. More than 70% of its population is predominantly rural and resides in its rural peripheries. From an infrastructural standpoint it is characterized by poor levels of basic services and facilities, furthermore its Integrated Development Plan (IDP) shows that it is a mountainous region, which poses significant challenges with the respect to the implementation of water projects, as it will later emerge. The unemployment levels in Richmond are high, accompanied by prevalent illiteracy rates (StatsSA, 2014). Richmond follows a seemingly ill-fated trajectory where it is repetitively enduring an upsurge in unemployment rates on an annual basis, coupled with a rise in poverty and a plummeting in investment base. However, 2014 marked a significant departure for all of Phatheni's residents, whose predicament with regard to water services resonates with other parts of Richmond's residential rural peripheries, of water services. The year, 2014, was a defining point as it marked the inception and implementation of numerous water projects in the Richmond district which were driven by the tribal authority of Phatheni and the local political leadership. Although Richmond has an undulating topography, it is nonetheless an area which is high in rainfall during rainy seasons, which helps to ease the dry conditions. Over the past two decades Richmond has witnessed a violent tussle in political masculinities, and has moreover experienced racial oppression that manifested itself in the form of systematic social exclusion, primarily through racial differences for many residing in its rural peripheries. Furthermore, it served as colonial garrison used for military defence in the 19th century. As it will later emerge from the research, the seemingly conventional and smoothly run projects of this area are presented as a decolonial program which aims to develop the previously oppressed and impoverished groups. Paradoxically there will be tension emanating from this, which will show that there are certain agendas that the actors have that is will serve the interest of some stakeholders and not all.

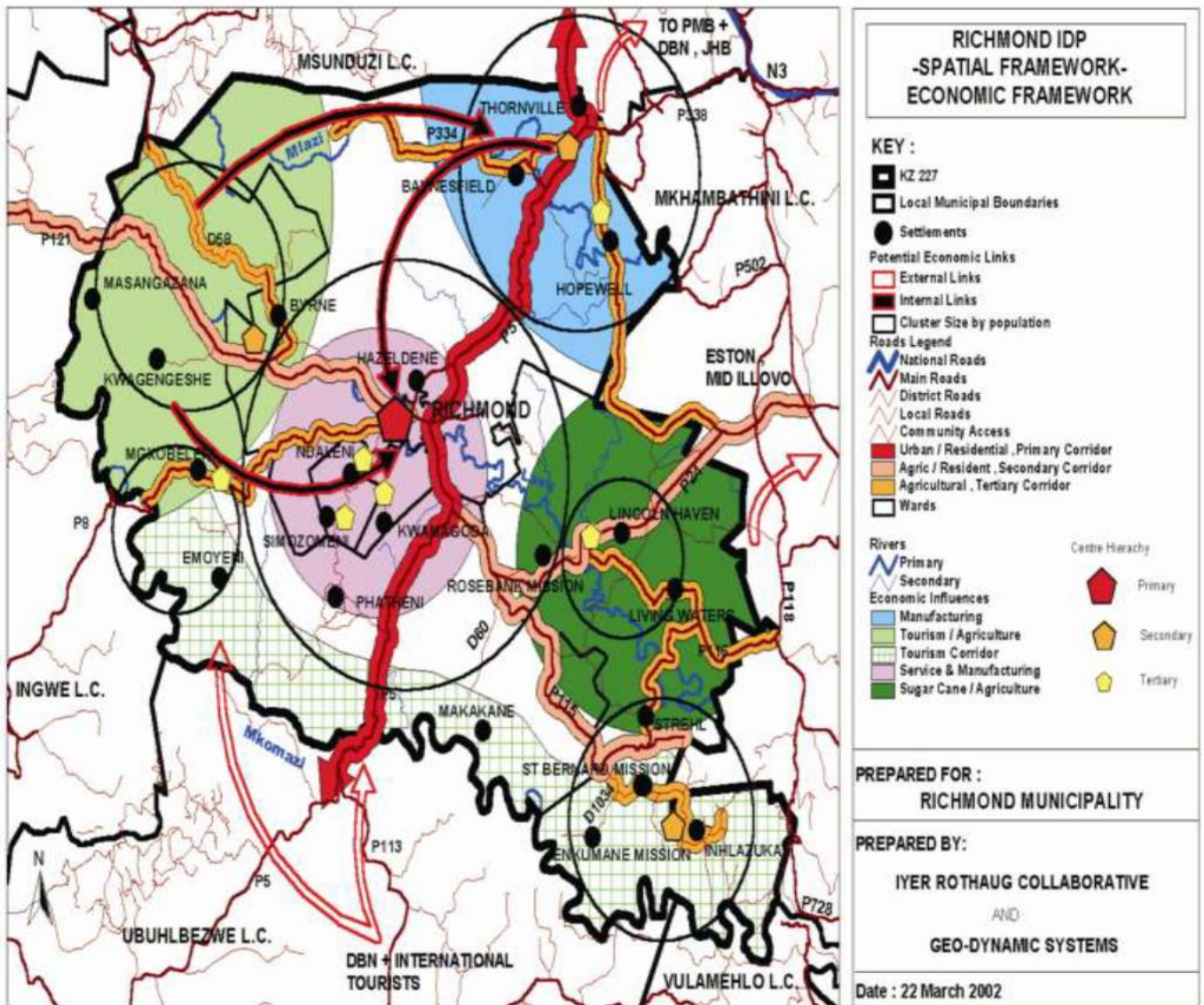


Figure 2: The SDF of the Richmond IDP: a spatial and economic framework

Source: Richmond IDP 2014-2016

It will be shown that As a result, the hydrosocial cycle framework has been plagued by many conflicting interests from inception to completion of the projects in this district. Here many contentions, and divergent interests and agendas have surfaced which will attempt to hamper the progress of the projects instituted.



Figure 3: Areal view of Phatheni in relation to the town of Richmond.

Source: Googlemaps 2016

Figure 2 and 3 provide maps of the Richmond and Phatheni district respectively. Phatheni is located approximately 5km's outside of Richmond. The depicted spatial development framework serves as a means of illustrating the most developed areas and the least developed regions in Richmond which are in dire need for services and infrastructural development. Given Phatheni's geographic positioning it becomes clear that it is isolated from the well developed areas, hence bringing development into this area can be a challenge. Given Richmond's political nature with respect to development, it should be fairly easy to understand the political element in the implementation of the water projects in hydrosocial cycle will take centre stage. Figure 3 is a further depiction of the district of Phatheni, and also serves to show Phatheni's geographical location in relation to other towns and the main transport networks which are meant to be a window into its potential means of thriving economically and how bulky construction material for its project can be swiftly delivered for project implementation, from cities. The pie charts reveal the most vulnerable population

group with regard to securing land ownership before infrastructural development is even realised. These graphs, in the same vein convey messages about the hurdles that government is grappling with in order to deliver infrastructure, which again requires land acquisition amongst other things from private institutions and individuals before addressing infrastructure.

According to StatsSA (2014), there are 16 440 households in the Richmond Local Municipality, with an average of 3,8 persons per household. Almost half, 48,8%, of households are headed by females. In terms of housing 54,7% of households reside in formal dwellings, and 20,2% have access to piped water from either inside the dwelling, inside the yard, or water on a community stand. Nearly a quarter of the Richmond population has access to proper sanitation, with a mere 12,6% of households having access to a flush toilet.

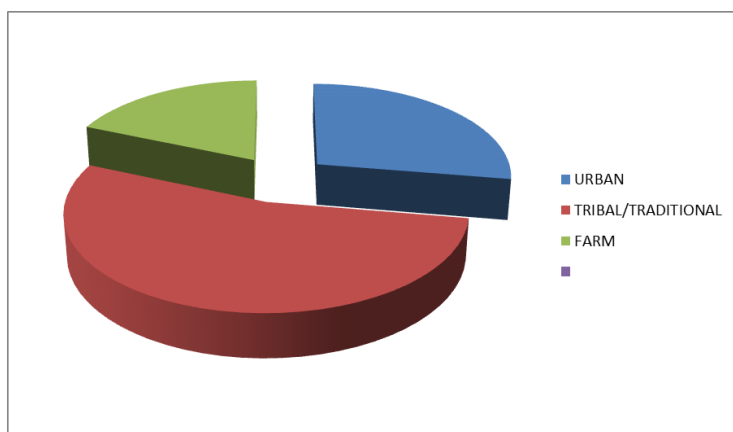


Figure 4: Richmond settlement types

Table 1: Percentage representations of settlement types

Source: Statistics South Africa (2014)

Area percentage	
Urban	27.6%
Tribal/Traditional	53.8%
Farm	18.6%

The above pie chart depicts occupation of the various settlement types within the Richmond district. The African population group accounts for staggering 95.2% of occupation in this particular district, with a 53.8% residing on tribal land. Tribal land has several challenges geographically speaking. Some households cannot be fully piped on the basis of their geographic location and spatial orientation. Additionally, the technologies implemented, such

as the water pumps fail to provide sufficient pressure to pump water to the households uphill located in this mountainous region. The water supply in the urban areas is not a major concern, as the households here are fully piped with running water. The remaining 18.6% of the African population group resides on privately owned farmland. This poses a huge challenge for government and the residents themselves as they are commonly employed by the farmers who own those plots of land upon which they reside. This scenario for the residents is fraught with danger of losing employment from their respective employers should they choose to relocate by their will or worse they may face forced evictions and dismissal from employment at the sound of uttering or even implying that they might seek alternative residence. All these variables add up and contribute to a conflict of interest on part of the community in this hydrosocial configuration amongst the actors as we will later discover, as a significant portion of these dwellers reside on privately owned farmland.

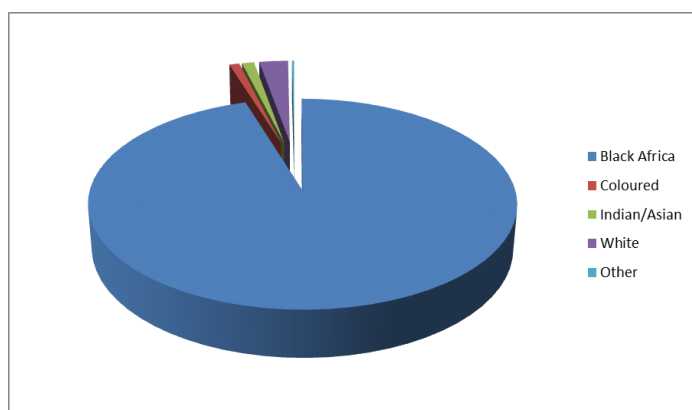


Figure 5: Richmond population group

Table 2: Percentage representations of population groups

Source: Statistics South Africa (2014)

Population groups	
Group	Percentage
Black African	95,2%
Coloured	0,9%
Indian/Asian	1,1%
White	2,6%
Other	0,2%

The chart above presented in Figure 5 coupled with the figures in percentage form detailed in Table 2 give one an indication of the most affected population groups that require assistance with water provision services. The African population accounts for a staggering 95.2% in this region of Richmond and these are commonly the poor and marginalised who reside on the rural peripheries. Given this state of affairs, political leaders typically take advantage of the

poor and are inclined to make promises as a means of winning over wards for their respective parties by using the race card and somewhat failing to do good on their assurances, in retrospect.

Table 3 below presents the numerical values in percentage form of the common water sources that are found in the district of Phatheni. A substantial figure of 55.1% indicate that the regional/local water scheme operated by the municipality is the most common water source that serves the water needs for many households in the area. The next water source commonly used by this community is river or stream water, 10.5%, followed by a water tanker and spring water at 8.6% and 5.2% respectively. The main problem with this is regular access and questionable safety of this resource or commodity.

Table 3: Sources of water

Source: Statistics South Africa (2014)

Source of water	Percentage
Regional/Local water scheme (operated by municipality or other water services provider)	55,1%
Borehole	8,6%
Spring	5,2%
Rain water tank	1,2%
Dam/Pool/Stagnant water	6,2%
River/Stream	10,5%
Water vendor	0,7%
Water tanker	8,6%

In conclusion, the area of Phatheni is not particularly well developed from a hydro-technological perspective. From its geographical position, in terms of its economy, social position and environment, this respective region is also deprived. The settlement types alone stand testament to the fact that many of the households, which are predominantly traditional in nature, further infer that there is underdevelopment from a water services and development standpoint. From a statistical perspective Richmond is composed of over 95% of the African population, many of which are under employed. As a means of addressing this water problem one has to understand the many underlying problems that stem from lack of municipal finances and poor project implementation, as well as design in programmes that do not talk to the needs of the impoverished, as a result of the unfortunate apartheid legacy in the region and the lack of transparency and accountability within this hydrosocial cycle framework.

CHAPTER: 4 CONTEXUALISING WATER SERVICE PROVISION

4.1 Introduction

Biswas and Tortajada (2010) argue that the position of governance in the water arena over the preceding three millennia has progressively changed into a state controlled one. From being under the control of monarchs and chieftains, the gradual shift was stimulated by a broader coalition of various actors which were thought to bring about meaningful and progressive change to the lives of the masses. The inclusion of civil society, interest groups and government officials was in retrospect envisioned to be the long term solution to effective water governance, which unfortunately in the long run did not yield any fruitful results (Biswas & Tortajada, 2010). Numerous challenges loom beyond the horizons which are stimulated by today's pressures of globalisation that manifest themselves in the form of radical political contentions and social and economic stresses. The preceding 20th century witnessed numerous technological and scientific developments in an array of fields coupled by exponential growth in education levels. These respective developments further mounted pressure on the water stakeholder architecture prompting it for further review. These rapid and dynamic changes effectively place pressure on the number of stakeholders or actors that should be involved in the the hydrosocial framework, as this essentially talks to their capacity to deliver effectively by reducing or eliminating any conflict that might be detrimental in sustaining this respective configuration, seeing as water is now a central part of the global structure (Biswas & Tortajada, 2010). Biswas and Tortajada (2010) further argue that, as of 2010, the next two decades will see rapid changes in the water sector. Challenges typically emerge from the production sectors and environmental sectors; these include agriculture, social and economic. Addressing these problems relates directly to equity and the capacity to deliver water to the masses in a timely and cost-effective manner. Accordingly the water profession will need to adopt unorthodox or "business unusual" principles as a means of addressing the projected water shortages as a consequence of hydrologic uncertainties that are looming in the future. Furthermore, the socio-political expectations of civil society for better living standards for all, resulting in a better quality of life globally exerts further pressure on water professionals to deliver just and sustainable water services (Biswas & Tortajada, 2010). As a result this segment of the thesis will assess the various fundamental features required for an effective water governance configuration coupled with relevant governance indicators which serve as assessment tools.

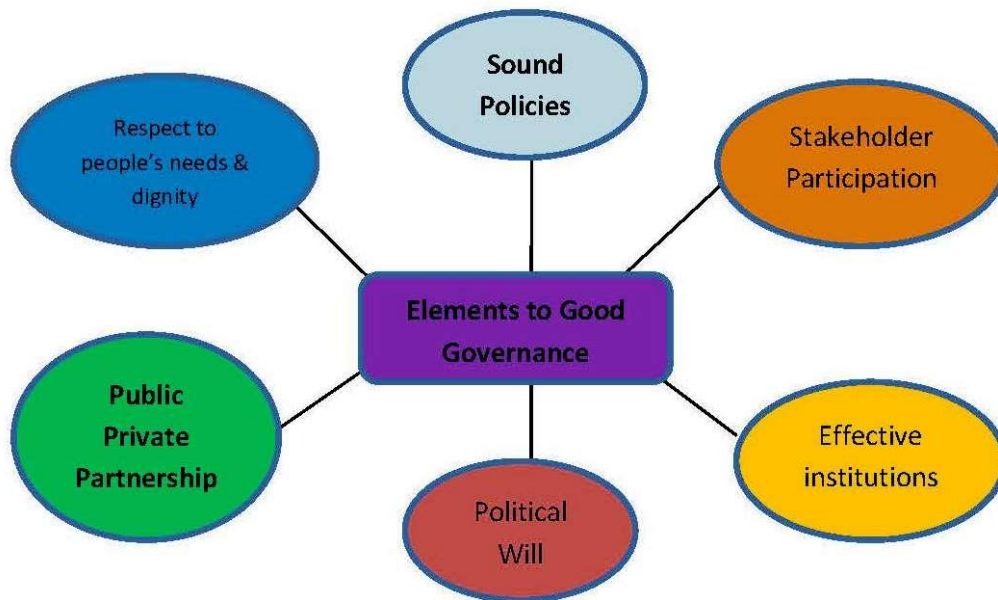


Figure 6: Elements of an effective water governance configuration (Source: Dayem & Odeh, 2010)

Figure 6 above presents all the crucial elements that are a prerequisite for good water governance in a rural area. These elements need to be factored from project initiation to project completion and thereafter, with the monitoring and evaluation phase. The idea at this point in time with respect to monitoring and evaluation is to serve as a means of assessing whether or not the project or program that was being implemented did in fact bring about meaningful change in the lives of the impoverished. Stakeholder participation is essential in the way that it compels every actor to have an input that will help with the program's or project's objectives. Effective institutions serve as entities that foster sound policy formulation strategies which in turn result in sound policies which encourage political will from political actors to take part in the hydro social cycle, by advocating for mutual inclusiveness and funding thus in aiding the process. The two other important elements include the assimilation of public private partnerships and respect and dignity for the impoverished in the process. The idea behind respecting people's needs is that the people will find the change to be meaningful and liberating if their concerns are not being taken for granted as no caring implementing agent agent would be happy to see the opposite. The integration of the public and private sector in addressing the water problem in rural areas is important in a sense that it merges two consciousnesses' which aids in resolving the water service delivery dilemma quicker. The private sector tends to be a stronger financial support base in these respective initiatives, whereas the public sector is armed with the knowledge

and broader understanding of the underlying issues that exist in the everyday lives of the poor.

