UNIVERSITY OF ZIMBABWE

FACULTY OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

LOCAL PARTICIPATION IN TRANSBOUNDARY WATER RESOURCES MANAGEMENT: THE CASE OF LIMPOPO BASIN, ZIMBABWE

By

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A thesis submitted in partial fulfilment of the requirements for the degree of Master of Science in Integrated Water Resources Management (IWRM)

JULY 2009

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DECLARATION

I, Joanna June Fatch, hereby declare that this thesis is a product of my own investigation except where acknowledged. To the best of my knowledge, this work has not been previously accepted for any degree and is currently not being submitted for an award of any other degree.

Signed…….. Date ……..

DEDICATION

To those who went too early but still inspire me especially my father- Stanley; and to those who have always been there, the silver lining beneath the cloud- aMa (Clara), I can never thank you enough. God bless you.

ACKNOWLEDGEMENTS

Firstly I would like to thank God for His guidance and countless blessings- thank you for giving me a second chance, thank you Lord for your kindness.

My sincere gratitude goes to my supervisors: Dr Emmanuel Manzungu, I never was the perfect student but thank you for your patience, for pushing me and for believing in me even when I was confused and lost course; and Mr Collin Mabiza, thank you for the guidance. This study would never have been complete without your input. To my sponsors WaterNet, the Department of Civil Engineering and the Challenge Programme (PN 17) - the institutions team in particular, thank you very much. I am indebted to the people especially in Shashe Subcatchment and the various respondents, friends and colleagues too numerous to mention, that took time to comment, share a thought, and offer a word of encouragement.

To Limpho and Vuyi- this course would never have been the same without you guys. Be blessed. Tshepo, thanks. Tione, here it is! To my friends and colleagues in IWRM 2008-2009 thank you guys for being there- this is it guys!

Finally to my siblings Mussa, Raissa, Sylvia, Victoria and niece Laura, thank you guys. You gave me a reason to go on even when I thought it was impossible. Thank you for dreaming for me. This one is for you.

ABSTRACT

IWRM-led water reforms in southern Africa have emphasised the creation of new institutions with little explanation regarding how the institutions can effectively engage with stakeholders at different levels, especially at the local level. This is despite the fact that the subsidiarity principle, which advocates for water management to be undertaken at the lowest appropriate level, which can be taken as the local level, is well recognised in water resources management. The main objective of the study was to investigate the applicability of the subsidiarity principle, especially the concept of 'local' participation in the Limpopo Basin at different (regional, basin, national and local) levels. The study investigated how the SADC regional frameworks provided for local participation by analysing participation clauses/provisions in the SADC Protocol on Shared Watercourses, the Regional Water Policy (RWP), the Regional Water Strategy (RWS), and the Regional Strategic Action Plans on Integrated Water Resources Development and Management (RSAP-IWRM). The appropriateness of basin agreements, as well national frameworks in relation to local participation in transboundary water resource management, was also examined. To investigate issues at the local level a sample of three wards in Shashe subcatchment of Mzingwane catchment in Zimbabwe was selected. Data was collected through key informants, focus group discussions and observations. As a framework which gives a guide on how shared watercourses can be managed in the region, the Protocol does not contain specific provisions for local participation. The study investigated the specifics of local participation in the Regional Policy and Strategy, the basin agreements, and national frameworks. While the RWP and RWS were found to contain some provisions for local participation the implementation details were lacking. Provisions for local participation at the basin level, as represented by the Technical Committee (LBPTC) were wanting. Provisions in the suggested basin institution (LIMCOM) were not realised because of non ratification of the agreement. Submissions of local people regarding how they can meaningfully participate in transboundary water resource management was based on practical realities: identification of stakeholder groups was according to water uses in the locality; stakeholder representation was based on the ward with the district level forming an intermediate level to the subcatchment and catchment level. There was a desire for direct participation at the basin level. The local model challenges the existing top-down approach to participation and shows how a bottom-up approach reflects the aspirations of the users.

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ABBREVIATIONS AND ACRONYMS

AGM	Annual General Meeting
AIDS	Acquired Immunodeficiency Syndrome
ARA	Regional Water Administrative Agency
AREX	Agricultural Research and Extension Services
CC	Catchment Council
CMA	Catchment Management Agency
DNA	National Directorate for Water
EU	European Union
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
ICM	Integrated Committee of Ministers
IWRM	Integrated Water Resources Management
LBPTC	Limpopo Basin Permanent Technical Committee
LIMCOM	Limpopo Basin Commission
RDC	Rural Development Council
RSAP-IWRM	Regional Strategic Action Plan on Integrated Water Resources Management
RWP	Regional Water Policy
RWS	Regional Water Strategy
SADC	Southern Africa Development Community
SCC	Subcatchment Council
SNC	SADC National Committee
SWCI	Shared Watercourse Institution
UN	United Nations
USAID	United States Agency for International Development
ZINWA	Zimbabwe National Water Authority

CHAPTER ONE: INTRODUCTION

1.1 Background

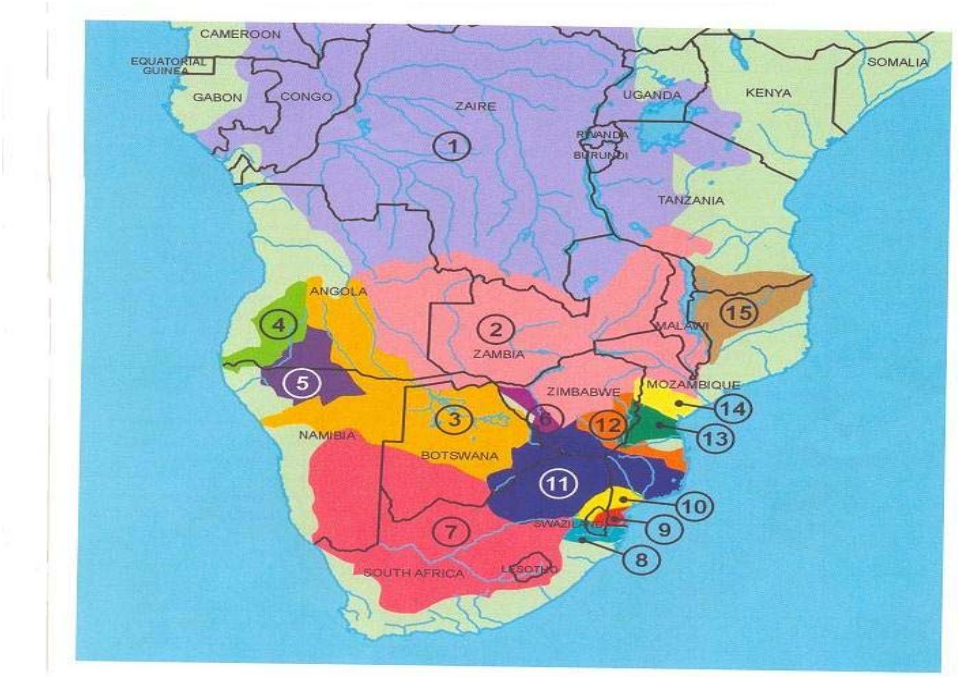
1.1.1 SADC regional developments

Out of the 63 international river basins in Africa, 15 are found in southern Africa. Between them they represent by volume, 7 percent of Africa's total freshwater resources, and 70 percent of the region's water resources. This figure excludes the Congo basin which contributes 30 percent of the continent's runoff (FAO, 2003). The water resources are characterised by spatial and temporal variability and are unevenly developed, both of which have implications for management of the resource. Generally, the north is water rich while water scarcity pervades the south, which is a function of climatic factors. The climate ranges from subtropical humid to arid with variable rainfall that ranges from 1000 mm to 1500 mm per annum in parts of the Democratic Republic of Congo and a small part of Mozambique. In the south the climate is semi-arid to arid and covers parts of Botswana, Namibia and South Africa where annual precipitation is less than 250 mm. High potential evaporation in these semi-arid and arid areas compromises the effectiveness of rainfall, which is not helped by a low runoff coefficient of 9 percent (Chenje and Johnson, 1996; Heyns, 1998; FAO, 2003). The majority of the 15 shared basins which include the Buzi, Cunene, Cuvelai, Incomati, Limpopo, Maputo, Nile, Okavango, Orange, Pungwe, Ruvuma, Save, Umbeluzi, Congo and Zambezi (see Figure 1.1), are shared by at least three or more countries (see Table 1.1).