4.2 Political state of affairs

Water, in many countries is predominantly a state governed affair. In ensuring an effective water governance strategy, the model needs to be all-encompassing as per the above illustration in Figure 6, where the reflected assortment of actors and state organs work in synergy with intersectoral collaboration for a common good. Typically in this configuration, conflict emerges, and this happens as a result of the incompatible interests of stakeholders involved in the projects or initiatives being jointly implemented. From a political perspective, as was the case with the research in Phatheni, contestations mushroomed on account of unclear dealings, through a lack of transparency and accountability amongst the actors. These variables are the primary determinants and values of good or poor governance approaches that can drastically affect the hydrosocial cycle architecture (Mollinga, 2008). A central subject theme that should effectively resonate within the water governance framework is that of ‘transparency’, and this element should be present at all levels of project implementation as it helps to promote accountability, which essentially helps to eliminate any potential contestations which might be detrimental and which might compromise an initiative’s objective or compromise the well governed hydrosocial cycle structure. Mollinga (2008) asserts that sound water provision practices coupled with effective water governance requires a collaborative approach from government institutions, the public sector and leaders in positions of authority. This strategy has been perceived as an effective method of delivering decent water services to the masses through sound policy implementation and practice. In defence of this idea, Plummer & Slaymaker (2007), assert that the above model stresses the dire need to decentralise, and incorporate civil society and non-governmental organisations into the water arena as a means of ensuring sound public administrative practices in efforts of achieving a state of practically sound governance.

The governance challenges in the water arena have in part been attributed to global politics (Mollinga, 2008). The emphasis on water privatisation has unwittingly contributed to the translation of inadvertent dialogue into policy. On this account a state of dysfunction ensues, and regrettably it is the poor under-developed states or rural areas that typically have to endure and become victims of this rather unfortunate and unsavoury state of affairs (Plummer and Slaymaker, 2007). On account of these socio-political contestations, technical setbacks often arise in this respective sector, which commonly leads to violent protests but also to the

birth of certain influential civil institutions that advantageously have the masses interests' at heart.

In light of the fact that governance is a political subject, its revised forms in the water domain does stimulate the possibility for the political element to be perceived as an integral part of the solution, which would help to stem the problem and not be seen as a hindrance that compounds the issue. Mollinga (2008) asserts that the key challenge rests with management and policy makers in not having the foresight and ability to effectively engage with mobilising communities, promoting partnerships and stimulating dialogue coupled with mediating conflict.

4.3 Challenges of water provision in the developing world

According to the OECD (2003), there are numerous critical issues that effectively need to be addressed within the hydrosocial architecture. Sound policy principles that talk to integration need to be in existence and to be operationalized. Moreover, there needs to be institutional frameworks in place that will help establish clarity on responsibilities of all the relevant actors. Folfac (undated) asserts that “the exclusion of many areas of great need, a lack of political legitimacy and will, failure to make resources available where they are most needed and the low level of economic activity in vulnerable areas” remains a problematic area that requires undivided attention. Seeing as politics is at the centre of water governance, numerous challenges have emerged that have called for the cooperation of many government and politically inclined entities that could either be cooperative, public or private to work together (Cleaver, Dayem and Odeh, 2010). Issues that commonly emerge around publicly-owned entities affirm that efficiency is compromised due to politics, in many low to middle income countries. Service delivery is severely hampered, furthermore these nations are characterised by high levels of corruption in many spheres of government, which leads to inefficiency in labour productivity.

Typical examples of this include disorganisation in countries in Southern Africa such as Tanzania, where exceedingly high levels of inequalities in water service delivery and other infrastructural challenges exist (Jimenez and Perez-Foguet, 2010). Sadly, the manner in which decision-making is undertaken with regard to public affairs is a largely political process, which has its own implications. Thus, focusing on investing in both water and water related services in rural areas can be a major challenge (Nel, Franks & Cleaver, 2007). Furthermore, there are challenges with respect to standards and policies that prompt for widespread consultation with all actors involved, seeing as there are confines within budgets

that need to be seen through (Cameroon, 2010). The WaterAid (2009), document asserts that accountability should not be overlooked at any stage as it inexorably tarnishes the states credibility and drastically diminishes government's capacity to provide services that are sustainable in the long run.

4.4 Institutional setups

According to Rogers and Hall (2003) cited in Tropp (2007), there has been a shift in water governance from a state controlled regime to a more comprehensive and all-encompassing one. This move called for inevitable institutional re-development, which was to be in the form of public and private partnerships coupled with decentralised decision-making strategies. These institutions effectively play a crucial role in guaranteeing and safeguarding effective water service delivery. Government departments, such as the Department of Agriculture Forestry and Fisheries (DAFF) and Water Affairs (DWA), local government institutions and certain CBO's and NGO's have been mandated with the important task of service provision to the South African community at large. The main reason behind the inclusion of certain CBO's and NGO's in the water provision arena is to help ease the pressure off Water Affairs, by helping to bridge the gap between communities and services providers (Seetheran, 2007). At the same time this approach helps to promote dialogue amongst the client communities and other important stakeholders (Seetheran, 2007). These institutions have to intimately and cooperatively work together, in efforts to ensure that water service delivery is provided to the masses in an effective and economically viable manner that is essentially sustainable.

Institutions have been characteristically described as being a dichotomous composition of two dimensions. These are the policy maker and the actual policy framework. The distributed roles and responsibilities of the respective policy makers and policies that exist amongst the community and private and government sectors are vital in that they play a regulatory and pivotal function in the water provision framework and its governance. Government and its respective institutions and within the water provision structure has the mandatory obligation of ensuring and establishing sound management systems to guarantee water service delivery to people and ensure that policies are adhered to.

The promotion of sound governance practices coupled with accountability measures can only be achieved if communities compel their leaders to be held accountable and question their actions. Not only should their respective leaders be questioned but the same should also go for government, the private sector and public institutions (Seetheran, 2007). The notion of

attitude and behavioural change should essentially resonate and be at the forefront of any development initiative from all actors in stimulating and achieving sound service delivery.

4.5 Challenges to water service delivery

The water problem is a challenge that is faced around the world, typically by underdeveloped and developing nations, and is an unending struggle which many countries are grappling with. Approximately one billion people around world have to contend and endure the dreadful conditions of drought which are accompanied by the famine and disease (World Bank, 2010). These dreaded conditions commonly affect the poor who typically reside in rural areas; statistically, 70% of the affected group is without a clean safe water supply or suitable sanitation (World Bank, 2010).

Research has affirmed that two thirds of South African rural communities are without clean safe drinking water (World Bank, 2010). It appears that the chief concern for leaders is with cost cutting which has manifested itself as the recent upsurge in neoliberalism and its policies. The existing policies have been found to be a major contributor to many resultant technical failures. Further compounding the problem is lack of funding which effectively enables for prompt and sustainable service provision. Nel (2001) asserts that the lack of equality and being impoverished has become the principal setback to development. As a means of improving on service delivery these set of restrictive challenges need to be immediately addressed. The backlog in water service delivery in both the developing nations remains an enduring threat to the lives of many. This remains an insurmountable challenge for many governments, on account that these respective people are poor and simply cannot afford these services (Jimenez and Perez-Foguet, 2010).

As a result of the lack of any incoming finances and any leverage for that matter, the service providers in this arena face considerable pressure with regard to their capacity to adequately govern water. There are significant challenges with respect to spatial orientation of the households and the technologies that have to be utilised in the provision of this commodity. This is especially problematic in rural households as the houses are commonly poorly located in relation to one another and this results in challenges with regard to project implementation, most particularly piping, as was the case with the Phatheni research. In light of the above limitations, it is recommended to adopt and adhere to approaches that are tailor designed, to meet the specific needs of impoverished communities on the ground.

Decentralising decision-making coupled with community involvement at every stage and grounded approaches that talk to sustainability in terms of service delivery has to be the first

step of any developmental initiative in the hydrosocial architecture (World Bank, 2004). In contrast to this position, Sam and Smith (2005), assert that municipal institutions are under immense stress to do more with the little resources that they have at their disposal by national government. The notion of decentralisation in theory makes a valid argument, however it is an approach that has been unearthed as time consuming and costly in times where water service delivery initiatives are most in need. Furthermore, it has been discovered that developing countries like South Africa show too much reliance on central bank proceeds in efforts to have decentralisation justified. The implications for taking this position are severe financial backlogs, which essentially translate into provincial leadership being unable to build leverage and a good independent monetary tax ground (World Bank, 2004).

However, the benefits of decentralisation far outweigh those of a centralised system (Hirsch *et al*, 2005). This rather rudimentary approach is effective as it talks to the transfer of responsibilities and management to the people at the ground level. This approach makes good on its promises and functions as it stimulates participation, encourages dialogue, accountability and transparency amongst the actors. According to Cleaver and Franks (2007), there are alternative approaches that are geared towards addressing the problems that are inherent in rural water service provision structure that could be implemented. Such initiatives include the rural Water Supply Scheme (WSS), and one that calls for the integration of sanitation and hygiene measures under the umbrella of the WSS. These approaches are all inclusive and embrace elements of cost-effectiveness; they also effectively permit and provide support for institutions in their abilities to support the needs of impoverished communities. Although these approaches are being implemented in some communities, a number of challenges remain persistent and enduring, and these are further compounded by the issue of poverty.

4.5.1 Improving water governance for the rural poor

In the previous chapter numerous crucial elements were highlighted and emphasized as being pivotal to ensuring that one has an effective water governance model. This section will focus on the challenges that will need to be sufficiently addressed as a means of improving on water governance. Cleaver & Franks (2005) assert that there is a dire need to explore all available options urgently, as there really is not a one size fits all model that can answer all actor contestations embedded in rural water initiatives or in this case the hydrosocial architecture in its entirety. Acting as an auxiliary to this position Daymen and Odeh (2010) affirm that there needs to be constant introduction of reforms on the part of government to create an enabling environment that effectively introduces and contributes to the creation of

flexible and enduring water management systems. This in essence calls for change in national policy frameworks accompanied by the enhancement of local government's role in monitoring and regulatory functions with respect to adequate provision of efficient technical support services. Planning should be carried out around impoverished people's needs on the ground, as a means of ensuring that the respective water services are appropriately delivered in a timely fashion and effectively talk to their concerns (Jimenez and Perez-Foguet, 2010).

4.5.2 Targeting poor communities

In light of the above, it is worthwhile taking note of the fact that all contexts vary, therefore respective and tailor made strategies need to be employed which should effectively talk to people's water needs. In assessing community needs inter-sectoral collaborative approaches need to be employed, that are communicating with the specific needs of communities and their needs. This undertaking is the public sector's, private sector's and community responsibility. This sort of pivotal, incremental and tactical change will ensure that whatever strategy that will be implemented is thought through, pertinent and effectively addresses the problem at hand.

4.5.3 Capacity building in the financial sector

The most fundamental component that is crucial in any development initiative is that of adequate funding and the erection of appropriate financial management capacities within government, its organs and other relevant stakeholders in the water domain (Hirsch *et al* 2005). With this position, so much more can be done to empower communities through culturally suitable methodologies with collaborative efforts from both the state and civil society. Advocacy integration, at this early stage in time has furthermore been proven to be vital in development initiatives as it sparks and catalyses the process of improved water service provision, thus smoothing the interactions between stakeholders or actors to achieve a common goal (Tortajada, 2010). Much emphasis has been placed on capacity building with regard to municipal government institutions and community based organisations as a means of decentralising activities and managerial functions. Sound training is imperative especially in the management and mobilisation of resources, which if employed correctly by the respective parties at ground level can be instrumental as it leads to accountability, transparency and timely delivery of projects and programs; moreover this approach can ensure effective and optimal utilisation of resources in both the private and public domains (Tortajada, 2010).

4.5.4 Sufficient stakeholder participation

Participation is a phrase that should essentially echo endlessly in every actor's ear, in this hydrosocial architecture, when the means are to justify ends. Franks & Cleaver (2007) assert that a number of the challenges that emerge in the development domain are as a consequence of the conflicting value systems and agendas of the actors involved. Characteristically, inherent in these sorts of scenarios is the presence of divergent views or perceptions amongst the stakeholders on what is financially feasible in achieving certain objectives. These divergent views raise contentions which directly talk to the presence of fraud and corruption and whether or not the issues that are raised talk to people's needs on the ground as is the case with Phatheni. It is important to have a thorough understanding and background knowledge of the systematic marginalisation of certain minorities which in many cases occurs in third world countries (Franks & cleaver, 2007). According to WaterAid (2010), groups can be marginalised on a number of grounds, and these include religion, politics, caste and race amongst many others. Diversity inexorably leads to conflict as result of the varying views in opinion, value systems and interests, and this is perhaps the most challenging side of participation. Accordingly this first and foremost, calls for multilateral well thought through measures to improve participation and achieve good results that talk to everyone's needs. An example is with policies that do not necessarily realise the masses needs, which the government institutions alone cannot resolve; such centralised decision-making is done without consultation. This promptly necessitates the need to involve civil organisations, which could be in the form of NGO's, CBO's and or the private sector to collaboratively work assist one another as means of achieving more (Seetharam, 2010).

4.6 Defined responsibilities and roles of actors

Management needs to entrench sound and appropriate mobilisation of resources and coordination measures in order to achieve an organisation's goals and objectives. The common managerial approach that has been classically employed is top down, where power is centralised. This system of governance is unfortunately inappropriate with regard to stakeholder participation as it disempowers communities and is a very paternal and authoritative stance. In opposition to this approach is the now widely used approach of decentralisation. Though time consuming, it has been proven to an effective methodology that helps to identify and provide clarity on roles and responsibilities for all actors. This is an instrumental tactical approach which helps to deal with the numerous conflicts, divergent interests and agendas that commonly emerge in the water arena that involve communities, civil societies and government bureaucrats (Dayem & Odeh, 2010). Accompanied by sound

thought through institutional arrangements which are all encompassing, in their abilities to technically and legally deal with challenges that frequently emerge, this heterogeneous composition can ensure that there is little to fuel conflict with respect to role identity and role function, thus guaranteeing a well governed hydrosocial cycle framework. Once again this methodical approach will ensure that the water regulatory institutions know and follow their roles and responsibilities within the water configuration and all other relevant parties understand what is expected of them, as these will be clearly defined. With this in mind the next section of this chapter examines the governance indicators that are utilised as a strategic means to addressing the global water challenges that are currently faced.

With reference to Figure 6 many of the contentions in the hydrosocial cycle configuration spawn as a result of the divergent views within institutions. On the one hand there is the District Municipality (UMDM) and on the other there is the local municipality. A scenario that commonly unfolds sees an overlap in the decentralisation of power at ground level to the implementing agents. This is a display of a lack in power separation which inevitably results in contentions, inefficiency and lack of service delivery. The management of water services in any hydrosocial cycle context should effectively take an all inclusive approach. This approach necessitates that relevant actors sit down around the table and engage in dialogue. An element that is perhaps most pertinent in this configuration is actor dialogue, which should in essence prompt and endorse community involvement at all stages. Though it is a time-consuming approach, it is nonetheless an invaluable tactical approach. McDonnell (2008) asserts that an all inclusive approach promotes sustainability from a socio-economic and environmental standpoint. A platform that promotes open decision making coupled with intersectoral collaboration, has likewise been endorsed to be an instrumental method that helps to strengthen the good governance model in the water sphere (McDonnell 2008).

The key concerns often emanating from in these scenarios of community development initiatives is that often policy makers, management and politics often translate casual dialogue into policy and projects. Tragically, these respective policies are not are not well thought through. Community representatives who meet in their constituents in this respective district often meet at the local community hall and engage in dialogue regarding any developments with respect to any further installation of taps and completion the umbrella program. It emerged that there was a lack of trust, communication and consultation with community members with respect to the completion of projects. Transparency or lack thereof appeared to be the key challenge and the community members asserted that this needed to be addressed promptly as a means of moving forward. It furthermore, emerged that there were

no clear lines of communication amongst stakeholders, and many of their roles and responsibilities were not well understood. Moreover, the entire project's vision and objective appeared to be well immersed in a contaminated pool of local politics, which inexorably hindered progress as funds were also compromised.

4.7 Governance indicators

Rogers & Hall (2003) cited in Biswas & Tortajada (2010) argue that the definition of governance amongst the innumerable global water institutions is of shallow depth and has lost its essence when attempting to operationalize the concept in its fitting context. Furthermore, an effective water governance framework should in principal incorporate the following aspects; political, social, administrative as well as economic, as means of addressing its development and management at the varying societal levels (Rogers & Hall, 2003, cited in Biswas & Tortajada, 2010). There are four governance indicators that effectively stand pronounced which are of pivotal importance and have received significant attention from the international community. These sets of indicators include the International Country Risk Guide (ICRG), the Freedom House, Transparency International and Country Policy and Institutional Assessment.

The first instrument used as a means of assessing water governance is the ICRG, which firmly entrenches its effectiveness when assessing potential political risks which may be possibly beneficial in the international business operations arena. This indicator is a commonly statistically inclined instrument of measurement and is difficult to use; it is nonetheless based on observable and estimable data. It consists of economic and financial constituents coupled with a political component (Biswas & Tortajada, 2010). The economic aspect talks to budget deficit or surplus as a GDP percentage whilst the political aspect conveys a subjective tune. It is based on the varying pre-selected topics relating to government's potential and capacity to implement programmes, enforce the law and have an effective bureaucratic system in place (Biswas & Tortajada, 2010). This is pertinent in Richmond's case study in that it serves as a guide that talks to the proper processes and procedures that need to be followed in regulating and ensuring that water services are delivered to the impoverished in a cost effective manner that does compromise the quality of water being delivered. The relevance once again in relation to Richmond's context is because of the inherent political element which should always be factored in as it relates to transparency and accountability within the municipality. This is critical as it also affects water service delivery and the quality of projects and programmes being implemented which

should essentially talk to the people's water needs. Furthermore, this should be done as a means of ensuring that environmental and social degradation is avoided too.

The second critical indicator is the Freedom House. This indicator talks directly to the assessment of political rights and also the civil liberties in nations through the use of in-house specialists. These liberties and rights are rated on a scale of 1 to 7 (Biswas & Tortajada, 2010). The idea of political participation, the right rule of law and individual rights are considered strong if the assessment rating is 1, and very poor if the assessment is 7. This type of ranking also applies to the risk in the form civil liberties which is defined as the freedom to self expression and freedom of choice in belief coupled by the right to organise and mobilise (Biswas & Tortajada, 2010).

The third pivotal indicator that has recently received much recognition and attention in the global arena is that of international transparency. The chief proponent and founder of this revolutionary indicator was former staff member, Mr Eigen of the World Bank (Biswas & Tortajada, 2010). The concept is relatively unassuming and to the point; it talks to the idea of having honest and sound policy and principles which effectively ensure a corruption free system of governance or at least partially, in retrospect. Post 1995, with the constitutional election of Jim Wolfenson as head of World Bank, the first corruption perception index (CPI) was born (Biswas & Tortajada, 2010). It is characteristically grounded on surveys that commonly included the perceptions of both non-resident business individuals and residents. One of the programmes was based on 13 independent surveys with a confidence of 90%. It received a CPI of 9.4 and a CPI of 1.1 for New Zealand and Somalia respectively as its highest and lowest recording. An important point to take note of, is that the methodologies change, accordingly the research needs to be mindful when employing the CPI methodology for year-to-year comparative checks within specific contexts (Biswas & Tortajada, 2010).

The concluding critical indicator is that of Country Policy and Institutional Assessment (CPIA). This is a documental indicator that effectively places emphasis on the quality of policies the country has in place and its institutions, and is grounded on annual numerical scores (Biswas & Tortajada, 2010). This category of indicator takes into account the important factors that are inherent in a country economic banking system, which is typically a product that is manufactured by Bank staff. The rationale backing the yearly production of economic commodities here is grounded on the notion and projected credibility that "good policies and institutions lead, over time, to favourable growth and poverty reduction outcomes, notwithstanding possible yearly fluctuations arising from internal and external factors" (World Bank, 2010) as quoted in (Biswas & Tortajada, 2010). The relevance of this

indicator in Richmond's has to do strictly with the tax and budgeting element and also the fact that there need to be good and credible policies in place that in essence address the needs of the poor. This indicator as per the Municipal Finance Management Act stipulates that there needs to be transparency and accountability at all levels of government and it also endorses the idea of development through credible implementation of development projects and programmes approaches where everyone gains. However, in Richmond's scenario the principles inherent in this indicator have been somewhat overlooked and thus these initiatives have not created win win situations for all stakeholders. The reason for illuminating these factors between Richmond and economic commodities is because this ultimately affects the budget for this water project, and hence completion times for the projects and quality. As the rand is placed under pressure, the budget that was utilised for the project was also compromised and in turn got reduced, which in turn affected a lot of factors and contributed to delayed completion of such initiatives and problems with constant service delivery thereafter.

Biswas & Tortajada (2010), however assert that although the 4 mapped out indicators do provide a detailed picture of the entire governance architecture in a specific country, it is essentially the management structure goal in this sector that is particularly problematic to accomplish and is fraught with perilous obstacles. Furthermore, this overall governance performance configuration does not necessarily mirror an effective and strategic water governance system and regrettably no governance indicator can be adequately operationalized with a high degree of certainty (Biswas & Tortajada, 2010). Nonetheless, developmental advances should be undertaken as a means of capacitating management to better, in order to help them determine how they can improve their positions through attaining theoretical knowledge and practical learning experience which they can put into good use (Biswas & Tortajada, 2010).

4.8 Water security and governance in South Africa

South Africa has been compounded by a succession of problematic hurdles with respect to water governance. Many sectors face financial constraints. There are effectively six critical areas in water governance that remain highly challenging in this domain. These being; the physical environment, legal governance context, state of water resources, critical user sectors, issues of water quality and the aquatic environment. According to Miranda *et al* (2011), issues of conflict extend to far beyond the physical realm. Conflict that emerges in the water arena, has embedded in it an economic, political and a territorial component intertwined with the physical.

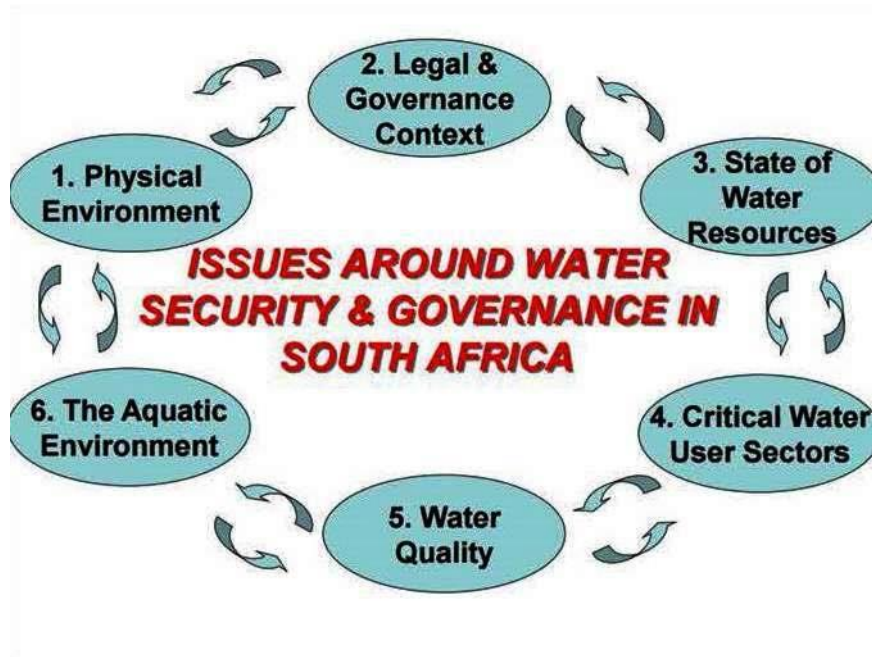


Figure 7: The Issues around water security and governance in South Africa

Source: State of water in South Africa document (2015)

According to Biswas & Tortajada (2010), issues of conflict get further complicated by economic management and structural clusters, institutions and social inclusion and equity. Figure 7 reflects the interactions of issues amongst the elements that are commonly found in the hydrosocial cycle framework in South Africa. This presentation of the issues embedded in the hydrosocial cycle structure also happens to exist in the context of Richmond. These issues happen to be integrated and connected and require that there is the reviewing of certain water policies or clusters as the many affected countries are predominantly Third world (World Bank, 2010) as cited in Biswas & Tortajada (2010). Richmond typically sees contestations between the physical environment and governance contexts. Other common frictional elements that have emerged lately are from the state of water resources, critical water users and the quality of water and its actual availability. Addressing these issues calls for intersectoral collaboration and the unequivocal need for widespread consultation against the problems embedded in this framework.

The respective clusters include economic management structural policies, social inclusion and equity and public sector management and institutions. Economic management structural policies address the macroeconomic management as well as both fiscal and debt policy. South Africa's debt position does not appear to be well accommodated, and with currency faltering, South Africa is in severe debt crises which contributes to an exponentially

unsavoury state of fiscal affairs coupled with a poor tax base, further compounds the issue of compromised of state water resources and research.

In conclusion it is important to take into account the aforementioned indicators which commonly serve as guides even in the context of Richmond. It should also come as no surprise that macro economics at a global scale which opens a window to economic commodities tends to affect municipal and governmental initiatives. Typically, if the trading of economic commodities is not going well for a country, its economy will inevitably fall, thus affecting budgets for government initiatives which could mean there could be no budgets at all for projects or little funds available. Consequently, this calls for thorough macro management in government, social inclusion and effective management of the public sector and its respective bodies. There is a dire need for local government initiatives to have indicators and examples that will be reminiscent of those in third world countries that characteristically foster a culture of optimising utility and having service delivery and the needs of the impoverished at their forefront. This can be done through widespread consultation and inclusiveness of all stakeholders from, the beginning to the end of all programmes.

With regard to the above information, it is important to highlight the fact that appropriate management and mobilisation of resources mechanisms be in place. Furthermore, there is a dire need to put in place coordination measures in order to achieve an organisation's goals and objectives. The common managerial approach that has been classically employed is top down, where power is centralised. This system of governance is unfortunately inappropriate with regard to stakeholder participation as it disempowers communities and is a very paternal and authoritative stance. In opposition to this approach is the now widely used approach of decentralisation. Though time consuming, it has been proven to be an effective methodology that helps to identify and provide clarity on roles and responsibilities for all actors. The instrumental water structures in the respective municipalities had undergone numerous key technical setbacks. The conflicting understandings of the responsibilities and roles of the respective actors proved to be a challenge, as there was a lack of clarity. This consequently had a huge bearing on service delivery. Roles and responsibilities need to be clearly defined within an institutional arrangement or configuration. The Water Services Act (WSA) clearly advocates for the separation of functions. This far-sighted approach's intention is to essentially enable for specific identification and understanding of the wide ranging costs that are inherent within the water services framework. Moreover, this approach can play a pivotal role reducing the detrimental effects of conflict amongst the actors, in efforts to achieve a

common objective of enhanced service delivery, both in terms of efficiency and sustainability (Cardon et al 2003).

CHAPTER 5: RESEARCH METHODOLOGY

5.1 Introduction

This chapter outlines the research methodology that was used in the data collection process for this dissertation project. This dissertation has the following four main objectives: (i) To identify the critical issues in terms of the quality and quantity of water in Phatheni. (ii) To map the main actors in the water arena. (iii) To identify tensions of water in the area and how these are addressed. (iv) To identify the main politics, interests and agendas of the actors in the water arena. The literature review and background chapters provided useful insight that informed the manner in which the research was to be conducted when engaging with the contentions that emerged from the hydrosocial cycle architecture, which is predominantly from a socio-political stance. Furthermore, the purpose that the literature review served was to address the predicament that the Phatheni community was faced with, whilst at the same time appraising contentions in relationships amongst the actors in the Phatheni hydrosocial cycle framework.

The majority of this research project was conducted using qualitative methods. The study employed the semi-structured interviewing technique with the assortment of actors and participants involved in Phatheni's hydrosocial cycle configuration. The majority of the semi-structured interviews that were conducted on a one on one basis were largely conversational. During interviews, the participants and main role player or actors would voice their views and felt opinions with their ground level encounters in this respective hydrosocial cycle environment. This research technique was instrumental in that it helped to assess the main actor's experiences at the upper levels of the hierarchy in political decision making and also helped to evaluate dynamics within this water architecture. The extended qualitative portion of the interviewing process with municipal officials necessitated the visiting of the local municipal offices and local UMgungundlovu Municipality District (UMDM) offices for one on one interviews. Given the close-fitting scale of the Richmond district, a significant portion of the key stakeholders which included the community services manager, local economic development manager, ward councillors, and tribal leadership authorities were available within the municipal offices, which aided the interviewing process, although the Phatheni district remained to be visited as a means to conduct a transect walk and a focus group discussion. Making use of an already prepared interview guide template also fitted well within the qualitative interviewing perspective where responses were recorded and documented in detail at the time of the interview. This approach similarly worked well with focus group discussions. This chapter furthermore provides incremental insight into the

methodology that was operationalized as a means of effectively and efficiently gathering data and analysing it through the research process. In closing, this chapter will communicate the challenging encounters that were undertaken during the course of the data collection process.

The participants in this study were drawn from a number of different actor groups. The participants varied from a ward councillor, community representative who was employed within a service provider company and community members. On behalf of the municipality, the study included a community service manager, municipal Local Economic Development manager (LED) and the Regional manager from UMDM. The qualitative interviews with the above mentioned list of actors will generate the data to conceptualise the dynamics of the hydrosocial cycle. In so doing it is possible to understand how the contentions arise given the various interests and agendas that the actors bring along. Phatheni being no different from the rest of black rural townships sharing a common inglorious past where its people were systematically excluded from opportunities, conflict of interest is bound to arise.

5.2 Desktop research/study

Prior to commencing the research, a preliminary information collection technique was employed by the researcher. This aspect of information collection was done through a desktop study by visiting the Statistics South Africa (Stats SA) websites and the relevant Integrated Development Plan (IDP) of the district. Additionally, the researcher collected information from the municipality itself from preceding community surveys and any other developments.

5.3 Main stakeholder interviews

This section details the relevant stakeholders and the respective data collection methodologies that were utilised during the data collection process. With the local residents of Phatheni, semi-structured interviewing and focus groups discussion were used coupled with a transect walk and drive which saw the researcher engaging in one on one discussions. The officials from the Richmond local municipality were likewise approached and interviewed on a one on one basis. Lastly, the interviewing process with UMDM officials was conducted via telephone, as these offices are Pietermaritzburg based and it was rather difficult to get hold of the Regional Water Manager that effectively oversaw the entire hydrosocial cycle architecture in the respective district as the chief implementer and catalyst. In all instances the interviews were conducted in isiZulu.