Table 1.1: Shared river basins in southern Africa

River basin	Basin Area (Km^2)	River Length (Km)	Mean annual runoff (Mm^3) at river mouth	Number of states	Basin states
Buzi	31000	250	2500	2	Zimbabwe, Mozambique
Cunene	106500	1050	5500	2	Angola, Namibia
Cuvelai	100000	430	Ephemeral	2	Angola, Namibia
Incomati	50000	480	3500	3	South Africa, Swaziland, Mozambique
Limpopo	415000	1750	5500	4	Botswana, South Africa, Zimbabwe, Mozambique
Maputo	32000	380	2500	3	South Africa, Swaziland, Mozambique
Nile	2800000	6700	86000	10	Tanzania, Burundi, Rwanda, Kenya, Uganda, Democratic Republic of Congo, Eritrea, Ethiopia, Sudan, Egypt
Okavango	570000	1100	11000	4	Angola, Namibia, Zimbabwe, Botswana
Orange	850000	2300	11500	4	Lesotho, South Africa, Botswana, Namibia
Pungwe	32500	300	3000	2	Zimbabwe, Mozambique
Ruvuma	155500	800	15000	3	Tanzania, Malawi, Mozambique
Save	92500	740	7000	2	Zimbabwe, Mozambique
Umbeluzi	5500	200	600	2	Swaziland, Mozambique
Congo	3800000	4700	1260000	9	Burundi, Rwanda, Central African Republic, Tanzania, Cameroon, Congo, Democratic Republic of Congo, Zambia, Angola
Zambezi	1400000	2650	94000	8	Angola, Namibia, Botswana, Zimbabwe, Zambia, Malawi, Tanzania, Mozambique

(Source: SADC, 2005)



Key:

1	Congo Basin	2	Zambezi Basin (including Lake Kariba, Cahora Bassa Dam)
3	Okovango Basin	4	Cunene Basin
5	Cuveli Basin	6	Nata Basin
7	Orange-Senqu Basin	8	Maputo-Usutu-Pongola Basin
9	Umbeluzi Basin	10	Incomati Basin
11	Limpopo Basin	12	Save/Sabi Basin
13	Buzi Basin	14	Pungwe Basin
15	Ruvuma Basin		

Figure 1.1. Southern Africa Shared River Basins (Source: SADC 2005)

These shared river basins provide an opportunity for cooperation among states, which can contribute to the broader Southern Africa Development Community (SADC) objective of regional integration (SADC, 2005). At the same time, this can constitute grounds for possible conflict (GWP, 2000). SADC's noble goal of using the transboundary waters as platforms of cooperation (see SADC, 2000) faces a number of challenges that relate to differences between the riparian countries in terms of the policy and legal environment, and the institutional arrangements. While these have been influenced by Integrated Water Resources Management (IWRM), which SADC adopted as its overall philosophy, it is important to note that there are still significant country differences in terms of the degree to which IWRM has been allowed to permeate in the political, social and cultural fabric of various countries (see Manzungu, 2004), as well as serious development challenges which are reflected in high poverty and

underdevelopment levels (Swatuk, 2008). Almost 40 percent of the approximately 200 million SADC nationals live below the poverty line of US$1 a day, while 70 percent live below US$2 a day (SADC, 2005; Swatuk, 2008). With a vast majority of the population living in rural areas and practising subsistence agriculture, food insecurity is common, and is closely linked to poverty.

The recognition of this level of underdevelopment has led to calls for water to be viewed as a catalyst for development (SADC, 2005). One of the early stages towards this goal was a review of the policy and legal framework, which resulted in calls for IWRM-led reforms to address short-comings of the colonial legacy (Turton et al., 2005). Water management has been characterised by unequal access on racial and socio-economic grounds, sectoral approaches, supply-oriented development, and reliance on administrative boundaries as management units. There was little recognition of the interconnectedness and dependencies of hydrological systems at various scales. The other problem was that the state, on its own, assumed most responsibilities relating to water management with a few elites claiming whatever space was left. This situation resulted in a poor governance system characterised by domination of the state and a few elites (Jaspers, 2003; Manzungu, 2004). The governance situation was worse in transboundary basins where state parties in many cases either went at it alone or engaged in partial consultations.

The adoption of IWRM in the region in the late 1990s (SADC, 2005; SADC, 2006; Swatuk, 2008), which is defined as a process which promotes the coordinated development and management of water, land and related resources that seeks to manage both surface and groundwater focusing on both water quality and quantity in a comprehensive and holistic way so as to maximise the resultant economic and social benefits in an equitable manner without compromising the sustainability of vital ecosystems in the face of the above challenges (GWP, 2000), opened up new possibilities for managing water. It is open to imagination how the region would have been enthusiastic about IWRM if it had been aware of the concept's vagueness and non-usability (Biswas, 2004; Jonker 2007 cf. Van der Zaag, 2005). But still the inclusiveness of IWRM seemed to have cast a spell on countries, hence its adoption in Malawi, Mozambique, Namibia, South Africa, Tanzania and, Zimbabwe (Manzungu, 2004). It was also supported by nongovernmental organisations wanting to be relevant in the development debate. IWRM claims

to improve water governance chimed with the claim that the water crisis in the world is a crisis of governance (GWP, 2000).

National water management institutions have been shaped by global trends masquerading as regional and local in water management. In Zimbabwe, catchment and subcatchment councils were formed a year after the enactment of the IWRM-influenced Water Act in 1998. In South Africa, the National Water Act of 1998 resulted in the provision for the formation of Catchment Management Agencies (CMAs). In both instances, institutions were hydrologically based. But there have also been some variations. In Mozambique, water management institutions have been developed on administrative-hydrologic regions in the shape of Regional Water Administrative Agencies (ARAs). This means that several basins fall under an ARA (Manzungu, 2004; Tapela, 2006). To a large extent, the state has retained considerable influence in water management (Jaspers, 2001, Jaspers, 2003; Manzungu, 2004; Swatuk, 2005).

Water sector reform efforts were encouraged under the auspices of SADC where a number of regional water management instruments were developed. These include; the SADC Protocol on Shared Watercourses, the Regional Water Policy, the Regional Water Strategy, and the Regional Strategic Action Plan on Integrated Water Resource Development and Strategy (RSAP-IWRM). The SADC Protocol on Shared Watercourse Systems was signed in 1995 but was later revised to incorporate provisions from the 1997 UN Convention on the Law of Non-navigational Uses of International Watercourses, and to address concerns raised by member states (Kidd and Quinn, 2005). The Revised SADC Protocol on Shared Watercourse Systems (2000) is viewed as 'a vehicle for regional integration' (SADC, 2005: 1) and mirrors changes that had occurred in the region over time as well as the increased demands exerted on the water resources. Based on Article 22 of the SADC Treaty, the Protocol spells out the objectives and scope of institutional mechanisms for cooperation in water institutions (Kidd and Quinn, 2005; Ramoeli, 2007). The SADC Regional Water Policy highlights the various opportunities water management presents to achieving the SADC goal and objectives and the attainment of Millennium Development Goals (MDGs) (SADC, 2005). The Regional Water Strategy is supposed to provide strategies for implementation (SADC, 2006). The Regional Strategic Action Plan on Integrated Water Resources Management (RSAP-IWRM) (1998-2004, 2005-2010) on the other hand, puts into

operation the Regional Strategy by adopting and implementing five year development plans through specific projects. However, the chronological inconsistencies, illustrated by the fact that the Regional Strategic Action Plans came into being before the Regional Water Policy and Regional Water Strategy, and in effect informed both of them, raises questions with regards to the logical progression of development ideas in water management in the region.

All the regional frameworks reiterate, at least on paper, the region's commitment towards IWRM, and improved governance through participation in the management of water resources (Kidd and Quinn, 2005; SADC, 2005). This is in line with the second Dublin principle which states that water development and management should be based on a participatory approach involving all relevant stakeholders- users, planners and policy-makers at all levels (ICWE, 1992:2). The basic idea of the principle was to underscore the importance of ensuring that water management decisions are taken at the lowest appropriate level in line with the subsidiarity principle (Jaspers, 2003). To what degree IWRM has successfully pursued the democratisation of water resources through stakeholder participation is open to question (Manzungu, 2004).

1.1.2 Overview of Zimbabwean water reforms

Water sector reforms in Zimbabwe resulted in the repeal of the Water Act of 1976 and the enactment of the Water Act [Chapter 20:24] of 1998. It was felt that the 1976 Water Act was not in line with the aspirations and objectives of contemporary Zimbabwe (Pazvakavambwa, 2002), as through the principle of priority date system (among others), inequalities in water allocation and limited stakeholder participation were perpetuated. The 1998 Act was guided by 8 principles, one of which spelt that 'Water management should involve all stakeholders and should be managed at the lowest possible level' (Latham, 2002:22). This resulted in the formation of stakeholder institutions in the shape of catchment and subcatchment councils.