5.3.1 Selection of participants

The selection process of the research participants was done through the purposive sampling technique. Prior to usage of this technique, the researcher, already had knowledge about the community as he had intended on interviewing certain groups of people and already had an idea about the problems that it was experiencing regarding water service provision. Accordingly, the researcher communicated with the Community Service Manager and the Local Economic Development Manager from the local municipality and on any leads from Phatheni behind the water initiative that was being instituted, as a starting point. Thereafter, the researcher had to familiarize himself with the unfortunate structural challenges that the people of Phatheni were confronted with on a daily basis. The researcher's networking skills allowed him to get into contact with the Regional Water Manager from UMDM. His contextual knowledge of Phatheni and its community members once more afforded him the opportunity to gain insightful knowledge of how to go about with recruitment of the most appropriate and relevant research participants.

The research sample was composed of 15 participants in the focus group and 10 participants in semi-structured interviews, including the one Regional Water Manager, the local Economic Development Manager and the Community Service Manager as shown in Table 4. All of the research participants resided in the Phatheni rural location with exception of the Regional Water Manager and the Community Service Manager and Local Economic Development Manager which formed part of the municipality. The purpose and role of these municipal officials was to guide and assist the researcher in gaining more meaningful insight from a municipal perspective as to what are the crucial issues that emerge, frictions and agendas the various actors have in Phatheni's hydrosocial cycle framework. From the community's perspective the idea was to gain a grass root level understanding regarding the politics and dynamics that they encounter on a daily basis. One resident stated that 'we normally experience technical problems with water delivery failure and sometimes the water comes out slightly muddy' (Participant 3 12/11/2015). Such statements further affirm why the researcher chose to conduct semi-structured interviewing, as a means of getting to the crux of their everyday lived experiences.

Table 4: Participant interviews

Richmond Municipality		Gender representation		Total number of participants
		Male	Female	
Local Municipality	Focus group participants	9	6	Participant #1
				Participant #2
				Participant #3
				Participant #4
				Participant #5
				Participant #6
				Participant #7
				Participant #8
				Participant #9
				Participant #10
				Participant #11
				Participant #12
				Participant #13
				Participant #14
				Participant #15
	Interviewed participants from community + (councillor)	6	4	Participant #16
				Participant #17
				Participant #18
				Participant #19
				Participant #20
				Participant #21
				Participant #22
				Participant #23
				Participant #24
				Participant #25
Richmond Municipality	Community Services Manager + LED manager	1	1	Participant #26
				Participant #27
District Municipality (UMgungundlovu)	Water regional manager	1	0	Participant #28
Total				28

5.3.2 Time frames of the interviewing process

Due to lack of availability of the municipal management officials, the interview sessions varied tremendously. The first session of interviews was conducted from 9 to 13 November 2015 with the local residents of Phatheni. From 6 to 8 December 2015, two local residents and I conducted a transect walk in order to gain a detailed understanding of the type of project that was being implemented in this area, more importantly about existent dynamics inherent in the hydrosocial cycle architecture of this district. The second phase of the interview sessions took place at the Richmond municipal office premises with municipal management on the 3rd of March 2016 and again on 10th of March 2016. Unfortunately, this process yielded fruitless results due to time constraints on their part; however, I was through providence finally referred to the Regional Water Manager from the UNMDM who oversaw the entire water initiative of Phatheni. The advantageous and distinctive trait of semi-structured interviewing is that it effectively affords the interviewer the opportunity to progressively ask respondents to confirm and identify important variables for analysis (Schensual *et al*, 1999). This qualitative tool of enquiry, furthermore stimulates detailed responses from participants through discussion by unearthing important information which would have otherwise rested dormant at critical times of need to build a valid account of what transpires in this district within this framework, both political and socially. The open-endedness of the questions allows for further expansion of answers by the research participants which can be stimulated by probes and certain gestures by the interviewer.

5.3.3 Qualitative interviews

As a means to providing a comprehensive account of the contentious political issues that transpired, endured and continue to dominate the hydrosocial cycle architecture of Phatheni, I had to embark on this particular research project a “business as unusual approach”. The qualitative interviewing tool for both focus groups and individuals was most suitable in this setting as I was able to unearth a lot of invaluable information with respect to the hydrosocial cycle framework and its contentious embedded issues. Acting as auxiliary to this idea, Turner (2010) affirms that standardized open-ended interviews afford interviewers an opportunity for flexibility and permit question probing which effectively allows for participants to fully express their viewpoints and unearth incremental and useful information which might have otherwise remained undeclared or unspoken of. Turner (2010) firmly asserts it is important for one to take into account the interviewer’s position relative to the research. Although time-consuming, conducting interviews with a large pool of participants and particularly heterogeneous focus groups with respect to age, gender and ethnicity helps paint a rich

picture of the diverse themes, agendas and contentions that typically emerge in the water domain. In support of this position Gall & Borg, (2003) cited in Turner (2010) assert that rich assortments of participants involved in study typically help in reducing the biases within the study as their opinions often differ and help provide depth to the narrative.

A rich narrative of the social setting needs to be carefully produced, as it is an important aspect to any research study as it communicates a sense of expectation, which could help to steer the research in the right direction. Following considerable and careful thought of the objectives of the research, an interpretivist paradigm was selected. As opposed to the seemingly appropriate post positivist paradigm, the interpretivist paradigm allows the researcher to essentially grasp the meanings behind the social actions within the people's contexts (Hennick *et al*, 2011). Within the context of the water configuration in Phatheni, I as the researcher, through informal dialogue with its residents was able to understand and gain a rich picture of the contentious political issues surrounding the water service provision problem. Employing this paradigm in this particular setting was a good choice in that it was a methodical approach that prompted for introspection on my part, furthermore allowing for unearthing vast amounts of invaluable information and insight into people's lives and experiences.

Accompanying this semi-structured interviewing methodology of data collection, was a transect walk and drive with some of the residents of Phatheni who had been intimately involved with the water project that had been implemented in this respective area from inception to end. These respective locals were accordingly at the same time, constituents of the hydrosocial cycle framework of this rural district. At this point semi-structured interviewing proved to be an instrumental tool that helped vastly in stimulating and sustaining debate and dialogue with regards the deeply imbedded societal issues connected to structured social exclusion in the water sphere of its rural people in this respective district. This methodical qualitative technique helped to effortlessly paint a detailed picture of the attitudes, interests, and agendas that had emerged and remain enduring in the hydrosocial architecture in this specific rural area. It appeared that there were many prejudicial attitudes towards local leadership that had permeated this particular hydrosocial framework in Phatheni that appeared to be a challenge to uproot as there were already preconceived ideas about people's behaviours and their capacity with being dishonest and not being transparent. This qualitative approach was moreover used with focus group discussions. The practicality and efficacy of this qualitative and methodical approach proved its worth when it once more stimulated dialogue and raised a lot of unspoken politically sensitive topics about the political

history of the area. However, the situation was well contained as the groups promptly diverted from that. Out of this, a wealth of knowledge was shared amongst the participants and researcher, as there were many accounts that were unearthed with respect to the water governance structure of the area.

Focus group discussions were conducted at Phatheni and the semi-structured interviews were also conducted on site at Phatheni with its local residents coupled with the discussions and the transect drive was conducted done in Phatheni. The research consisted of numerous participants and one the ward councillor. The number of participants who were involved the study area reflected on the table 4 below.

With regard to the interviewing process, some participants were randomly interviewed on site. With the aid of one of the community members who was intimately involved in the water project, whom I had met several months before at the local Municipality. I was then able to interview some of the community members at the actual ward in Phatheni upon request, regarding the political and contentious issues related to water in the district. With this approach, an already prepared interview guide was utilised for questioning the participants. As reflected in Table 4 above, both male and female participants were interviewed whose aggregate amounted to 10.

The semi-structured interviewing process that was conducted with the residents of Phatheni took place at their households or on open plains. Wherever an opportunity availed itself, where there was presence of participants who had the time and in an area that was suitable the researcher made use of that chance, as many of the residents seemed to be in pursuit of an immediate agenda of cattle herding or collecting water from the river. With some of the participants the interviews were pre-arranged and with some it was a matter of the opportunity availing itself, which made the process of the meeting the deadlines somewhat unpredictable, and then asking the relevant technical questions and general feelings about the water projects that were being instituted in the area. A bulk of the questions were open-ended and were qualitative in nature which allowed for the participants to be as much detailed as possible in their responses The dates for these were from 9th to 13th November 2015.

Focus groups discussions were an important data collection tool that was employed during the research phase. This form of information collection typically sees a compelling interaction amongst individuals who have some common interest or characteristics, given that the facilitator is well versed with the dynamics around the topic. This respective methodology culminates in the investigator bringing together research participants and having a discussion

around a particular theme or issue. The group ideally should be retained as small as possible as a means of encouraging free dialogue in efforts to unearth as much valuable information as possible (Mack et al, 2005).

Steering the discussion in the appropriate direction focuses the dialogue. A checklist is a common method often utilised here to ensure all the main issues under discussion are covered. This systematic procedure helps to intensify talk and aids in unearthing details about actual and potential accounts that hamper water service delivery through documenting the manner in which the hydrosocial cycle architecture is sternly compromised by political influence. Partially for this reason, focus group meetings are held at a few selected community settings with certain key members who meet in their constituencies to discuss and attempt to resolve the issues around water. In this respective setting there is commonly the presence of government and local municipal officials coupled with tribal authorities and local political leaders. This entire interviewing process which was formal was conducted from the 9th to 13th November 2015. Another important point worth mentioning was the fact that the discussions did not get to heated seeing as the community members were in the presence of local political leaders and officials.

5.4 Transect walk/drive, physical observations and personal engagements

The study included a questionnaire accompanied by a checklist (see appendices) and a transect walk (Figure 6) and physical observations were appropriately instrumental in this case in a sense that they allowed me as the researcher to physically observe, listen and pose relevant questions regarding infrastructural developments of the water project that was being instituted in Phatheni, and the current state of affairs within this water configuration. During the course of the research I was accompanied by three of the local community members, one of which was a supervisor and a community representative/chairperson before, during and after this the water initiative was implemented in this rural area. This participant was able to assist me in the mapping of the infrastructure, services, housing and the actors that were involved. Furthermore, this participant was instrumental at this point in the research because he was very familiar with community members, seeing as he was of Phatheni by birth, which was very useful as I would occasionally meet up with community members and have a casual chat which would see me posing questions related to the research along the dusty gravel roads of this area. This proved to be a very significant and useful tool in the research to utilise, as it showed the varying views on local water governance. Many of the subject themes around water that emerged were grounded in politics and subsistence farming. Furthermore, this tool's usefulness helped to echo the different meanings that the men and women of

Phatheni ascribe to water. Over and above, this tool allowed for the straightforward and detailed information to be documented, because people feel more at ease when visited at their comfort zones and talking about glaring issues that they feel need to be promptly addressed. To conclude, the transect walk that was conducted allowed me as the researcher to map out the spatial orientation of Phatheni, thus allowing me to make further resolute deductions about the political climate respect to water in this respective rural district (see Figure 8 below).

5.4.1 Informal Interviews

This systematic methodology of interviewing follows a similar trajectory as focus group discussions; however with the informal interviewing technique the manner in which it is conducted is on an individual basis. With this specific approach the questions are rather spontaneous and not necessarily predetermined, and are the least structured of all the interviewing approaches (Barry, 1999). This particular style tends to be more conversational with the respective acquaintances that the investigator will be interviewing. Accordingly, the interviewer conducts follow up questioning on the respective points the interviewee will be providing. De Walt (2002) argues that in this manner, the investigator is not necessarily steering the topic tabled for discussion, but the interviewee is also part of the construction of knowledge.

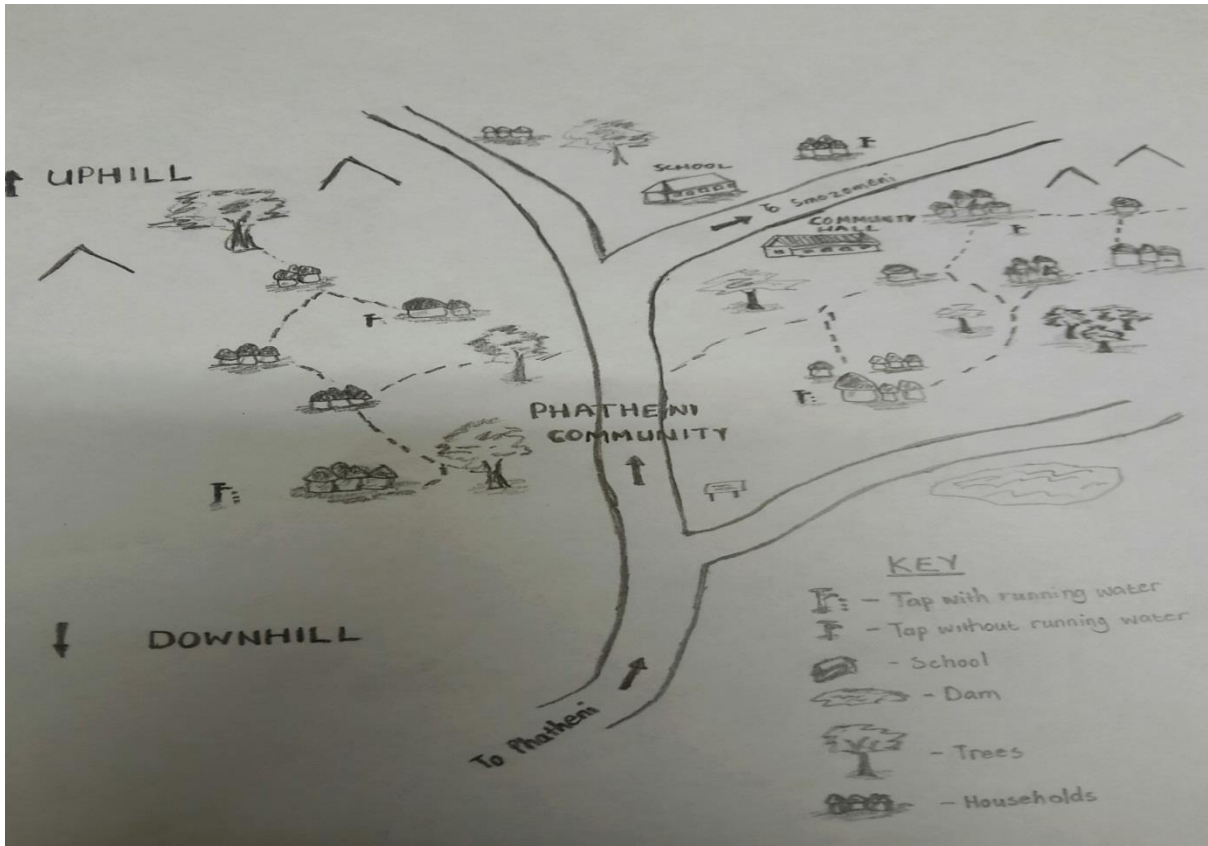


Figure 8: Community Map constructed in words by the men and women Phatheni, Umgungndlovu District

Source: Picture drawn is by Bayanda Mbanjwa

The process follows that an informal meeting has already been held followed by the interviewing process with the community members. In this instance, the process follows that the community members that have already had an encounter with the investigator regarding the research around water related issues will be the only ones that will interviewed.

A comparatively similar informal interviewing schedule is prepared and utilised on separate instances with the tribal authorities of the respective rural community within the applicable municipal authorities. The main motive that accounts for this particular approach is to find out about the different perspectives on the problems embedded in the respective hydrosocial cycle configuration and the glaring emergent issues regarding water access. The entire informal interviewing process which included the transect walk/drive was conducted from the 6th to the 8th of December 2015.

5.4.2 Physical Observations

The physical observation technique affirmed itself as a very instrumental tool to employ at this point in time in the research phase. This methodology proved to be very useful in helping

to map out the main affected areas with respect to infrastructural implementation and conditions, which were installed by the respective contractors and service providers of the specific rural district. With the aid of the local authoritative figures from within the community, the researcher was then able to conduct a thorough visual assessment of the current infrastructural conditions in several wards of the area. Moreover, the researcher was able to identify and chart out alternative sources of water that the local community members were utilising for domestic purposes. Several run-down infrastructural developments that were exposed yet fully functional included several communal standpipes, springs, poorly plastered reservoirs and boreholes. Alternative natural water sources, included and local communal wells.