The formation of the catchment and subcatchment councils represents decentralised decision making in the management of water resources in Zimbabwe. Their establishment is provided for in Section 20(1) (a) of the Act. The functions of the catchment council as captured in sections 21(1) (c), 22 and 23 reflect a shift from centralised decision making. Catchment councils are given operational powers over water under their jurisdiction. This includes regulating and

supervising the exercise of rights to and use of water. Section 20(1) (b) gives the minister powers to fix the number of representatives who constitute the catchment council.

The catchment council can delegate, among other functions, the role of regulating and supervising the exercise of rights to and use of water to subcatchment councils (Section 24(4) (a) and (b), and Section 24(5) (a) and (b) for other functions of the subcatchment council). Various literature points to efforts that have been made in terms of enabling participation in water management (Latham, 2002; Kujinga, 2002; Swatuk, 2002). Since their formation, catchment council and subcatchment council have experienced many problems (see Tapela, 2006). Findings showed that the agenda for subcatchment council meetings (Shashe subcatchment for example) came from the catchment council and were handed to councillors on the day of the meeting (Gwanda Urban Council- personal communication (February 3-2009). The subcatchment council was reported not to have made any substantive decisions with regard to water management as all decisions were made at the catchment council (Shashe subcatchment councillors- personal communication (February 3-2009). In the results section we will examine to what extent the Act facilitates participation in the management of transboundary water. As far as transboundary water management is concerned, Section 6(2) (f) provides duties of the minister in terms of transboundary water management as: 'to give effect to any international agreement, to which Zimbabwe is a party, on shared water course systems in a spirit of mutual co-operation'.

The need for participation came about as a result of changes in water resources thinking worldwide. The Water Act [Chapter 20:24] is influenced by IWRM principles of which participation is one. Provisions within the Act that enable decentralised decision making attest to this. The form of institutional structure that the Act puts forward ends with the subcatchment council as the lowest formal structure with the ministry as the highest decision making body within the country. The Ministry of Water Management and Development is said to be reviewing the Act. It was felt that the subcatchment council, as the lowest legally provided for tier, was too extensive and there was need for a lower tier(s) that allows for local participation. The study aims to provide some insights into this process.

1.2 Problem Statement

The hydro-geographical scale of transboundary river basins means that problems experienced and solutions devised reach beyond a single basin state, and as such necessitate cooperation (Karkkainen, 2005). Shared river basins require states to accept some form of restricted sovereignty and to enter into agreements that can enable joint management and prevent conflict (Turton, 2003). Effective transboundary water management requires a paradigm shift: from the promotion of national interest, to one that seeks to promote mutual interest for regional cooperation and peaceful collaboration (Amaral and Sommerhalder, 2004; WCD, 2000 in Turton 2003). Regional and basin agreements have been seen as vehicles that can be used to achieve this. However, there are questions as to whether this provides enough opportunities for other actors other than the state given that the state has been and is the primary stakeholder in transboundary water management. Where other institutions exist, which include sub-national, non-state actors and local communities, the link to the national level is not clear. Some of these actors may challenge the legitimacy of the state in transboundary water management (Karkkainen, 2005). However, the extent to which these actors can effectively participate largely depends on the laws and policies that are promulgated by the state.

IWRM-led water reforms in southern Africa have emphasised the creation of new institutions with little guidance offered regarding how the institutions can engage with stakeholders at different levels, especially at the local level. It is also significant that these new formalised institutions have tended to ignore informal traditional management arrangements (Manzungu and Machiridza, 2009 cf. Moench et al., 1999). Such introduced institutions tend to lack legitimacy at the local level, and consequently fail to facilitate widespread stakeholder participation (Malzbender et al., 2005). To this end it is doubtful whether existing international and national policy, legal and institutional frameworks can be said to have created space for decentralised and broader stakeholder participation in water management.

Therefore, although IWRM emphasises the need for improved governance of water resources through the participation of various stakeholders by adopting the subsidiarity principle in water management (GWP, 2000; ICWE, 1992), the conceptualization and implementation of local

participation at the transboundary level remains unclear. More specifically, the real reason for local participation, how 'local' is defined, and how it may be applied in practice, remain ambiguous. In other words how the subsidiarity principle is applied in practice still needs to be clarified.

There are a number of related questions that can be posed when discussing local participation in transboundary water resource management. The main question relates to whether the lowest appropriate forum/level for participation has been identified, which raises further issues relating to what the lowest appropriate level is. But the mere determination of the lowest appropriate level does not automatically result in improved governance of water resources, hence the need to assess the internal governance arrangements (within the state) and how these relate to other relevant institutions.

In more specific terms we can pose the following questions:

- What is the stated and implied rationale for promoting participation in transboundary river management?
- Who is the delegated authority for promoting participation in transboundary water resources management at various scales?
- Is subsidiarity a part of the governance and management architecture in relation to the lowest appropriate institutional level, and how does this relate to other institutions?
- What are the arrangements that regulate the interaction of the different actors at different scales?
- What have been the experiences of efforts directed at participation, for example, do water users see the need to participate in transboundary water resources management?
- How can the subsidiarity principle and governance mechanisms between and among same and different actors be operationalised in transboundary water resources management?

1.3 Objectives

The main objective of this study was to investigate the applicability of the principle of subsidiarity, especially the concept of 'local' participation in the Limpopo Basin. Specifically, the study aimed to:

1) Assess the appropriateness of provisions for 'local' participation in regional and basin frameworks;
2) Describe the extent to which national legislation facilitates local participation;
3) Asses the experiences to date of local participation; and
4) Explain the effectiveness or lack thereof of local participation.

For objective 1 important questions that were posed were how is participation defined in regional and basin frameworks, and what were the important historical developments that informed the frameworks? With regards to objective 2, the critical questions included how was participation provided for, what influenced the need for participation, who were the actors involved, and how was participation supposed to be structured? In the case of objective 3 the issues under investigation included how was participation structured at the 'local' level, what are the perceived changes needed to improve participation? As far as objective 4 was concerned the issues of concern included how do the provisions for 'local' participation at the regional, basin and national relate to each other, what were the similarities and differences, and to what extent do provisions translate into practice on the ground?

1.4 Justification

The call for participation in water management has been justified on the grounds that water resources management without stakeholder participation in decision-making is highly ineffective (Jaspers, 2003). However, the concept and its application remain vague in regional, basin and national frameworks (Soussan and Harrison (2000) in Kidd and Quinn, 2005). In addition, evidence of effective local participation in water resources management at the national level is scanty (Kidd and Quinn, 2005). This study will enhance understanding of how the subsidiarity principle can be conceptualised and operationalised at the different scales in transboundary river basins. It will also provide practical insights into how participation within the subsidiarity

principle can be operationalised and help determine its applicability in transboundary water resources management.

1.5 Structure of the thesis

Chapter two provides the literature review. It gives a rationale of governance and participation in water resources management in general and transboundary water management in particular. It argues that statements made concerning stakeholder participation do not provide for who is to be considered a stakeholder especially in transboundary water management (apart from the basin states themselves). Furthermore, at the sub-national level, participation has been seen to be merely rhetoric as in reality transboundary water management decisions are taken at higher centralised levels and ignore local initiatives and interests. The chapter then attempts to define and situate local in transboundary water resources management and documents selected experiences of local participation in transboundary water management. Chapter three provides a general overview of the Limpopo basin in relation to physical, social and economic characteristics. It then specifically focuses on the specific study area, Mzingwane Catchment and the Shashe subcatchment. This is followed by chapter four, which describes how the data was collected and analysed. The fifth chapter provides the findings and discussion. The discussion is guided by three analytical categories: stakeholder identification, stakeholder representation, and the appropriate organisational form. The concluding chapter provides the major findings, main conclusions and recommendations of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter gives an overview of the literature that pertains to governance issues in water resource management including transboundary water resource management. It does this by framing the discussion within the subsidiarity principle in water resource management, and also discussing the rationale and experiences that relate to what constitutes good water governance. It focuses on participation as an important characteristic of water governance. It argues that official pronouncements about stakeholder participation do not provide adequate understanding of how it is conceptualised and implemented at the various levels in transboundary basins. The chapter then assesses the role of the state, as the ultimate authority in transboundary water resources, focusing on the space it creates for sub-national and supra-national actors. It then attempts to define and situate the 'local' in transboundary water resources management.