5.5 Ethical considerations

In conducting the research, the investigator was aware that he had to get consent from the research participants. Accordingly the researcher was fully compliant with the applicable and professional ethical standards. With respect to the qualitative research aspect, researchers need to be mindful of the fact that they need to fully respect the participants and the sites where the research is to be conducted.

For the entire interviewing process, there were ethical issues that were to be taken into consideration. These were as follows:

- Informed consent

Informed consent was gained through verbal agreements with participants that partook in the study. The goals and objectives of the study were clearly communicated coupled with procedures and what the study was essentially about. The extent to which the information the participants would provide would be kept confidential a critical aspect that was sensibly and thoroughly communicated with the participants. The permission to conduct the research was officially obtained from the Richmond Municipal management which was directly responsible for the entire southern district region.

- Confidentiality and Anonymity

The research participants were reassured by the investigator that the information provided by them would be kept strictly confidential and that pseudonyms would be used in the respective report.

5.6 Limitations and bias

There were several challenges I encountered with this specific research project. My positionality as an insider in the Richmond area meant that I had to be careful of how much subjectivity influenced the research. The time factor with regard to the availability of the municipal officials and councillors also proved to be another challenge. Moreover, the redundancy aspect served as a setback when I attempted to extract information from the research participants, as I would find repetition of the same data in multiple different ways. However, I did have measures in place to counteract such problems. A key example of this was when I purposely separated the participants and deliberately conducted semi-structured interviews at varying points in time check for uniformity from the answers retrieved from focus group discussions and individual interviews that I had conducted prior to this. Typically, sharing a common background and language base, with participants ushers in partiality during the research process, which can be potentially harmful to data analysis and data collection (Dwyer and Buckle, 2009). Thus, mindfulness needs to be exercised with care in such instances as you might in actual fact be projecting your own thoughts and misconceptions as opposed to the true accounts of the events that transpired when doing an interpretation of the research findings (Asselim, 2003). Given, the fact that I am from Richmond and I am appropriately familiar with all of the municipal officials, I also had to be mindful of the fact that I had to have a clear mind and be aware of any biases that I might project through dialogue at the point of interface, during the interviewing sessions. I needed to be aware of my own positionality in the research. Acting as an auxiliary to this position, Asselim (2003) affirms the point that the researcher should stringently adhere and bracket his or her assumptions to the research at hand.

Foote and Bartell (2011) and Savin-Baden and Howell Major (2013) assert that the term positionality is both a description of an individual's world view as well as the position the researcher chooses to take with respect to a specific task at hand. Positionality "...reflects the position that the researcher has chosen to adopt within a given research study" (Savin-Baden and Howell Major, 2013, p. 71). Given the context upon which the research was conducted it is important for the research to explain several aspects about positionality which has a direct bearing on culture, gender, race and nationality as they may compromise the data collection process by leading one in to not getting results that are truthful in nature. Other aspects of

positionality are said to be contextual and also subjective, and relate highly aspects such experiences, history and and one's personal life (Foote and Bartell, 2011 and Savin-Baden and Howell Major, 2013). According to Sikes, (2004) it is important for a researcher to be aware of their position from both a paradigmatic and philosophic perspective, as any assumptions they might hold might influence the research and and their related thinking practice. Foote and Bartell (2011) and Savin-Baden and Howell Major (2013) put forward the fact that there are both advantages and disadvantages in having an insider's position in research. The following have been illuminated as being advantageous to the research when conducting research. The first advantage has been said to be the ability of the researcher to ask meaningful or insightful questions as a result of the potential familiarity with the problem. The second is having more honest answers, the advantage is the potential advantage of understanding the language, including colloquial language and verbal cues and last perceived benefit is that of the researcher not having to undergo the element of 'culture shock' (Foote and Bartell, 2011 and Savin-Baden and Howell Major, 2013).

On the other there are disadvantages with holding an insider's position. These include the inability to construct an external perspective in the research process. Secondly, the participants may feel the researcher is asking 'obvious' questions thus the respondents may answer sarcastically or give limited truth to the question being posed. Thirdly, the researcher may be too close, and might be seen as familiar with the community or culture, and as result they cannot raise taboo or provocative questions (Foote and Bartell, 2011 and Savin-Baden and Howell Major, 2013).

Conflicting with this position is the subject theme that researchers have coined as 'strong objectivity' (Harding, 1991). According to James (1997), having knowledge of a subject's or participant's background, knowledge as well as their experiences, enhances the strength of a scientific claim as opposed to wearying it down with 'presupposed biases'.

My experiences are nevertheless consistent with the sentiments of Harding and James, which affirm that there is a direct correlation on the position you hold in society and your level of education. The multiracial character of the local municipal officials that I interviewed appeared to have a completely divergent view from that of the Regional Water Manager from UMDM who was male, with respect to the water affairs of Richmond. The RLM seemed to place blame of the existing predicament that these people of Phatheni were facing, implying that they are partly to blame for the stolen pipes that resulted in this respective initiative not being fully completed. In contrast to this position, UMDM firmly asserted that the problem was back with national government and the lack of funding that led to friction and tension in

this hydrosocial framework. This paints a problematic picture of the polarised views that gave rise to the water contentions through certain hidden agendas and interests that many of the stakeholders particularly municipal officials, hold against one another presumably for self benefit, as I was later to learn from my key informant who was intimately involved with the municipality and community of Phatheni.

In conclusion with respect to the research methodology, there were eight critical elements that had to be kept in mind through throughout the research. As a starting point the researcher conducted a desktop study on the area of Phatheni. This translated into looking at information on Richmond's demographics from Statistics South Africa (StatsSA) and Richmond's IDP document detailing much of Richmond's spatial orientation and changes throughout 2013 to 2017 as well as its economic position and likely trajectory. This phase was dubbed the preliminary information collection technique of the area. Next was the qualitative and key stakeholder interviewing stage, which in recollection looked at the everyday lived experiences of people, and in doing so helped in extracting a lot of information from the participants. The key stakeholder interviews with Regional Water Manager helped to unearth valuable information regarding project planning and institution in the area of Phatheni and also helped put some focus on the actors that were part of Phatheni's hydrosocial cycle framework. The fourth element, was that of informal interviews, which was more conversation in nature, this technique was helpful in a sense that it prompted for spontaneous responses from the participants which in essence helped the researcher to gain a general sense of Phatheni's water narrative and history of development. Element five and six included physical observations and focus groups discussions. These assisted the researcher in mapping the main affected areas of the district of Phatheni and their core problems and the focus group discussions helped in unearthing valuable information about the underlying problems in Phatheni's most recent history. This technique also helped the participants to develop dialogue on regeneration and resilience of its people, who had now felt that this form of outside help was talking much to the municipal officials' financial needs and not necessarily addressing their needs. Points seven and eight articulated ethical consideration, and limitations and bias respectively. With ethical consideration the researcher had to pay close attention to informed consent and confidentiality and anonymity. Partaking in this helped with the participants to reveal more information about their feelings on Phatheni's hydrosocial cycle framework and the actors involved, as they understood about that their identities would be concealed and the purposes of the research wasn't going to be harmful in anyway to them. Lastly, the limitations and biases in the research pondered the idea of positionality which was the position the researcher chose with regards to the task at hand, and

factoring in the idea of being insider or outsider in the area which would deeply affect the participant's responses, depending on how they understood the researcher's positionality. The sum point of all these points put together would then affect the outcome of the research in unearthing crucial and detailed information which accurately document Phatheni's water story. All these elements worked together very well and helped to synthesize a singular unified account that would put into perspective Phatheni's water hydrosocial cycle configuration.

5.7 Conclusion

This chapter has outlined the range of qualitative methodologies that were adopted to explore the relations in the hydrosocial cycle in Phatheni. The data collected from the various methods used enabled formation of a picture that detailed the politics of water in the area to be constructed. The following chapter presents the results of the study.

CHAPTER 6: THE POLITICS OF WATER AND THE HYDROSOCIAL CYCLE IN PHATHENI

6.1 Introduction

With respect to the data collected in Phatheni, many of the participants in the research argued that the manner in which the water projects were instituted was not appropriate to some of their immediate needs such as employment. This would have occurred with hiring of local labourers of the district when the water projects were being instituted through it. From the data collected it emerged that the water was of compromised quality and as it is later reflected in this thesis, there are some areas in Phatheni that to date still do not have water running. At certain times the water would come out, and in other instances it would not. One of the community members who has been working closely with the implementing agent (hydrotech), the traditional authority and the researcher; argued that the traditional top down approach to resolving Phatheni's water problem was perhaps not the suitable approach to the community's water needs. He asserted that the approach adopted needs to shift to a much more participatory approach, bringing in to sharp focus what is positive within the Phatheni community and then what is wrong, including the lack of clean safe drinking water. Surfacing from the data collected was the fact that the people of Phatheni were not entirely happy with the manner in which the ward councillor handled the water project issue as there were some areas that lacked water and there were some areas that simply did not have the projects completed, as it will be shown later in the chapter. What also emerged from the data collected was that the traditional authority was playing an important role in facilitating water service delivery in the area given the fact that the Inkosi was from Phatheni herself. The water projects being implemented in Phatheni seemed to be doing more harm than good. This form of help appeared to be having a shadow side to it, as there was friction amongst the actors. There was a level of dissatisfaction that came from the community with respect to the manner in which the constituents of the municipalities were instituting the water projects. One of the community members highlighted these critical challenges in the following statement:

“We as the community must sit down and work together, the powers that be should not leave us out when attempting to bring change in our community. We know our community better than anyone, we attend meetings willingly only if informed by the councillor, which is rarely. And this compounds the problem of lack of participation. We don't need this” (Respondent; 10/11/2015).

There was questionable cohesion as the data suggested, as this change that was being brought to this community by an outside agent was seen as a something that was not liberating at all and was being experienced as some form of violence against the people because of the unequal way in which it was being implemented.

6.2 The main actors in the Richmond hydrosocial cycle

There were numerous challenges and contentions that were discovered, prior, during and post project implementation within this hydrosocial cycle architecture. The Richmond local municipality (RLM) reports directly to the UMgungundlovu district municipality (UMDM). In terms of the Constitution of the Republic of South Africa, Act 108 of 1996, the Richmond local municipality falls under category B whose code is KZ227; according to Chapter 7 section 155. Accordingly, its role and functions within this hydrosocial cycle configuration interface with those of the UMDM. The interview with the Regional manager of water from the UMgungundlovu district affirmed that it is in fact the UMgungundlovu district municipality that is responsible for the implementation of water projects coupled with water service provision in Richmond and in this specific case, Phatheni.

Complexities emerge, given the fact that there are two levels of municipalities involved in the project; namely the UMDM, RLM and also the traditional authority. This impacts on the issue of communication. The UMDM is the actual implementer of the water project in the district; however the traditional authority here has a far more intimate working relationship with RLM. The problem however surfaces when the lines of communication are comprised through the varying agendas of the different municipal officials. The community's understanding is that since its respective delegated ward councillor is under the RLM, then the RLM must be steering and funding the initiative. There is also the perception that since the ward has a tendency to oversee some of the aspects of the project and communicates every now and again with community members, then it must be that the RLM is directly in charge. An important thing to take away from this is that having buy in or simply portraying an image of the development agent can and most certainly will help in political lobbying for a certain political organisation in forthcoming elections, Hence local councillors often might be compelled to act as though they are in charge. Communication is often not so good as result of this dual governance system although the traditional authority steps in as a mediator in order to accelerate progress with respect to project implementation and to improve other services on the people's behalf. To further support this, a common denominator that emerged, from both the focus groups discussions and the semi-structured interviews was that the traditional leadership of Phatheni is intimately involved in municipal affairs with respect to

water and other infrastructural developments. Quoted from a focus group discussion a respondent was cited as saying “the Inkosi and her team play a huge role in helping Phatheni grow. The municipalities have too much politics and we rarely talk to our ward councillor” (Focus Group: 11/11/2015). It is also evident that the traditional authority structure played a pivotal role in the regulation and facilitation of service delivery in the Phatheni region. Tension typically arose owing to dual governance and the different agendas that the municipalities have, however the traditional authority communities have some sense of surety that issues will be addressed and some development will happen.



Figure 9: Tap water located on the yard of a household in Phatheni

Source: Photograph taken by Bayanda Mbanjwa

Figure 9 above is a depiction of a water meter and a tap that is erected in the yard of a household in Phatheni. The fact that this water source is located within the premises of this household is indicative of the great lengths the traditional authority has gone to ensuring appropriate service delivery and infrastructure for its people in this specific district of Phatheni. It emerged from the focus group discussions that the community has a more open, transparent and accessible relationship with the traditional authority in comparison to the ward councillor. The ward councillor does come from Richmond and hence the community is concerned about whether he has their best interest at heart given that he is not personally invested in the living environment of Phatheni. As a result some of the areas within Phatheni did not have their water needs justified, which complicated the matter and increased conflict and inequality around water delivery in this area.

The majority of Phatheni's households are located on steep slopes, which also happens to be a very uneven geological region of Richmond. From the inception of water implementation projects there has been widespread debate as to whether or not all the households will receive piped tap water. Although this water project was undertaken by the UMgungundlovu District Municipality (UMDM), some of the activities were decentralised to the Richmond Local Municipality (RLM). Ward councillors who did not necessarily have the community's interests at heart have overlooked and did not complete projects for a sizeable portion of this region. At this point in time the community of Phatheni is expressing discontent with the manner in which the leadership of this district is seemingly facilitating the complete implementation of the water matter. The most affected region which is uphill is currently enduring challenges with respect to having flowing tap water, while the households located downhill have fully functional taps installed complete with water meters. This is related to the impact of not having the technology and planning to address the impact of topography on water delivery. Another matter directly connected to water service delivery was the decentralisation of duties to ward councillors and local municipal officials, who were said to be employing their political associates to oversee the process of piping the area, who once again did not necessarily have the people's interests at heart. From the some of the interviews conducted, it also emerged that it was the geographical positioning of the uphill households that had presented a challenge with regard to pumping water to the already piped households.



Figure 10: Underutilised water pipes from the unfinished water project undertaken in Phatheni

Source: Photograph taken by Bayanda Mbanjwa

Figure 10 is an image of under utilised water pipes, which is an indication of the on-going political conflict amongst the actors in Phatheni. The divergent interests and agendas amongst the actors inherent in this hydrosocial cycle architecture of Phatheni have inadvertently resulted in a dead end for the project, at least for the time being. In contrast to this situation, the interviews established the fact that there is a current undertaking of a reservoir construction and hydraulic hydro pumps that are being installed, to supply the remaining households in the future. Given that this is a rural setting many of the households are not densely settled which makes the provision of water services and infrastructure difficult. Furthermore they are located uphill in hard to reach locations, as this is a rural area with the spatial orientation of households being dispersed. A participant that the researcher worked closely with, who was aligned with the community of Phatheni's TA, the RLM and the implementing agent, Hydrotech, which was also the service provider during the implementation of the project, was very articulate about the area having challenging geomorphology, which consequently posed great challenges during the digging and laying of the pipes phase. He furthermore affirmed that there was a lack of transparency between the actors with regard to fund allocation of the entire project. The respondent provided useful insight into certain issues related to lack of transparency and accountability with the community on behalf of the implementing agent. Some of the people involved in the project were concerned about how these projects were managed and how the process of fund allocation was carried out. Some of the officials were political opponents and hence they shifted more focus on to politics rather than the actual delivery of services.



Figure 11: Construction of the Phatheni reservoir

Source: Photograph taken by Bayanda Mbanjwa

There are a few water projects that are currently being undertaken. These water projects included the construction of the dam and the laying of pipes which were going to be the network that was going to serve the water needs of the Phatheni households. The purpose of the construction of the dam was to assist by acting as a reserve and also to supply water to Phatheni's periphery and the neighbouring rural district known as Smozomeni. The focus group discussions unearthed some valuable information in relation to the ongoing water projects. Many of the community members had hoped to be employed in the local projects. Initially it was announced that they needed to be part and parcel of their development at every project undertaking and at every stage, by the UMDM. These local community members were concerned that the political leadership in control does not address their needs. The needs that the community members highlighted were employment. They asserted that the ward councillor had an important role in facilitating and allocating employment if and when such development projects were being instituted. There are concerns that the allocation of employment in development projects is not always socially just or transparent.