2.2 The emergence of subsidiarity in water resource management

The subsidiarity principle, which is one of the key concepts of IWRM, can be traced back to the Informal Consultation in Copenhagen in 1991. Defined as decision making at the lowest appropriate level (ICWE, 1992), subsidiarity espouses the idea that facilitating decision making in water management at the lowest appropriate level is best. In general it is assumed that the lowest appropriate level is the level at which water is used. However, the fact that water management has been pitched at different levels other than where it is used suggests that this understanding is not widely shared. Apart from defining the lowest appropriate level it is also important to create channels which ensure decisions made at the lower level reach the higher levels. Subsidiarity in transboundary water resource management incorporates a scale factor - looking at how stakeholder participation at the international, national and the sub-national is configured. This means structuring and designing institutional linkages between the different levels with local level institutions forming the foundation and building blocks of catchment and basin-wide institutions (Savenije and Van der Zaag, 2008). To what extent this has been achieved is open to question.

Subsidiarity can influence decentralisation of decision making in water management, and has been identified as one of the triggers for water sector reforms (Jaspers, 2003), since traditional

water management, was for a long time characterised by centralised decision making. The principle enables broader participation of stakeholders as contained in principle two of the Dublin principles. The principle states that water development and management should be based on a participatory approach involving all relevant stakeholders- users, planners and policy-makers at all levels (ICWE, 1992:2). Subscribing to the subsidiarity principle, the European Union Water Framework Directive (EU WFD) states that 'decisions should be taken as close as possible to the locations where water is affected and used' (European Commission, 2000 in Neef, 2008). Such involvement 'holds the promise of improving the management of international watercourses and reducing the potential for conflict over water issues" (Jansky and Uitto, 2005 in Earle and Malzbender, 2006).

2.3 Governance and participation

The relationship between governance and participation is interesting to explore because often participation is undertaken as an end in itself. Traditionally, the concept of governance was defined and used in relation to government (Stoker, 1998). However, over time the concept has been defined differently to signify 'a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed' (Stoker, 1998:17). Governance encompasses the state's institutional arrangements, the processes for formulating policy, decision-making, and implementation, information flows within government, and the overall relationship between citizens and government (World Bank, 1998). The European Union (2001) defined governance as rules, processes and behaviour that affect the way in which powers are exercised particularly as regards openness, participation, accountability, effectiveness and coherence. The definition emphasised the issues of power and principles of good governance as highlighted in the *White Paper on European Union Governance*. Borrowing from a definition from the Institute of Governance, Bakker (2003) defines governance as the process by which stakeholders articulate their interests, their input is absorbed, decisions are taken and implemented, and decision-makers are held accountable. Governance, according to this definition, includes (but is broader than) formal structures of government. A definition of governance put forward by United States Agency for International Development (USAID) is explicitly normative, likening governance to democratic processes of decision-making (Grindle, 2007), just like the other definitions.

Although there exist variances in definition, measurement and inference of governance which has resulted in the term governance being used in various ways and having a variety of meanings, the essence of governance is its focus on governing mechanisms which do not rest entirely on the authority and sanctions of government (Grindle, 2007; Stoker, 1998). Governance has made a strong appearance in the water sector in the 1990s. At the second World Water Forum held in The Hague in the Netherlands in 2000 governance was identified as the missing link in effective water resource management. By proclaiming that the current world water crisis was a governance crisis, governance was firmly put on the water agenda. Since then there have been attempts to explore governance in terms of its conceptualisation and application (see for example Turton et al, 20006). In many ways the arrival of governance on the water scene was a welcome addition to the sterile mantra of stakeholder participation which was being promoted as the destination instead of as a vehicle towards viable stakeholder engagement (see Manzungu, 2004).

It is argued here that it is when participation is taken as part of a broader water governance agenda that it becomes useful. Participation is a process by which citizens can induce significant social reform which enables them to share in the benefits of society (Arnstein, 1969). It is about changing power relations between public agencies and citizens. There exist common reasons that are advanced in favour of participation in the water sector. First, it is aimed at raising the legitimacy of water governance arrangements and outcomes. Second, it enhances public acceptance of projects and improves water quality and allocation among other things. Third, it taps into local resources such as local knowledge, which can be deployed to great effect in water resources management. Fourth, it enhances accountability of institutions involved in the water sector and can help identify alternative dispute resolution mechanisms for a resource that tends to be characterised by increasing complexity, competition and conflict. Finally, it empowers marginalised groups who have been left out of decision-making (Neef, 2008:89).

Participation takes many forms ranging from manipulation, consultation and citizen control (Arnstein, 1969; Tapela, 2006). The least empowering forms of participation involve manipulation and therapy. Here participation benefits those with power and maintains the status quo without creating deliberative spaces for those to whom participation is being directed at.

When participation is framed within the paradigm of 'informing and consultation' it can easily become tokenism, which provides no guarantee that views brought forth by stakeholders will be heeded by those in authority. Citizen control and delegated power can be viewed as the climax of participation as they represent a degree of citizen power (Arnstein, 1969; Parkins and Mitchell, 2003; Tapela 2006). However, it is important not to lose sight of the fact that participation is primarily concerned with the redistribution of power, a problematic process which faces resistance from different quarters (Arnstein, 1969; Cornwall, 2002) as it challenges the status quo and reconfigures relationships between different actors. Participation should therefore go beyond a headcount of participants to a stage where citizens create their own opportunities and terms of engagement (Cornwall, 2002; Manzungu, 2002).

The notion of participation as one of the cornerstones of democracy has been widely accepted, which is also true for the water sector. However, what it constitutes raises problems. For example, the popularisation of stakeholder participation as contained in principle 2 of the Dublin Principles has not been accompanied by how it can be undertaken in practice. Statements made concerning stakeholder participation do not provide for who is to be considered a stakeholder especially in transboundary water management apart from the basin states themselves (Jaspers, 2003; Manzungu, 2004; SADC, 2000). While the definition of a stakeholder 'as an interested individual, group or institution that may or may not be affected by decisions or actions pertaining to a specific resource and may or may not be part of a decision- making about the resources' Tapela (2006:10), is easy to understand, it is how it is applied that is a problem. The definition raises a lot of questions and 'does not help in organising stakeholder participation' (Manzungu, 2004:17). At the sub-national level, stakeholder participation has been argued to be mere rhetoric as in reality transboundary water management decisions are taken at the higher centralised level and ignore local initiatives and interests. As such participatory processes are viewed as extractive, time-consuming, and not empowering and do not bring about the expected changes. The irony is that people are willing to participate in local community driven water governance arrangements when the issues directly affect them even if it is beyond their borders (Neef, 2008).

The challenge then is to explore how participation can work especially for local people on whose behalf many good things, which turn out to be bad, are done. The following paragraphs explore

how local participation has been framed at the international, regional (SADC), and national (Zimbabwean) level.

2.4 SADC regional water frameworks for transboundary water resource management

Water management in southern Africa has been and continues to be heavily influenced by international developments in the water sector. This has also affected the conceptualisation of local participation in transboundary water resource management. The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, which was adopted by the UN Assembly in 1997, has been very influential in this regard although it has not been ratified (only 20 out of the required 35 countries have ratified it). The Convention was influenced by various developments in international water law which include the Helsinki Rules of 1966, and is considered a treaty in terms of Article 2 (1)(a) of the Vienna Convention (1969). It emphasises principles such as equitable and reasonable utilisation and no harm. Equitable utilisation (Article 7 (2)) takes precedence over no harm in the Convention. These principles have, to a large extent, resulted in its non-ratification as it touches on upstream downstream state relationships and challenges the maintenance of absolute sovereignty by upper riparians over water originating within its borders (Merrey, 2009).

As already noted, the UN Convention has influenced the development of southern African regional water management frameworks with respect to shared watercourses. The SADC Protocol is one such instrument. The SADC Protocol on Shared Watercourses, which was signed in 1995 and revised in 2000, can be said to be the primary legal instrument that establishes a coherent and harmonized regional framework for the management of shared watercourses in the region (Malzbender and Earle, 2008). The Protocol is grounded on the need to maintain a balance between national development interests of member states and the global interest of ensuring environmental conservation and sustainable development (SADC, 2005). It subscribes to the principles set forth in the UN Convention such as equitable and reasonable utilisation and no harm among others.

The Protocol is operationalised through the SADC Regional Water Policy (2005) which provides a framework for sustainable, integrated and coordinated development, utilization, protection and control of national and transboundary water resources for the promotion of socio-economic

development, and regional integration and improvement of the quality of life of all people in the region (SADC, 2005). The Regional Water Strategy (2006) in turn gives effect to the Policy by giving strategies and how they will be implemented, including monitoring and evaluation mechanisms (SADC, 2006). The RWP and RWS are not legally binding yet they provide important guidelines for the harmonization of national water policies and laws in the region (Malzebender and Earle, 2008). Through specific projects, Regional Strategic Action Plans (first phase 1998-2004, second phase 2005-2010) puts into operation the Strategy.

2.5 Factors affecting local participation in transboundary water resource management

The existence of frameworks for stakeholder participation on their own does not guarantee participation. For example, the various regional frameworks have not resulted in local participation. The question is what does this say about the effectiveness of the frameworks if the lower levels do not bring into effect stakeholder participation. It is noteworthy to observe that the Protocol has similar parallels in other regions of the world.

Intra and inter-state political power poses a challenge to meaningful involvement of stakeholders (Earle and Malzbender, 2006; Neef, 2008; Tapela, 2006). This may be attributed to the nature of the state as the sovereign authority over a defined territory, or because of the overall governance configuration within the state. There is a risk that community driven water governance can be undermined by centralised state-driven institutions which are not convinced that local communities can make decisions about how to manage and govern their water resource (Neef, 2008). Participatory initiatives become more effective when local stakeholders are principal actors in the design and implementation processes while other institutions like government and donors become subordinate, enabling and supportive (Tapela, 2006). One has to be aware of how decisions are made at the local level- where water is used- and how the decisions find their way to influence decisions made at the higher level such as in shared basins. Neef (2008) showed that participation at the local level is influenced by the existence of democracy at the lower level where there was a history of collective action and everyone had a voice and decisions were made after lengthy deliberations, consensus and compromise. Of course this depends on the governance culture within the state itself as effective stakeholder participation is influenced and shaped by the status of governance within a country (Manzungu, 2004).

In developing countries, as a result of limited financial resources directed at participation, there is often dependence on donor funds. There is evidence to suggest that donor funds often influence the nature of participation that will be undertaken. There have been complaints to the effect that local interests tend to be overlooked or misunderstood in such cases (see Swatuk, 2008; Merrey, 2009). However, these caveats disappear when such stakeholder participation enters the public domain (Box 1.1).

Box 2.1: Narratives of stakeholder participation in the Pungwe and Okavango Basins

Okavango basin

In the Okavango Basin that is shared between Angola, Botswana and Namibia, the Every River Has Its People Project (endorsed by the Okavango River Basin Commission in 1999) has been touted as an example that best illustrates local participation in transboundary water management. Here stakeholder participation has been promoted and recognition given to national obligations on shared waters given that all three countries are, among other agreements, signatory to the SADC Protocol on Shared Watercourses (2000). The Project is aimed at developing the capacity of local communities within the basin to enable them to participate more fully in decision-making through among other things the formation of the Basin-wide Forum. The project is donor funded and implemented by a nongovernmental organisation. The Project enables stakeholders to have exchange visit and so see other parts o the basin and gain a better understanding of how the system functions (Source: Bethune, 2006).

Pungwe basin

Participation in the Pungwe basin, shared between Mozambique and Zimbabwe, can be said to have been influenced by the two governments being party to or acceding to provision in the SADC Protocol on Shared Watercourses (2000), the Dublin principles (1992) and Agenda 21 (1992) which require among other things broad participation in the management of shared watercourses. Broadening stakeholder participation has been supported by varying political commitment with devolution of operational functions and decision-making to the Pungwe Subcatchment Council in Zimbabwe while centralised decision-making through ARA-Centro characterises the Mozambique side. Stakeholder participation in the Pungwe Basin has been funded by donors (Source: Tapela, 2006).

2.6 Conclusion

This chapter has raised issues regarding how the subsidiarity principle can best be conceptualised and operationalised in transboundary water management, especially how effective local participation can be assured. A number of practical issues relating to who is to promote stakeholder participation, who are the actors in transboundary water resources management, and what is the best organisational form for stakeholder participation in transboundary river basins

were also raised. Finally how 'local' participation is related to the broader stakeholder participation, and are the two the same. This research will attempt to answer these questions.

CHAPTER THREE: DESCRIPTION OF STUDY AREA

3.1 Introduction

This chapter firstly gives the description of the general study area, the Limpopo basin. It provides details on the climate and physical features, the demographic features, socio-economic issues as well as water and environmental issues affecting the basin. It then goes on to describe the specific study area, namely the Shashe subcatchment located in Mzingwane Catchment on the Zimbabwean side of the Limpopo basin.

3.2 Overview of the Limpopo basin

3.2.1 Physical characteristics

The Limpopo River is approximately 1750 km long and flows eastwards forming the borders between South Africa and Botswana, and South Africa and Zimbabwe before entering into Mozambique and draining into the Indian Ocean (see Figure 3.1). The source of the Limpopo is near Krugersdorp on the northern side of the Witwatersrand (Penn, 2001). It rises at an altitude of about 2300 m near Lydenburg (South Africa) and drops into the alluvial plain in Mozambique. It is ephemeral with the river flowing for almost 40 days in dry years.

The basin has an area of approximately 415,000 km^2, shared between Botswana (18%), Mozambique (19%), South Africa (47%), and Zimbabwe (16%), representing 1.3 percent of the continent.

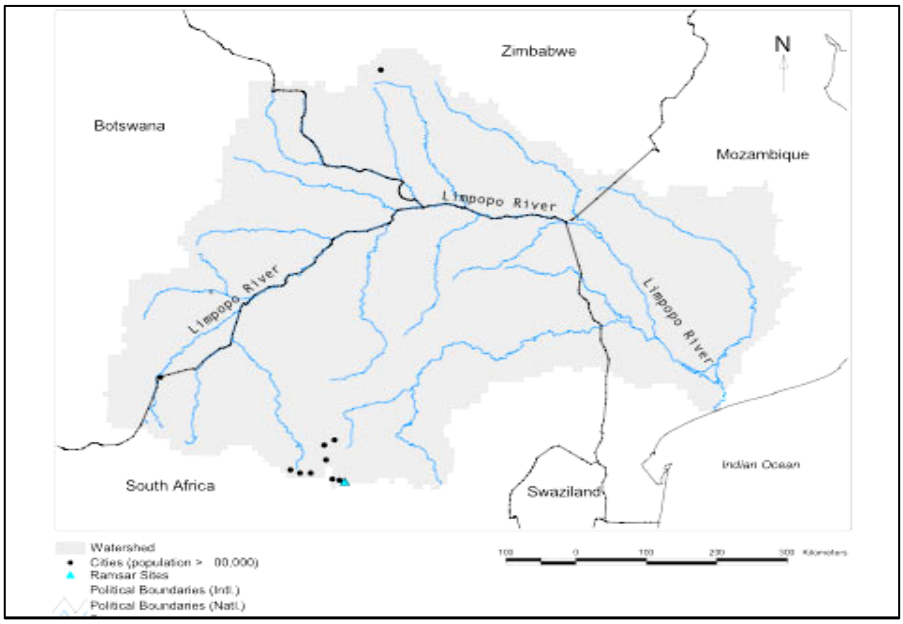


Figure 3.1: The Limpopo River Basin (Source: adapted from Amaral and Sommerhalder, 2004; http://www.sardc.net/imercsa/Limpopo/map.htm)

The basin is subject to highly variable rainfall and runoff (mean annual runoff at river mouth of 5500 Mm^3) with droughts and floods being common. Climatic conditions are difficult to predict as a result of the high variability in rainfall that averages 530mm per year, and ranges from 200 mm at Beitbridge for example to 1200 mm in a. As such floods and droughts threaten a large proportion of the inhabitants in the basin, as well as the diverse ecosystems. Flow in the river is characterised by considerable inter and intra-annual variation. In some years the river is dry for several months mainly due to abstractions in the upper catchment. Floods occur when peak flows on the Limpopo and Olifants rivers coincide downstream of their confluence, as happened in 2000. Evaporation varies between approximately 1000 mm and 2700 mm per annum. Summer periods of high evaporation coincide with the rainfall season, significantly reducing the effectiveness of rainfall, runoff, soil infiltration and groundwater recharge. The basin experiences cyclones during the months of January to March which compound the problem of floods (Boge, 2006; CGIAR, 2003; SADC, 2005; Turton, 2003; Vaz and Pereira, 2000).

3.2.2 Socio-economic features

The total population given in Table 3.1 constitutes at least 20 percent of the total population of the basin countries (approximately 63 percent of Botswana's population, 25 percent of South Africa's population, and below 10 percent of Mozambique's and Zimbabwe's populations). The basin is considered as the second most populated after the Orange in the SADC region (Boge, 2006; CGIAR, 2003).

Table 3.1: Distribution of settlements in the Limpopo basin

Country	Number of settlements	Distribution of settlements (%)	Total population (in millions)
Mozambique	2541	49	1.3
South Africa	2355	45	10.7
Botswana	198	4	1.0
Zimbabwe	100	2	1.0
Total	5194	100	14.0

(Source: http://earth-info.nga.mil/gns/html/namefiles.htm; UNDP (2003) in UNEP/UN-HABITAT, 2008)

Most human settlements are located in flood-prone areas close to river valleys. Settlements are most dense especially in South Africa, in the delta area, and along the main river channel in Mozambique. However, they are less dense in the upper reaches of the basin in Botswana and Zimbabwe (CGIAR, 2003).