6.3 Water resources, services and infrastructure in Phatheni

Through the interviewing process with the respective residents, numerous contentious issues emerged about the hydrosocial cycle configuration, however this time specifically with respect to the main sources of water in the area. An important point of note was that the previous and current water sources were not functioning effectively to best serve the community's needs. Infrastructural source points were not fully fitted on the premises of entire households of Phatheni. This has consequently raised some major contentious debates regarding transparent governance processes in the district, and has led to the glaring question of, "who deserves and who isn't?" Key issues at this point in time place emphasis on quality, and equitable distribution of this important commodity, whose lack thereof in terms of its service provision has already raised conflict.

From the focus group discussions, it emerged that the water tankers that typically made rounds to the district and accommodated 5000 l of water, was compromised in both quality and quantity. The rounds of water delivered to the community were commonly done once every two months, or depending on how long the problem lasted for. This predicament ultimately forces the households back to the rivers and boreholes where they are once again forced to share water with livestock, which compromises water quality. The functionality and sustainability factor of these remedial actions moreover came under scrutiny, as this was not the projected and expected thing to have on an on-going basis. During the course of the focus group discussions, it emerged that in some areas water was not running at all, and this hydro-

technological crisis has been on-going for several years, since the completion of the project mainly on the households that were located uphill on mountainous regions of the respective district.



Figure 12: Uneven topography of the the Phatheni region

Source: Photograph taken by Bayanda Mbanjwa

Figure 12 is a depiction of the highly irregular topography of this district and spatial orientation of the households. This specific area's location is uphill and is a very mountainous region. The spatial orientation of this area presents numerous challenges with regard to the cost of the project, in particular providing piping to the remaining households. In many cases the ward councillors that have been elected in succession and had been involved in Phatheni water affairs, have misled the people in this area with regard to timely implementation and piping of water to the remaining households. The reason for the lack of timely of the piping was on account of the fact that the houses were far apart from one another which translated in to major costs for UMDM. This point was argued by the Regional Water Manager of UMDM, however ordinary people beg to differ. However, with some of the households that I visited there was the presence of countless underused piping material. Some of the community argued that there was lack of transparency and accountability on the part of the local municipality, thus inferring that there were duplicitous transactions going on of monies that were allocated for prompt completion of this water initiative, which would see people's water needs being finally realised.

The year 2016 marked a positive departure from what appeared to be an on-going problematic setback with respect to infrastructural development. At this point in time, there is water reservoir that is being constructed 2 kilometers away from the Phatheni district at a neighbouring township known as Smozomeni. This reservoir is not fully operational at this point in time, and the whole point behind its erection in terms of its purpose is to serve the water needs of the remaining and newly constructed houses. During the course of data gathering process of this respective research, it emerged from the focus group discussions, semi structured interviews and transect walks and drives that this particular construction would in effect also cater for the water needs of the neighbouring township of Smozomeni. Though spearheaded by the UMgungundlovu District Municipality (UMDM) in its implementation, this project was in essence an initiative that was stimulated by the Richmond Local Municipality (RLM) on politically motivated grounds. At this stage many of the households are using varied methods of water collection as some do not have reticulated on the actual premises, as it was witnessed during the transect drive.



Figure 13: Typical landscape of Richmond which is the context which shaped the responses of the focus group members

Source: Photograph taken by Bayanda Mbanjwa

Figure 13 shows the context of rural Richmond which has shaped the responses of the focus group members. Here the interviewer's approach was a very methodical approach in that it was based on a set of pre-constructed questions and yet at the same time it was stimulating

debate and discussion on issues that were somewhat delicate around the political contentions in this respective water configuration. With their consent, pseudonyms were used to protect the identity of participants. With this approach, crucial information was divulged about upcoming developments with regard to the overall completion of the program which at this stage had included the Smozomeni, and some technicalities emanating from both a political and operational perspective within this framework.

Table 5: Sources of water in relation to household location

Water infrastructure/source	Location	Description	Distance from nearest household
Communal tap	Not recorded	Pull-up nozzle	200m
Tap located on HH premises	Not recorded	Onsite HH tap	On site at house hold
Reservoir	S 29 ⁰ 12.830 E 20 ⁰ 05.822 Elevation: 2119 ft	Newly constructed, for domestic purposes & well protected	Approximately 1.8 km's

The setback with regard to the out rolling of taps or other infrastructural water source points remains a rather daunting challenging, for this district. Earlier, contained within this chapter it was highlighted that there is a dire need to have existing running water tap facilities within the household as per the initial arrangements and agreement between governing authorities and community members, see Figure 13 on the focus group discussion. At this stage, as reflected in Figure 14., there is erection of water reservoir which is nestled at a location of S 29⁰12.830, E 20⁰05.822, with an elevation: of 2119 ft whose construction has come to a complete and imminent halt, on account of the newly spawned political contentions. This project is approximately 4km's uphill from the district of Phatheni and falls under the first ward of Smozomeni, which is the neighbouring township.



Figure 14: Picture depicting unfinished construction of the reservoir

Source: Photograph taken by Bayanda Mbanjwa

Figure 14 shows another failed project in the district. The above picture is that of a reservoir construction that came to an abrupt halt. Emerging from the semi-structured interviews is the fact that there is now insufficient funding for the completion of this respective project. With local government elections in 2016 opposition parties challenged the ruling party, and hence there were numerous debates, tensions and issues surrounding which political party might actually govern the respective district, as the citizens are now revolting against the current governance system in the region. Many people in the district were hoping for change and were concerned with this project not being completed. Many were frustrated with the lack service delivery in the area.

Table 6: The participant’s responses regarding having tap water on HH site

Local Richmond Municipality & Phatheni Community		Do most households have tap water?		
		Yes	No	Not sure
Richmond local municipality (Phatheni district)	Participant #1	<input type="checkbox"/>		
	Participant #2	<input type="checkbox"/>		
	Participant #3	<input type="checkbox"/>		
	Participant #4	<input type="checkbox"/>		
	Participant #5	<input type="checkbox"/>		
	Participant #6	<input type="checkbox"/>		
	Participant #7	<input type="checkbox"/>		
	Participant #8	<input type="checkbox"/>		
	Participant #9	<input type="checkbox"/>		
	Participant #10	<input type="checkbox"/>		
	Participant #11	<input type="checkbox"/>		
	Participant #12	<input type="checkbox"/>		
	Participant #13	<input type="checkbox"/>		
	Participant #14	<input type="checkbox"/>		
	Participant #15	<input type="checkbox"/>		
	Participant #16	<input type="checkbox"/>		
	Participant #17	<input type="checkbox"/>		
	Participant #18	<input type="checkbox"/>		
	Participant #19	<input type="checkbox"/>		
	Participant #20	<input type="checkbox"/>		
	Participant #21	<input type="checkbox"/>		
	Participant #22	<input type="checkbox"/>		
	Participant #23	<input type="checkbox"/>		
	Participant #24	<input type="checkbox"/>		
	Participant #25	<input type="checkbox"/>		
	Participant #26 (Regional Water Manager)		<input type="checkbox"/>	
	Participant (Community Service Manager) #27			<input type="checkbox"/>
	Participant (Local Economic Development Manager) #28	<input type="checkbox"/>		<input type="checkbox"/>

This was on account of the fact that the most recent remaining developmental initiatives from both the local and district municipalities are clouded by many misguided political agendas from both the district and local ruling political elites and the people could see this.

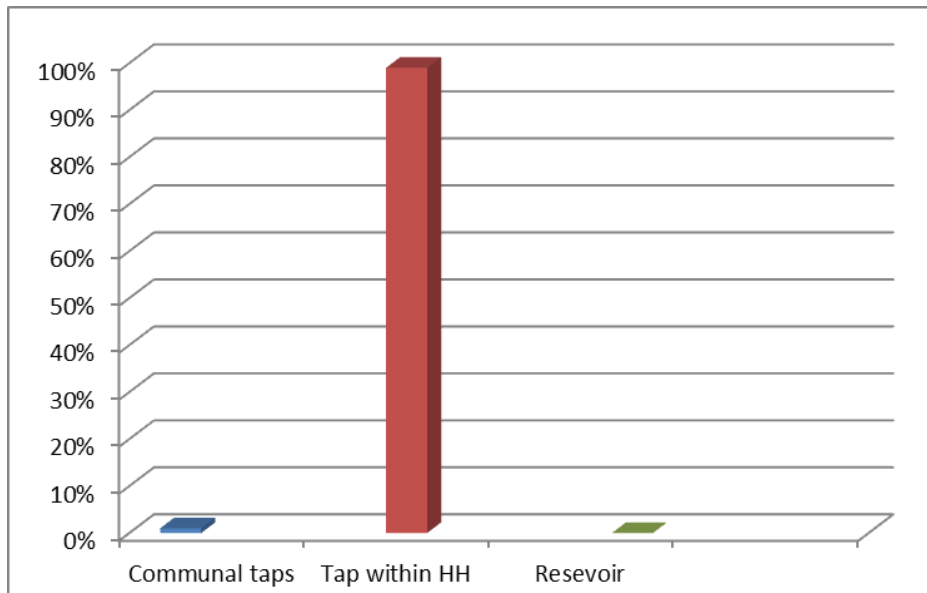


Figure 15: Percentage of the most utilised water sources in the Phatheni district

Table 6 above shows the participant’s responses with respect to water connection in a sizeable portion of Phatheni. A substantial amount of participants that partook in the research conducted, stated the fact that a majority of the household did have reticulated piped water. This data and evidence emerged from the focus group discussions, semi-structured interviews and was seen through to the transect drive with local residents. Through semi-structured interviewing a participant was quoted as saying “many of the households do have piped water from this bottom part of Phatheni, however some of the areas in the upper region do not have water such as Msanga, Nine nine and Shiyabazali” (Respondent, 12/11/2015). Statistically, 90% of the respondents affirmed that a sizeable amount of households did have running tap water, 7% were not sure and 1% said no. Despite this promising data, the community members still expressed discontentment with the counsellor with respect to poor communication between them regarding service delivery and employment with such projects. Figure 6 and Figure 10 are testament to the idea that some projects are not well implemented as there is an element of mistrust and lack of transparency present in the process. People are angry because they feel their constitutional rights are being violated with regards to basic water as their needs are not met. Another important point to note here that emerged, is that it

is one thing to have pipes in place and another to have actual clean safe uncompromised quality drinking water running. This matter was amongst the other concerns that emanated from the discussions.

Table 7: Most utilised water sources in the Phatheni area

Percentage of the most utilised water sources in the Phatheni area		
Communal Taps	Taps located on HH	Reservoir
5%	95%	0%

Table 7 above presents the source of water in the Phatheni area. These figures are aligned with the responses that were obtained from the semi-structured interviews and focus group discussions that were conducted in the area, as shown in Table 3, Section 3. The main reason that accounted for this is that the UMDM's initial core objective was to institute an integrated project in the area that appropriately addresses each household's water needs in the area. This came after the realisation that unlike some of the previous water projects of neighbouring rural areas such as Smozomeni, which resulted in communal pull-up nozzle taps which did not exactly address each household's water needs, given the vast spatial orientation of households and uneven topography which posed a challenge for collecting water for households living farthest from the source point. As highlighted earlier, there were three areas that did not have the water system fully implemented as shown in Figure 6 of Section 3, and these were Msanga, Nine Nine and Shiyabazali. However, these areas only contributed a fraction of Phatheni. The main cited source of dissatisfaction amongst the residents of Phatheni was the manner in which the project was being instituted. The main concerns that arose were typically around employment during the course of project implementation, the quality and flow of water and the general facilitation and governance by councillors throughout the process of implementation. The reason why the communal taps accounted for 5% in Phatheni is because they were bordering the neighbouring rural area of Smozomeni and as a result this periphery, Phatheni was sharing the same water source points, though this is not common characteristic of Phatheni.

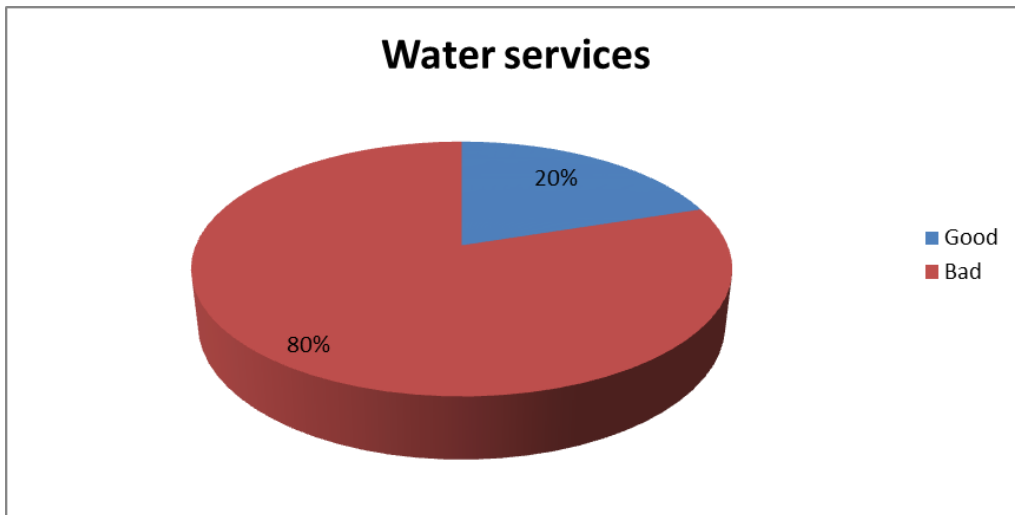


Figure 16: Responses of participants with regard to the state of water service within Phatheni

Figure 16 is a reflection of the varying views with respect to the quality of water services the community receives in the area. A sizeable 80% of the participants affirmed that water service delivery was of poor quality; however 20% were in opposition to this view. The main reason behind this opposing view was due to the fact that the water was in various occasions unavailable though the infrastructure was there; furthermore, the interviewed group stated that when it eventually comes out it shoots muddy grit. Although this was a temporary condition, it still led to negative opinions regarding its overall perceived substandard quality. The participants once again asserted that the ward councillor is to blame as the neighbouring township does experience this at all

According to De Visser (2002) “uncertainty, continuous adjustments and temporary arrangements with regard to service delivery responsibilities can only but complicate effective and sustainable service delivery. Each time adjustments are made; municipalities face administrative and financial consequences...”

The distance that the Richmond municipality has created with the community of Phatheni has created a high level of distrust, discontent and resentment. The relationship amongst UMDM, RLM and the community of Phatheni at this point in time is problematic. This current state of affairs, seen as an intense conflict that has broken out these three parties, is attributed to a lack of transparency where the financial affairs aimed at supporting the completion of this endeavour are shrouded in secrecy.

6.4 Financial resources for fair distribution of water resources

Countless initiatives alike through the globe require some form of financial assistance as a means of fulfilling their goals. Whether the funds are from civil society, private donors or from government funding is an integral part of ensuring that the masses needs are realised. As a means of meeting the needs of people on the ground, funding should effectively be decentralised from national departments, filtered through to district municipalities and finally local municipalities. The current key challenge though at this stage is that these municipalities have to contend with the issue of very limited funding. The UMgungundlovu Municipal District (UMDM) and its sub-regional municipality of Richmond operate under tight budget constraints. These specific funds from treasury have in many cases, been projected to meet project milestones and ultimately accomplish project or program completion in a timely fashion, which in many cases they do not. However, this does not serve to insinuate that Treasury's financial allocation projections are misguided. This position talks to the municipalities capacities to optimise utility of its physical and financial resources, which requires prompt introspection if matters are to be rectified as a means to avoid fruitless expenditure. Barbhan and Mookherjee (2006) assert that given this lack of funding, municipalities are constantly grappling with equitable service delivery goals for the respective communities that they serve. As a result certain of the services received by some communities are as a result of other services that have compromised or entirely scarified on account of budget constraints.