The majority of the basin inhabitants are rural and depend on rain-fed agriculture, which does not guarantee secure livelihoods in an area characterised by unreliable rainfall. As such starvation and malnutrition are common with about a million people reliant on food aid. In addition, poverty is widespread which worsens the rural people's vulnerability to both floods and droughts. Migration to South Africa is common. Remittances as such contribute to survival mechanisms. Estimates give HIV and AIDS rates of at least 10 percent (CGIAR, 2003). HIV and AIDS also negatively affects water resources management through loss of indigenous knowledge and human resources. This weakens institutions.

Among the basin states, Botswana and South Africa are economically strongest while Zimbabwe is weaker and Mozambique lags behind. The per capita Gross Domestic Product (GDP) for Zimbabwe, South Africa, and Botswana is 3, 13, and 16 times (respectively) more than that of Mozambique. However, with the exception of Zimbabwe, all countries registered positive GDP growth rate in the last decade. Botswana and South Africa, though considered among the most developed states in SADC, are also among the driest in the region as previously mentioned. Big cities like Johannesburg, Bulawayo and Maputo which are located on the fringes of the Limpopo Basin and influence, or are influenced by, socio-economic events and activities within the basin (CGIAR, 2003; Turton, 2003).

3.2.3 Water resources management

There are numerous dams in the basin, 44 of them with a storage capacity of more than 12 million m³ (UNEP, 2005). Most of these dams (28) are located in South Africa. The largest of these is the Loskop Dam on the Olifants River (348 Mm³). The Limpopo is the receiving basin for four inter basin transfers and itself has two intra-basin transfers. The basin is viewed as approaching closure in that the water use in the South African portion of the basin exceeds the yield potential. In Zimbabwe the river has nearly been developed to its full potential. The remaining runoff makes very little contribution to the flow in the Limpopo River. The major water uses in the basin include irrigated agriculture, industry, mining, power generation, subsistence agriculture and domestic use (Amaral and Sommerhalder, 2004; Malzbender and Earle, 2008; Vaz and Pereira, 2000; Turton 2003).

Water resource management in the basin is affected by what happens in the riparian states. Water sector reforms and changes as well as the socio-political environment have influenced water management in the basin. In Zimbabwe and South Africa, water sector reforms resulted in the enactment of new water Acts in 1998. As previously mentioned, the Water Act [Chapter 20:24] is the main legal instrument that guides water management in Zimbabwe. It represented an attempt to address a history of racially-skewed water distribution and allocation of agricultural water as enforced by the 1976 Water Act where less than 1 percent of the population (4,500 white commercial farmers out of a population of 13 million) controlled 85 percent of agricultural water in the country. The Act also divides the country into catchment and subcatchment councils

reflecting a shift towards management of water along hydrological boundaries (Jaspers, 2001; Manzungu, 2004; Tapela, 2006).

Like in Zimbabwe, the 1998 South Africa National Water Act vests water in the state. It also aims to correct injustices of the past that encouraged racial inequalities in the access to water. Access to water is provided for as a right in the 1994 Constitution of South Africa (Wuringa, 2008). Similarly, the Act aims at decentralised water management along hydrological boundaries with progressive establishment of catchment management agencies in the 12 catchments in the country. Both are guided by the IWRM principles. The Mozambique Water Law (1991) assigns decision making to regional water administrative agencies- ARAs- of the Department of Water Affairs (DNA). Thus water is managed administratively with a regional agency overseeing several river basins (Tapela, 2006). In Botswana, the 1968 Water Act guides water management in the country. It stipulates what water uses require or do not require a permit. The revised act is currently in its draft form.

All basin states are signatory to the 2000 SADC Protocol on Shared Water courses. All countries but Zimbabwe have ratified the Protocol. However, Zimbabwe has acceded to the Protocol and as such is bound by its provisions. Currently the Limpopo Basin Permanent Technical Committee (LBPTC) represents the basin wide mechanism for managing the Limpopo. An interim Limpopo Basin Commission (LIMCOM) secretariat has been established. However, it does not have legal standing as Zimbabwe has not ratified the LIMCOM Agreement.

3.3 The study area

3.3.1 Mzingwane Catchment

The study was carried out in Zimbabwean part of the basin. In Zimbabwe the Limpopo basin falls entirely in Mzingwane Catchment, which is one of the 7 catchments established by the Water Act [Chapter 20:24]. The catchment is divided into four subcatchments namely Upper Mzingwane, Lower Mzingwane, Shashe and Mwenezi and generates around a quarter of the runoff in the Limpopo (Love et al., 2004).

Upper Mzingwane and Shashe fall in natural region IV with rainfall ranging between 450 to 650 mm per annum. Lower Mzingwane and Mwenezi are in natural region V receiving rainfall of

about 450 mm per annum. Agro-ecologically and socio-economically, the north-west, Insiza and Mzingwane Districts and the northern parts of Mangwe, Gwanda and Matobo Districts, have higher rainfall, better soils, more commercial agriculture, higher population density and higher household incomes. On the other hand, the south and south-east, Mberengwa, Mwenezi and Beitbridge Districts and the southern parts of Mangwe, Gwanda and Matobo Districts, have lower rainfall, poor soils, more communal lands and ranchlands, lower population density and lower household incomes (Love et al., 2004; GoZ, 1998; GoZ, 2000b).

The study was carried out in Shashe subcatchment. Shashe has a mean annual rainfall of 600 mm. It has an area of about 69000km and covers Gwanda, Matobo, Mangwe and part of Mzingwane district. Shashe subcatchment is the area bound by sub-hydrological zones BS1, BS2, BS3, BS4, BS5, BS6, BT2, BT3, BT4, BT5, BM and BR. This semi-arid zone is found in natural regions IV and V. The area is characterised by low erratic rainfall, with high incidences of drought and severe intra-seasonal dry spells (Love et al., 2004; GoZ, 2000b). Figure 3.2 shows the specific wards where the study was undertaken.

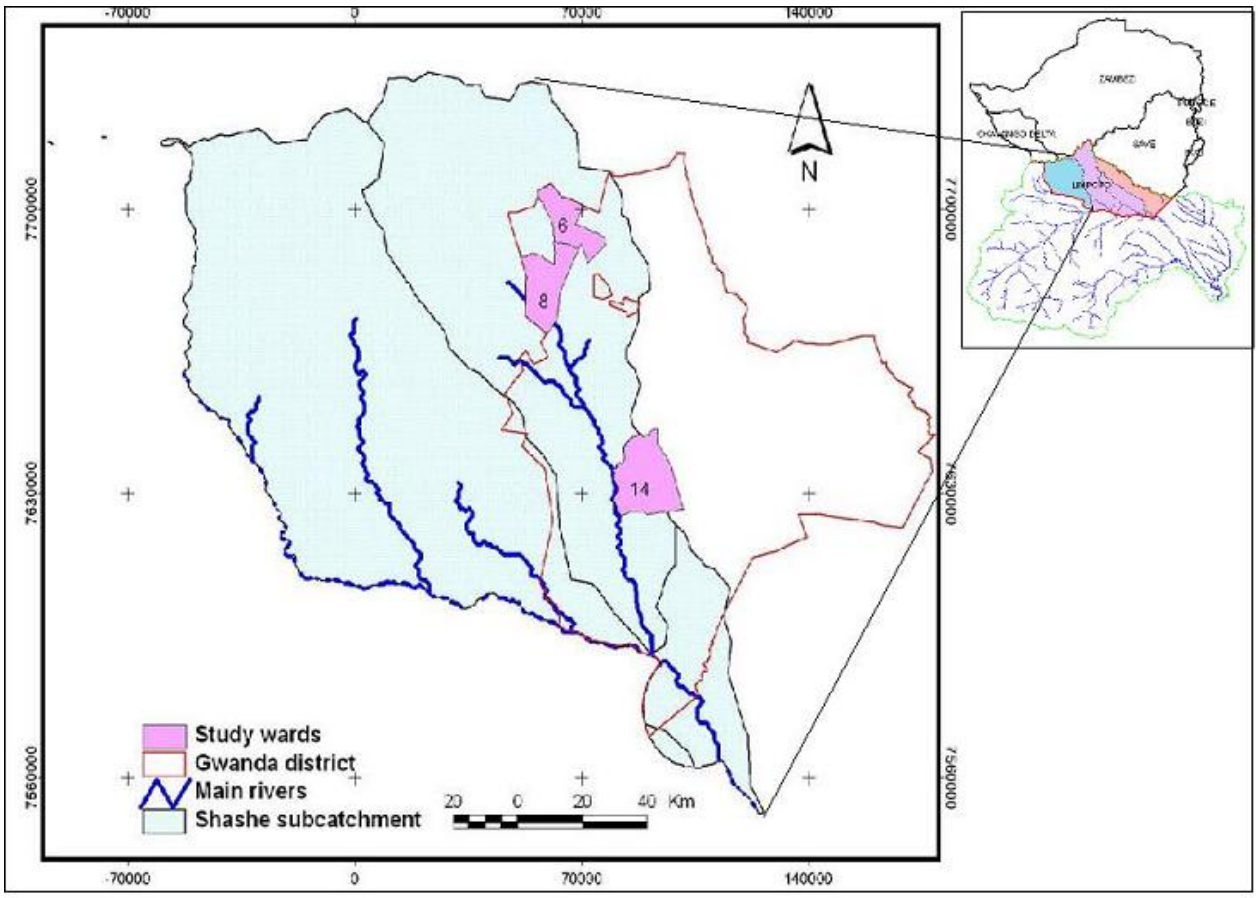


Figure 3.2. Map showing study locations in Shashe subcatchment

3.3.2 Overview of the wards

In order to document local experiences (objective 3) three wards in Shashe Subcatchment were selected for in depth study. In choosing the sites, the researcher attempted to find out how different water management regimes affect participation. After liasing with officials from Mzingwane catchment 3 sites were identified within Shashe subcatchment. It was felt that the subcatchment was more organised (levies were still being collected and the data collector was said to be active) than the other subcatchments in Mzingwane (Catchment Coordinator- personal communication). These sites were namely Makwe Irrigation Scheme in Ward 8, Guyu-Chelesa Irrigation Scheme in Ward 14 and Gaswa Irrigation Scheme in Ward 6. These sites were mainly used for the preliminary visits which involved fact finding and ground work before the ward workshops. Wards are the spatial units used to elect local government councillors and make up

the building blocks of Zimbabwe administrative geography (National Statistics and ONS, 2009). They may be looked at as the lowest planning unit at the administrative level.

Ward 8- Makwe Irrigation Scheme

Ward 8 is made up of five villages. One of the most important socio-economic activities in the ward is Makwe Irrigation scheme. The scheme covers an area of 300 hectares and is the largest in Gwanda district. It has 466 plot holders with varying amounts of land sizes from 0.1 to a hectare. The scheme has an agreement with the Zimbabwe National Water Authority (ZINWA) because it gets its water from a ZINWA dam- the Tuli-Makwe Dam on the Tuli-Makwe River through a 7km canal. The allocation is seasonal with the scheme getting 3ML/annum from the dam in the summer and 4ML/annum in the winter. The water is pumped by 2 motorised pumps then goes into a canal where by gravity it goes through pipes when crossing the Tuli-Makwe River and into a canal to get to the scheme. The water is then siphoned onto plots. The dam also supplies water to Freda Mines and Guyu-Chelesa and Simbane Irrigation Schemes. The irrigation schemes have permits to pump water from the sand.

As of December 2008, Makwe Irrigation Scheme had paid R15335 in levies to ZINWA. Each plot holder pays according to the amount of land they hold with plot holders paying R100/hectare maximum and R10 for a 0.1 hectare. Plot sizes within the scheme range between a hectare to 0.1 hectare per farmer. The scheme is divided into 4 sections (according to how the canals are divided) with 7 representative chosen in each section. The irrigation management committee is made up of 12 (8 males, 4 females) representatives from the 4 sections. This committee oversees the overall operations in the scheme and decides on the use of water, sees that the canals are clean and checks the fence. It holds monthly meetings and works closely with the subcatchment council and ZINWA on problems. General meetings for the scheme are held every three months or when the need arises. The chairperson of the committee is also the catchment and subcatchment council representative for communal farmers. After each subcatchment meeting he holds a meeting with the management committee and may call for a general meeting if necessary.

Ward 14- Guyu-Chelesa Irrigation Scheme

Ward 14 has 6 villages- Sengezane, Sizhubane, Bethel, Paye, Ntanye and Nhlamba. The scheme, located in Sengezane, gets its water from the Tuli River downstream of the Tuli-Makwe Dam. It has a withdrawal permit. Water is pumped from the river and stored in a concrete tank. The scheme uses sprinklers to irrigate the fields. The pipes and sprinklers were donated by a donor unknown to the farmer who was interviewed. Currently however, only one of four engines at the river is working. The water from the tanks is also used for drinking and watering livestock. The quality of the water was said to be good except for rust from the pipes. Other sources of water include taps and wells. The water is used for drinking and watering livestock. There are 160 members at the scheme. Each farmer in the scheme has a 0.2 hectare plot and pays R10 per month. Maize, sugar beans and wheat are grown at the Scheme. The Agricultural Research and Extension (AREX) officer decides on what is to be planted. The maize is sold to the Grain and Marketing Board and the rest is left for the farmers. Other produce used to be sold in Botswana but not anymore.

The scheme has an irrigation management committee which was formed 11 years ago. A new committee was retained for the third time last year. Committee meetings are held every Wednesday together with farmers. The farmer mentioned issues such as payments, conflicts, fencing and security at the scheme as some of the things that have been discussed at the meetings. The Chairlady attends meetings in Gwanda and reports back during the weekly meetings.

Ward 6- Gaswa Irrigation Scheme

Ward 6 is made up of Wabayi, Esibona, Mtshabezi, Gonkwe, Gakwe and Khozi villages. The scheme is located in Wabayi village. It has 5.5 acres and is divided into 288 beds and equally shared among 18 farmers. The scheme gets its water from Gaswa Dam that is constructed on the Gaswa River. The dam construction was a community initiative where after being granted permission for the site by the kraalhead people started to dig using manual labour. Seeing their commitment, the Rural District Council (RDC) assisted the community in finding donors namely the New Zealand High Commission which provided financial support and a local commercial

farmer who provided wire for fencing the scheme and tractors during the construction. The dam was completed in 2002. At the time of the research the dam was a quarter full as there had not been inflow from the river for some years. The dam provides water for both people (for irrigation and domestic water use) and livestock. The water in the dam is mainly used by people from Ward 6 although in drought years people from Ward 7 also have access. The scheme does not have an agreement or a permit for abstraction.

An irrigation management committee made up of the seven (5 female and 2male) farmers manage the scheme. Individuals are nominated and voted into the committee by the other farmers. The scheme has a constitution written down although some unwritten rules also apply. Maize, wheat, tomatoes, peas, sugar beans and groundnuts are the main crops grown and the committee decides when and what to grow. Each farmer pays R10 every month which is used to buy seeds, pesticides and transporting produce to the Grain and Marketing Board and other markets. The farmers interviewed are not aware of the subcatchment council. They work closely with the RDC and AREX who conduct workshops on ploughing skills among others. The scheme however, is aware of ZINWA. The interviewees are also aware that the water in the Gaswa River ends up in the Limpopo River which they share with South Africa.

CHAPTER FOUR: METHODOLOGY

4.1 Introduction

This chapter presents how data collection and analysis was undertaken. First to be presented is an overview of the research design that was adopted for the study. Next to be presented is the data collection methods that were employed. Last to be presented is the data analysis procedure used. This is given in the form of an analytical framework used to analyse data from the basin to the local level.

4.2 Research design

A research design is a logical way that connects empirical data collected and conclusions derived from the data to the initial questions that guide the study. It can be said to be a plan that guides a researcher in collecting, analysing and interpreting observations, and allows one to draw inferences concerning casual relationships among variables under investigation. A research design assists one to maintain the thrust of the research as guided by set research question and ensures validity of the research (Jonker and Manzungu, 2008; Yin 2003).

Two main broad categories of research methodology exist in social research namely: qualitative and quantitative. Qualitative research is founded on world of lived experience, for this is where individual belief and action intersect with culture. It places emphasise on the qualities of entities and on processes and meanings. Such phenomena cannot be experimentally examined or measured in terms of quantity, amount, intensity or frequency. Focus n qualitative research is placed on the socially constructed nature of reality, the intimate relationship between the researcher and what is studied and the situational constraints that shape inquiry. Thus emphasis is placed on the value-laden nature of inquiry and answers are sought to questions that stress how social experience is created and given meaning. As such qualitative research employs a complex interconnected family of terms, concepts and assumptions. Case studies, participatory inquiry, ethnographic interviewing, participant observation, visual methods and interpretive methods are some methods and approaches in qualitative research (Denzin and Lincoln, 2000 in Kujinga, 2007, Manzungu and Jonker, 2008).