6.5 Capacity enhancement

Capacity enhancement and skills development is another area of government's undivided attention. This respective area is very important and can be instrumental in improving organisational performance or service delivery if afforded substantial attention. The UMDM contains the economically active and high performance city of Pietermaritzburg. Accordingly, this respective district municipality inherent in its structure contains capacitated staff members who are highly trained and skilled. On the other hand the RLM is located in a rural setting, though an area rich in cultural heritage and potential, it simply does not boast any higher learning institutions nor is it an attraction zone for business. Further compounding this problem is the fact that this municipality does not offer attractive remunerative packages for stimulating external interest for skilled management and professionals. Furthermore, it is located in a war stricken zone with recurring political conflict. Thus financial management capacity and capability is compromised, and this condition typically ushers in detrimental consequences, which typically hinder capacity enhancement. In defence of this idea,

Plummer & Slaymaker (2007) argues that “good governance requires appropriate human and financial resources for activity related to water supply, effective institutions performing delineated roles, improved information and management systems and political will backed by the necessary rules for service delivery”.

6.6 Consequences of poor water governance

Unquestionably one of the most pertinent areas that talks to the nature of politics and its impact in the hydrosocial architecture of this thesis is the impacts and consequences that result, when the model of good water governance and its elements are compromised. Referring once more to Figure 2 in Chapter 2, the five crucial elements have been compromised in this respective setting. These are: a lack of sound policies, a lack of political will, a lack of respect to the needs and dignities of the respective client community, a lack of stakeholder participation and a questionable regulatory framework. In earlier chapters it was cited that the manner in which casual dialogue was translated into policy was questionable. This insightful knowledge emerged from two prominent participants in the research sample, these being a community representative who was intimately involved with both municipalities and the implementing agent of the water project in Phatheni and also the Regional Manager of water from the municipal district. These two individuals both attested that from the interviews that numerous policies were developed and implemented without consultation with the respective stakeholders and mostly importantly the client community. The lack of political will and compromise hampered timely completion of the project and to this day has led to even higher levels of political unrest.

Richmond inherently has a profound history of violence; as a result it comes as no surprise that a model of good water governance can barely survive in this setting. The respect of the community's needs and dignities is clearly violated, as cited earlier. An overwhelming 25 out of 26 of the research participants that participated in the study, where the locals resolutely expressed complete dissatisfaction with the treatment received from their respective ward councillor, further exclaimed that he focuses on his own political interests and those of the communities that support him. Resulting from this is the lack of stakeholder participation. This is further compounded by a break in communication amongst the client and its respective stakeholders. This then put an interrogatory question mark on the “existent” legal and regulatory framework. “is there one in place that guarantees equity and fairness?” if so “why is it not being operationalized?”.

The above mentioned compromised elements laid a foundation of what was to follow, and what was to follow was a series of drastic and unfortunate consequences. Firstly, a foundation of rent seeking behaviour was laid and a platform of private merchants to engage in profit trading for this commodity was likewise stimulated especially for clean and safe drinking water. These activities go against the very fundamentals of developing the poor, and what one ultimately achieves is a state whereby the rich get exponentially rich, as a result of increased sales of this commodity to the impoverished leaving them at an even worse state (Miranda *et al*, 2011). Given the current global financial crisis, local government is not securely positioned to roll out free basic water services to the South African rural communities at large freely. Stanton (2009) argues that the South African economy has felt a pinch and the cost process itself is too expensive to guarantee everyone FBW in the long run. With reference to Figure 8, in Chapter 4 of the transect diagram, the sketch clearly depicts that there are some households that do not have fully operational water systems (taps). Numerous reasons have been cited for this unfortunate status quo. The first is attributed to the project not being fully complete in terms of piping, the second was attributed to a malfunctioning water system in its entirety, as it was constantly in a state of disrepair and the third accounts for the already fitted households which is attributed to government's lack in financial capacity to support these households with this respective service.

Consequently, some of the community members are forced to resort to the old fashioned ways of collecting water. The old prominent water collection source points were a dilapidated reservoir that had been decommissioned with the implementation of this initiative and certain boreholes. An important point to bear in mind is that water at these respective source points is not treated and poses a risk on health on the lives of many. This similarly applies to those newly erected households that had not received attention post project implementation; they too have to collect water from rivers. Casual dialogue and focus group discussions helped to unearth some valuable information regarding the receiving of water on a daily basis. It emerged that water was not always received on a daily basis and at times, its quality was compromised. Constitutionally speaking, the right of this respective community's to clean, safe and sufficient water was violated. Sadly the status quo remains unchanged. Furthermore government is protected by the constitution as there is clear clause that stipulates that "if the government has the financial means and resources to do so..." Similarly there is a clause in the very same legislative document that cites that every South African has the right to "basic water supply must be sufficient, safe, accessible and affordable". On account of the first clause highlighted, which serves as a loop hole for the state not to account for its negligence or disingenuous transactions with the respective community in this arena, many impoverished

communities residing in rural areas simply cannot enjoy these constitutional and democratic rights. They consequently remain vulnerable and disempowered as an external locus of control is maintained upon them by ruling elite. Sound policies and a robust legal and regulatory framework needs to developed and entrenched, along with shrewd national and local strategies in the hydrosocial cycle architecture to cover the water needs of the masses. The adoption and application of this approach will to a great degree guarantee that the rights of the rural poor are realised and not merely overlooked, simply because they are poor.

In conclusion, Phatheni's water governance framework was under dual governance. The two municipal entities that played a role were the UMgungundlovu municipality (UMDM) and the Richmond municipality (RLM). Surfacing from both sides of the municipalities was the fact that the projects being instituted ultimately had to contribute to a water supply service that was in tune with the needs of Phatheni's residents. The goal of these municipal institutions was to provide safe, accessible and sufficient water sources to their citizens. Though reasons such a topography and households spatial orientation was cited as the reason for the lack of water service delivery, a sizeable portion of its citizens who participated in the research affirmed that the nature of politics in Phatheni impeded water service delivery. This chapter also revealed that there was a need for capacity enhancement amongst the actors with respect to training as a means of improving on the knowledge of water service delivery systems for the municipal officials and actors involved. The incomplete reservoir and under utilised pipes shown in the pictures stand testament to the fact that there is dire need to have in-depth involvement of the actual community itself from inception to project finish in the form the traditional authority and its indunas. This follows the fact that a sizeable portion of its citizens insisted that the inkosi has the community's interest at heart seeing that she is from Phatheni as opposed to the ward councillor.

CHAPTER 7 CONCLUSION

7.1 Introduction

The research project utilised several methods with respect to the data collection process. These were semi-structured interviews, focus group discussions, informal dialogue, telephonic communication and email and a transect walk/drive. A focus group discussion for the community was held at one of the households, with the aid of one of the local participants who was intimately involved with implementing agent, community and municipalities. Telephonic communication and email was used to converse with the Regional Water Manager from UMDM as this municipality was located in Pietermaritzburg.

The data collected revealed the complexities of water governance in Phatheni and enabled the development of the water governance configuration of the area, as shown in Figure 17 below.

Relationship between the different stakeholders and actors in the water configuration of Phatheni.

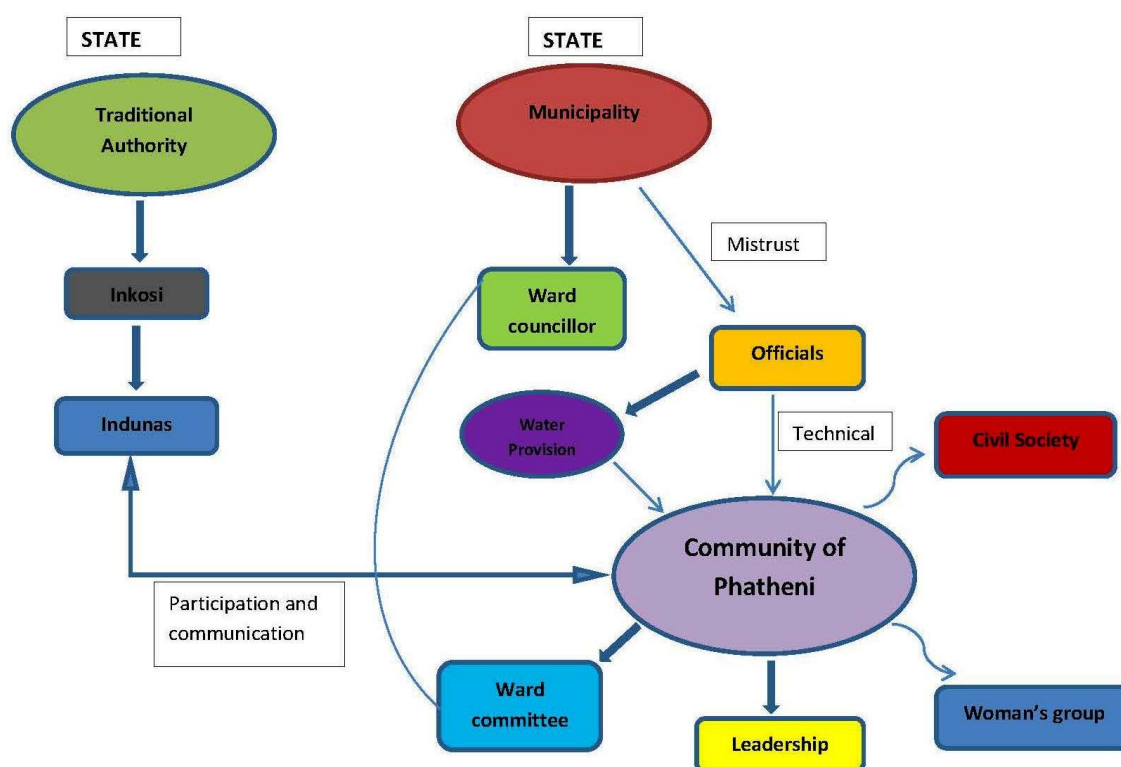


Figure 17: Challenges experienced in the water governance configuration in Phatheni.

Source: Produced by Bayanda Mbanjwa

Figure 17 sums up the relationships, contestations and what essentially transpired in the implementation of the water project in Phatheni. When analysing the diagram and understanding what lessons can be drawn from this hydrosocial cycle configuration, it is imperative to once again reflect on the following elements; the actors, the main discourses in this context, the material realities, politics and ultimately the governance. To begin with, the traditional authority had a pivotal role in facilitating the prompt implementation of the project, as an authority entity. From a political standpoint it had considerable influence over the municipalities, seeing as it had an intimate working relationship with the communities and was seen as an authority figure. The community itself was heavily reliant on this entity; the inkosi and the izinduna were from Phatheni itself which implied that it had the community's best interest at heart. In light of the fact that there was an element of mistrust amongst the municipal officials and the community members meant that there was little communication.

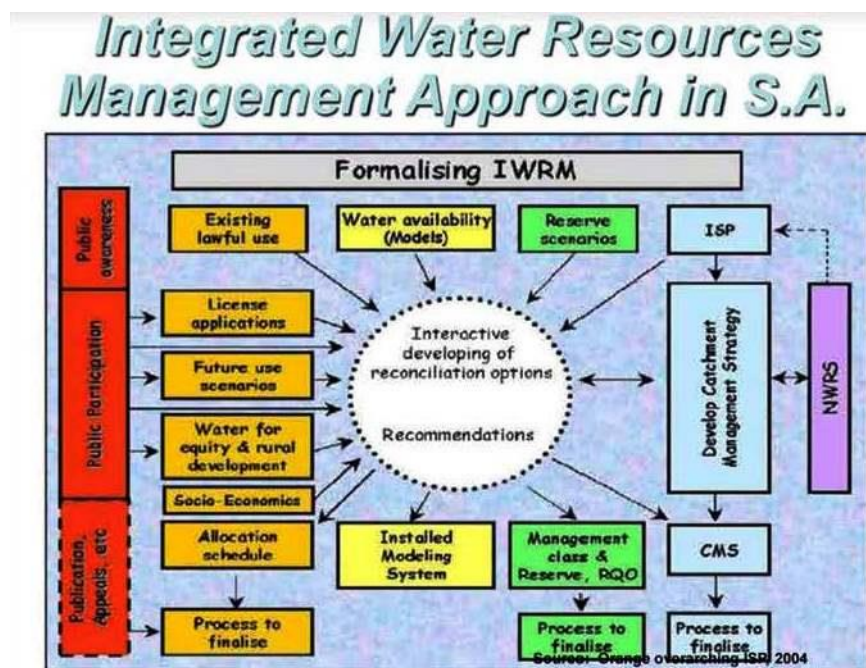


Figure 18. Proposed Integrated Management Approach for Phatheni.

Source: State of water in South Africa document 2015

Figure 18 presents all the crucial components and interactive processes inherent in an optimally operational water framework at national level that can also be applied in the area of Phatheni. There are certain elements that can be drawn from this to best explain how well Phatheni is doing with regards to the Integrated Water Resources Management Approach. These important elements include public awareness, the elements of appeal, socio-economic

relations and water for rural development and equity. The full practical application of these elements in Phatheni's scenario will ensure that conflict is thoroughly minimised as these foster a culture of transparency, whilst at the same time reducing the the usage of political manipulation in ways that the community is not completely happy with. When analysing Figure 18, it becomes clear to see that there are obvious parallels that stand out, and these include include rural development, which is at the core coupled with water equity which is drawn from public participation. Figure 17 talks to the idea that there is lack of communication mainly between the community members and the municipality including its ward councillor. Ultimately this model serves as an instrument that should fundamentally be utilised at all levels in government in the water domain to promptly address these fluid and complex socio-political crises firmly embedded in water. The various intersecting challenges, such as lack water availability in catchments, public participation, politics and funding have all been highlighted as the main setbacks in the water governance framework. The above model is presented in essence as an approach that talks to the practical manner in which these setbacks should be addressed.

The IWRM approach diagram as reflected in Figure 18 also presents all the critical spheres within government's scope that need to be present as a means of adequately addressing the challenge of water service delivery in government. This diagram also shows that Phatheni lacked an installed modelling system which led to ineffective water delivery. This diagram also demonstrates the fact that the public awareness component is important in achieving the purported objectives of the stakeholders in this setting. Given that some of the projects have not been thoroughly completed, a sensible conclusion that many of the stakeholders have arrived upon is that of adopting an interactive reconciliation approach. This respective collaborative and reconciliation approach from the various actors, could safeguard many of the goals and objectives of water service delivery in Phatheni, but could that the roll out of the respective projects or programs that were being implemented is achieved in a timely fashion, though this has not happened in all cases. The prompt implementation and completion of the respective projects in some parts of Richmond has to large extent ensured that fruitless and excessive expenditure has been avoided, and this to a large degree translated into better quality outcomes that effectively that spoke to the real needs of the disadvantaged.

In conclusion, given all the conflict that has amassed in Phatheni's hydrosocial cycle's configuration, it becomes clear that there is a dire need for more reflexive approaches from the municipality's side as well. There needs to be constant and incremental implementation by using polices, knowledge, skills, participation, and risk sharing in the public sector at a

regional local municipal level. The idea behind the risk sharing factor is to bring in collective effort. This comes with the understanding that no stakeholder should be solely responsible for effecting change, this change should come in essence as a result of intersectoral collaboration, with correlating goals and objectives. There needs to an intentional focus on development which should be sustainable which will also address the service delivery backlog, enhancing service provision for the poor. Consultation and communication are factors in addressing the political friction amongst stakeholders in the hydrosocial cycle configuration of Phatheni. There needs to be demonstrable cohesion and direction in goals and objectives amongst the stakeholders. If the conflict amongst stakeholders is minimised, factors regarding social, environmental and political degradation can be reduced as well, which in turn would contribute positively to Phatheni's social, economic and political fabric. If these highlighted exemplary commendations are followed, there will definitely be improvements in Phatheni's development. Moreover, municipal officials need to be trained and capacitated with the necessary skills as a means of improving knowledge on water related issues.

7.2 Recommendations

As means of achieving an optimally functional state of water governance in Phatheni, the stakeholders in this area have to engage in multilateral decision-making processes. This complex process of merging water, technology and politics has to be approached with the end in mind. The idea of learning from successful and synchronistic patterns from other rural projects and programs should not be overlooked at any point in time. Phatheni under Richmond's leadership has seen successful implementation of projects which have brought meaningful change in its people's lives. However, lately with the implementation of these water projects and having the element of politics dominating this arena, progress has been hampered to a great extent. This interface between technology, the environment and politics additionally calls for a consciousness of solidarity and transparency. The idea behind the mechanics of appropriately implementing projects has always been there and it seems that it is actual communication factor itself that is lacking coupled by the polarized agendas that the actors have in this hydrosocial cycle configuration of Phatheni. Though some of the emerging discourses in this configuration talk to people's metaphysical needs, such as people's spiritual and cultural needs, many of the discourses surfacing from Phatheni's hydrosocial cycle framework relate to people's physical water needs, and hence should be addressed accordingly. Once again with respect to Figure 17 and Figure 18, the important elements that need focusing on are the building of trust amongst the stakeholders. In particular this should

be with respect to the client community, the municipal officials, the forming of community and woman's group, strengthening of institutional capacities and improving the relationship between traditional authority and the UMDM is also a critical aspect that can contribute in the establishment of trust and restoring cohesion in Phatheni hydrosocial cycle architecture and its actors.

From national through to local government, consultation with all respective parties is key, and as a means of achieving optimally evolved model that primarily talks to impoverished needs in their specific context is important, it essential to understand the underlying needs. With the understanding that hydrosocial cycle frameworks are context specific; accordingly the governance approaches should include individuals and civil society organisations and be tailor made to communicate to address the community's unique needs. This talks to the idea of tailor-making policies as well, as there is no "perfect" model that can address all the distinctive challenges that many hydrosocial cycle frameworks bear. This stance will ensure that the water governance systems talks to the needs of the rural poor on the ground and does not deviate from addressing the existential problems that they encounter on a daily basis. With respect to fund allocation to sponsor and sustain the existence of such initiatives, government has entrenched monitoring and evaluation systems within this water domain's framework. This system would in essence play the pivotal function of acting as a steering mechanism whenever such initiatives seem to be going out of line, coupled by the follow-up role, as a means of evaluating the respective' s initiatives failure or success, before further conflict grows.

With regard to Figure 18 the recommendations made likewise need to support the notion of participation by accentuating and engraving the idea of participatory approaches in decision-making processes in all municipal initiatives with respect to the local communities they are serving. Tragically, some of the households in this area of Phatheni remain plagued by the problem of still having to go and fetch water from the source points that are unsafe where they share drinking water with livestock that are miles away. More transparency is an integral issue that needs to be present at all stages with respect to program implementation and should not be taken lightly. Much of the conflict that surfaces in Phatheni's hydrosocial cycle architecture amongst the actors has appeared to be as a result of the lack of transparency. Accountability is compromised, as is communication emanating from the politics of the area. As this has been a common occurrence for an on-going period of time, another important recommendation, is to examine other water projects and water governance models and examples from rural areas that have proved to be success stories as shown in the IWRM

approaches in South Africa. These strategies commonly talk to the adoption of sound policies and measures which would serve as means of ensuring that municipalities are better equipped to provide the desired services and eliminate the problems commonly found in the hydrosocial cycle architectures in rural areas that actors are normally found to be grappling with

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APPENDICES

1. Checklist guide of focus group discussions

1.1 Interview meeting with RLM

**INTERVIEW SCHEDULE FOR CONDUCTED FOCUS GROUP
DISCUSSIONS**

(Municipality)

Date: _____ **Name of interviewer:** _____

Name of Local Municipality: _____

Number of participants in the group _____

M		F	
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1. Community water services within Municipality

Please take note not to provide the options to participants, only mark off what they mention.

1.1 What is the role of the RLM with regard to the water supply of Phatheni?

Q Is the RLM is responsible for water provision services to the Phatheni district

Q Is the RLM the planning and implementing agent of water projects in the Phatheni district

Other (discuss)

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.....

1.2 Outline the role the local leaders with regards to the water supply in the Phatheni area

Discuss

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.....
1.3 Are there any existing problems with this governance approach with regards to the water supply

Discuss

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.....

2. Costs and implications on human and financial resources within the RLM

2.1 Provide a number of employees that are employed in water service unit, also outline challenges that are encountered.

Discuss

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.....
.....

2.2 Please outline the sources financial funding with regard to the community water supply?

Q State funding Q external sources Q other

Discuss.....

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.....

2.3. Are these sources sufficient in covering the cost of providing these services?

Q Yes Q No, if not elaborate

Discuss.....

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.....

2.4 Outline the implications if any for O&M with regard to the water supply in the community?

Discuss

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3. Water supply problems in the community

3.1 How many rural districts or communities is the Municipality rendering its services to?

(Obtain a list of all the communities served by the municipality)

Discuss

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3.2 Is the municipality able to sufficiently cater for the community's water needs as required?

Q Yes Q No if not, elaborate

Discuss

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3.3 Outline any challenges that communities face with regard to water supply?

Discuss

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3.4 Outline the approaches that the municipality employs in addressing those specific challenges?

Discuss

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3.5 Is the municipality providing reticulated water to communities?

Q yes Q No, if not why not, elaborate

Discuss

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3.6 Outline the main water resources in and around Phatheni.

Q Dams Q Springs Q Groundwater/Rivers Q Reservoirs/wells or fountains

Other (Discuss)

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3.7 Are these sources sufficient?

Q Yes Q No (if not elaborate)

Discuss

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3.8 What is main access mode of water (Is it through infrastructural sources installed by the municipality)

Q Communal taps Q Reservoirs Q in-house connections Q Yard taps Q or Other

Discuss

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4. Conclusion/Other information

4.1 Please confirm the state water of service provision in the Phatheni district?

Discuss

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.....

INTERVIEW SCHEDULE FOR CONDUCTED FOCUS GROUP DISCUSSIONS

(Community)

Date: 02/02/2016 Name of interviewer: _____

Name of Local Municipality: _____

Number of participants in the group _____

M		F	
----------	--	----------	--

1. Community water services within Municipality

Please take note not to provide the options to participants, only mark off what they mention.

1.1 What is the role of the RLM with regard to the water supply of Phatheni?

Q Is the RLM is responsible for water provision services to the Phatheni district

Q Is the RLM the planning and implementing agent of water projects in the Phatheni district

Other (discuss)

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1.2 Outline the role the local leaders with regards to the water supply in the Phatheni area

Discuss.....

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.....

1.3 Are there any existing problems with this governance approach with regards to the water supply?

Discuss

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2. Costs and implications on human and financial resources within the RLM

2.1 Provide a number of employees that are employed in water service unit, also outline challenges that are encountered.

Discuss

.....
.....
.....

2.2 Please outline the sources financial funding with regard to the community water supply?

Q State funding Q external sources Q other

Discuss.....

.....
.....

2.3. Are these sources sufficient in covering the cost of providing these services?

Q Yes Q No, if not elaborate

Discuss.....

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2.4 Outline the implications if any for O&M with regard to the water supply in the community?

Discuss

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.....

3. Water supply problems in the community

3.1 How many rural districts or communities is the Municipality rendering its services to?

(Obtain a list of all the communities served by the municipality)

Discuss

.....
.....

3.2 Is the municipality able to sufficiently cater for the community’s water needs as required?

Q Yes Q No if not, elaborate

Discuss

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3.3 Outline any challenges that communities face with regard to water supply?

Discuss

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3.4 Outline the approaches that the municipality employs in addressing those specific challenges?

Discuss

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.....

3.5 Is the municipality providing reticulated water to communities?

Q yes Q No, if not why not, elaborate

Discuss

.....
.....

3.6 Outline the main water resources in and around Phatheni.

Q Dams Q Springs Q Groundwater/Rivers Q wells or fountains

.....
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.....

5. Outline the main sources are used for drinking? Can you please rate the safety of water from these sources ?

Q Yes Q No, if no why no

Discuss.....
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6. Outline the main infrastructural structures erected is in the community as source points?

Q Hand pumps Q Yard Taps Q Local reservoirs Q Boreholes Q Communal taps Q Other

Discuss
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7. Are these sources points fully functional, if not, why?

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8. Outline the state of water services in the Phatheni area.

Q Good Q Poor Q Other (describe)

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9. Outline the any recommendations or suggestions from community with regard to the highlighted issues.

Discuss.....
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10. Any other comments

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Participant (List)	Position/Structure	Contact number

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1. Physical Observations from the transect walk/drive of water infrastructure in the Phatheni district

**COMMUNITY WATER SOURCES/ INFRASTRUCTURE OBSERVATION FORM
CHECKLIST**

Date: _____ **Name of interviewer:** _____

Name of Local Municipality and rural district: _____

1. Outlining the main water sources and infrastructure in the rural area

1.1 Is the infrastructure fully operational?

Noting the physical conditions of the infrastructure (Housing), is it complying with the RDP standards (located within 200m etc.). Q Is the water running and is it safe for drinking.

Make a note below.

Household connection (if any)

Notes:

.....

Notes: Yard Taps

Notes:

Communal taps

Water tanks or reservoirs (what is their storage capacity?)

Springs (are they being used presently)

Boreholes (the type of pumping mechanism used)

Rivers

Are there any other sources? elaborate

Conclusion

2) Informal interview guide with the villages

INFORMAL INTERVIEW CHECKLIST (COMMUNITY INTERVIEWS)

Date: _____ Name of interviewer: _____

Name of Local Municipality or community: _____

M		F	
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Rural community details

Name of the rural community	
Tribal Authority/ward councillor (Contact person and is there protocol to be adhered to?)	
Settlement type in the community e.g. % rural, urban, formal or informal etc.	
Estimated Population (obtained from the RLM)	
Estimated number of Households in community	

1. Outline any water service institutions within Phatheni district

Please take note not to provide the options to the interviewees, only mark off what they mention.

1.1 To whom do the community members report the water problems to?

Q Induna Q ward councilor Q other

Discuss.....

1.2 Outline the existing challenges with this type of arrangement?

Q Yes (If yes, identify and describe) Q No

Discuss

2. Water sources and infrastructure

2.1 Do the households in the community receive water on a daily basis?

Q Yes Q No (If not, explain)

Discuss

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2.2 Outline the modes through which the community accesses water on a daily basis

Q Standpipes/communal taps Q In-house connection Q Boreholes that are equipped with hand pumps Q Spring/Well Q Rivers Q Yard taps Q other

Discuss

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.....

2.2 Outline challenges with respect to the above source points or infrastructure. Are there any?

Q Yes Q No

2.3. Outline the key challenges with respect to water access in the community

Q Damaged taps/hand pumps Q insufficient water Q Water safety

Discuss.....

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.....

2.4 Are there any problems being experienced with respect to water safety in households within the community?

Q Yes Q No Q don't know

Discuss.....

2.5 From your experiences, explain the state of water services in this area Phatheni.

Q Good Q Very good Q Poor Q Very poor

Discuss.....

3. Conclusion/Other information

3.1 At this point in time, outline state of water services in Phatheni?

Discuss.....

Persons interviewed (List)	Role in the community	Contact details
Bhekukwenza Dlamini	Chairperson	0825999995
Mrs Jama	-	-
Mrs Zulu	-	-
Mr Mbanjwa	-	-
Mr Ngubane	-	-
Thandeka Nsindane	-	-
Balungile Dlamini	-	-

Mr Zaca	-	-
Phako Nxele	-	-
Siwe Nsindane	-	-
Thenjwa Nxele	-	-

3) Desktop research findings

Selection of the research district

This segment of the paper presents the findings through a rigorous desktop research which was conducted prior to the politics of water research in the Phatheni region. There were effectively 2 options within the Richmond local municipality where the research could be conducted; these were namely, the Indaleni and Phatheni districts. The appropriately selected area in this case was Phatheni, which was chosen on the grounds that it had presence of a traditional leadership structure, it was district with vast population and lastly it displayed characteristics of a typical rural area in need of water services. The findings the emerged through the research process are as follows;

1. Richmond district

Background

	COMMUNITY INPUTS	PROGRAMME OF ACTION	RESPONSIBLE OFFICIAL	Due By Comment
WATER AND SANITATION	Yard water connections at Smozomeni and Slahla	Was communicated to uMDM. Project has already commenced – continuous liaising with relevant persons to continue	S M Technical	

Source: Richmond Municipality IDP 2012/2013 to 2016/2017

Appendix 1. Schedule for questions

1) Summary of Focus group discussions (municipalities)

Subject of discussion		Richmond LM outcome
<i>The role of water service provision by the RLM</i>		The Richmond local Municipality (RLM) plays a marginal role in water service delivery. It is the UMDM that plays a pivotal role in water supply and regulation in this respective rural district. The RLM only delivers water in times where there is no running tap water, through the delivery of water by water tanks. The additional role of UMDM is reticulation, operation & management.
<i>Municipal resources in with regard to water services (Financial & Human resources)</i>	<i>Finance resources</i>	There is currently no government support funding. However, the Community Services Manager from the RLM, indicated that they are working on a service level agreement with provincial government they might offer support.
	<i>HRM resources</i>	Both Technical Manager and Regional water Manager from the RLM and UMDM respectively work hand-in-hand. However, it the Technical Manager from the RLM that typically oversees the water services issues in the Phatheni area.
<i>Outlining the role of local leadership in Phatheni with regard to water services</i>		On numerous occasions with the interviews and focus groups discussions conducted, it emerged that the local leadership had a pivotal role to play. Mrs Dlamini (inkosi), induna and ward councillors were found to be very much immersed in municipal affairs. Though it was voiced out that the community is disgruntled with dealings of the councillor with regards to governance, it emerged that this leadership triad did serve the community's needs.
<i>Management issues</i>		The monitoring of problems pertaining to operation and management are rarely conducted, and if conducted it's on an ad hoc basis by the UMDM. This is mainly attributed to lack of funding and the fact the the UMDM is located in the Pietermaritzburg region and has 7 other local municipalities to cater for on top of being short staffed with the appropriate personnel.
<i>Water services in Phatheni</i>		The RLM as highlighted earlier plays a nominal role, in the areas water supply. It is the UMDM (district) that effectively supplies

	water to this specific rural district of Richmond. The UMDM also goes on to serve 7 other local municipalities in its region.
<i>Availability of infrastructure and water resources to serve Phatheni</i>	Phatheni has numerous water sources, which include reservoirs, rivers and boreholes. This was ascertained through the transect walk/drive. It also had yard taps on HH and in-house tap connections
<i>Challenges with respect to infrastructure & resources</i>	Common problems with water that exist up till present include cases where the water simply does not run at all and the challenges the treatment plants face, as the water is sometimes muddy when it finally runs. As a result the RLM has deliver water with water tanks, whose quality questionable.
<i>Presence of alternative options if any</i>	The only alternatives are to resort to river and borehole water or rely on the water tanks, though this last option is costly; it has however worked in many cases worked for this poverty stricken community.
<i>Free basic water service provision</i>	Currently no household has been charged any fee with to water supply reticulation. The FBW provision still applies to all piped HH's and no charges will be applicable until the entire district of Phatheni is fully piped with water including the RDP houses and the newly erected HH's. From one of the interviews with an UMDM official it arose that a register will be used to map out indigent HH's who are unable to afford the service fees. Seeing as this is a predominantly impoverished region of Richmond, a consensus was reached, concluding that the entire community will be receiving this FBW service.
<i>Any probable means of improving the current situation (if any)</i>	The RLM has integrated the community of Phatheni into its IDP framework. At present, another water initiative is being undertaken in this respective district to further cover the number of outstanding households (HH's), whose water service demands haven't been met.

2) Focus groups discussion outcomes from the Phatheni district

Issues for discussion	Phatheni community (Richmond)
<i>Outline the role local leadership with respect to water services in Phatheni</i>	Assist in the sound regulation of the hydrosocial cycle in the area. Represents the shared people's water needs in this respective district.
<i>Water resources and sources</i>	In-yard tap connections, rivers & boreholes.
<i>Outline any infrastructural developments in Phatheni with regards to water</i>	Outlined were; in-yard tap connections, water pumps, reservoir & hand pumps.
<i>What are the challenges</i>	The challenges that were outlined included governance, the timely role out of the taps as well as shortages in construction material for the current and on-going projects.
<i>Are there any records of water-borne disease in Phatheni</i>	None were highlighted.
<i>Recommendations with connection to the existing water problem in Phatheni</i>	Change in local political leadership as there was lot of political discontent.