Quantitative research on the other hand mainly focuses on quantifiable data in terms of numbers and measures that can be analyzed statistically. Emphasis is placed on issues of design, measurement and sample because of their deductive approach and as such stresses thorough planning prior to data collection and analysis. Validity and reliability are of prime importance in quantitative research. Validity is concerned with whether or not the study indeed measures that which it is intended to measure. Reliability is concerned with whether the study can be replicated by other researchers in the same context (Neuman, 2000 in Kujinga, 2007).

In order to understand local participation in transboundary water resources management one has to understand the various processes that occur at the various levels (regional, basin, national and local). It is also important to understand the context in which local participation takes place. As such the study was qualitative because it mainly involved the use of documents and formal and informal interactions with different stakeholders, key informant interviews and focus group discussions at the various levels. This research was informed by the fact that there are different levels at which transboundary water resources management is undertaken. It was therefore important that the design adopted for the study be capable of addressing the issues at all the levels. The study as such used both the survey and case study approach in order to achieve the objectives of the study. A survey of documents was conducted at the regional and national level. The case study approach was mainly employed at the local level. This approach requires one to study a certain phenomena over an extended period of time and as such gives one an in-depth view of an event (Jonker and Manzungu, 2008; Collins, 1999).

As described in chapter 3, a sample of three wards in Shashe Subcatchment was chosen. Sampling involves a process of selecting a number of respondents from a defined population (Collins, 1999). This study employed non-probability sampling. Purposive and convenience sampling were used. Purposive sampling allows one to use one's own knowledge and experiences in selecting the most suitable respondents for purposes of the study. As such respondents were deliberately selected on the basis of their experience and positions to form a purposive sample. Convenience sampling was used in selecting specific study sites (Collins, 1999; Bernard, 2000).

4.3 Entry into the field

In order to carry out the study in Mzingwane catchment, a visit was made to the catchment offices. After presenting the study to the catchment coordinator a decision was made to conduct the study in Shashe subcatchment as presented in section 3.3.2. In the company of the Catchment Coordinator the researcher went to the subcatchment offices which are located in Gwanda to meet the Data Collector. His knowledge of the subcatchment helped in identifying irrigation schemes- one that uses agreement water, one that uses permit water and another that uses a community built dam without a permit. This was supposed to help guide the researcher in trying to understand how the different water management regimes affect participation at the local level. In addition to also see if the interaction of these schemes with ZINWA influenced local dynamics. The preliminary visits also did the ground work for the ward workshops that were to happen later.

4.4 Data collection methods

Both primary and secondary sources were used to collect data. The main methods of collecting data included document reviews, key informants, focus group discussions and observations. In order to achieve the first objective document reviews were done. At the regional level, all the four riparian countries were considered. This was done through the review of the SADC Protocol on Shared Watercourse Systems, the Regional Water Policy, the Regional Water Strategy and the Regional Strategic Action Plan on Integrated Water Resources Development and Management. Basin agreements that were reviewed included the Massingir Agreement, the Limpopo Basin Permanent Technical Committee (LBPTC) Agreement and the Limpopo Basin Commission (LIMCOM) Agreement. Key informant interviews were also conducted with officials at the basin level. Document reviews were also done for the second objective. The 1998 Zimbabwe Water Act [Chapter 20:24], Statutory Instruments 47 of 2000 and 209 of 2000 were reviewed at the national level. Key informant interviews were also conducted.

Interviews conducted with key informants at the basin, national and local levels (see Table 4.1) were semi-structured and used interview guides (see Appendix A). Formal interviews were conducted at the basin, national level and at the catchment council. Open ended answers

provided by the respondents allowed the researcher to probe and as such allowing one to get a detailed appreciation of the issues at hand.

In order to achieve the third objective three preliminary visits aimed at collecting facts about the subcatchment (19-23 January 2009, 01-06 February 2009, 22-27 February 2009) were made where interviews were conducted with farmers at the three irrigation schemes, subcatchment council councillors, a prominent commercial farmer and mining houses. Workshops at the ward level were conducted on 2, 4 and 6 March 2009 at Makwe, Guyu- Chelesa and Gaswa respectively. Focus group discussions (4 at each site) were conducted with the participants. These lasted for at least an hour. Box 4.1 shows the groups participants were divided in. Group 1 was mainly composed of leaders (councillor, senior kraalheads, kraalheads, and irrigation management committee chair) from the community. Members of the other groups were randomly picked from the participants. Presentations were made by a nominated member of each group at plenary. Participants were allowed comment, add or disagree to what was presented. The plenary sessions were also used to discuss the organisational form that is presented in chapter 4 (see Appendix E for a detailed account of the process). It should be noted that the workshops were facilitated and were part of the Challenge Programme PN17. These workshops also marked the end of the field visits by the researcher. In addition, a catchment level workshop was held from 14-16 April 2009 in Bulawayo. Box 4.2 shows the assignments of the groups at the catchment levels. A facilitator was designated for each group at all the workshops (local and catchment).

Table 4.1: Data collection methods at various levels

Method	Regional and Basin level	National level	Catchment and subcatchment level	Local level
Document review	Review of published and unpublished bilateral and multilateral agreements, policies and strategies including Regional Water Strategy (2006), Revised SADC Protocol on Shared Watercourse (2000), Regional Water Policy (2005), the Regional Strategic Action Plan (1999-2003, 2005-2010), the Massingir Agreement (1971), the agreements that formed the Limpopo Basin Permanent Technical Committee (1986) and the Limpopo Watercourse Commission Agreement (LIMCOM) (2003).	Review of the 1998 Water Act *[Chapter 20:24]*, Statutory Instrument 47 of 2000, Statutory Instrument 209 of 2000	Not applicable	Constitution of Makwe Irrigation Scheme and similar narratives
Key informants	South African and Zimbabwean officials, Former South African and Zimbabwean officials, Global Water Partnership	Ministry of Water Resources	Mzingwane catchment council Chairman, Catchment Coordinator, Catchment Manager Water Councillors, RDC, Urban authority, Mining houses	Traditional leaders, Irrigation Management Committees
Focus group discussion	Not applicable	Not applicable	3 groups (see below for description)	4 in each ward and 1 plenary session (see below)
Observations	Not applicable	Not applicable	Not applicable	Activities in and around the irrigation schemes

The group assignments at local level workshops were as shown in Box 4.1.

Box 4.1: Group assignments and plenary session at the local level

Group 1: Water resources mapping

This was a small group made up influential people in the ward (chiefs, kralheads, and irrigation management committee chair). The people were the ones to indicate the water resources in the ward. To make this possible a step-wise approach was used:

a) Let people draw up the villages and the main water sources with approximate distances being indicated. It was also important to pay attention to what kind of villages vis-a-vis traditional or the administrative;

b) After indicating the water resources in the ward people would discuss water issues outside the ward boundaries;

c) Practically it was envisaged that people would start with a location map of the villages that are involved and then put in the water resources.

Group 2: Water issues

The objective was to help local people identify the main water issues in the area in terms of water sources, water uses and water users. First the group was required to list local water sources per village and the uses the water was put to. Next they identify the water users. This was done in columns for presentation and ranked in terms of reliability and seasonality.

Group 3: Water problems

Two groups of men and women were constituted so as to identify and discuss water challenges they face. They were supposed to prioritise the problems and if time permitted discuss how to solve the problems

Group 4: Institutions

The idea was for the group to identify water institutions and their effectiveness. First local people identified the water sources and the related institutions. Each institution was characterized according to main functions, how they were constituted and effectiveness.

Plenary session

In the light of the discussions we needed to answer the following question: is it a good idea to have a ward wide water institution, if yes how can that be constituted in terms of representation? If not why this was so and how would the situation be improved? Will this lead to a better situation?

Group assignments at the catchment level are shown in Box 4.2.

Box 4. 2: Group assignments at the catchment level

Group 1

This group was meant to identify stakeholders at the subcatchment level and compare these with those identified in the Statutory Instrument (47 of 2000).

1. List primary and secondary stakeholders at the subcatchment level (primary stakeholders are the main water users while secondary stakeholders are those indirectly affected)

2. Describe the relationship between the two groups

Group 2

The group was meant to show linkages, if any, between the local, catchment and basin levels.

Describe stakeholder representation at catchment and basin level in the light of the findings from the local level

4.5 Data analysis

Data collected was analysed using the thematic approach. The operational themes identified were regarded as critical to understanding local participation in transboundary water resources management. These were stakeholder identification, type of stakeholder representation and the best organisational form that facilitates effective participation. With regards to stakeholder identification the question was who are the actual stakeholders and what is the basis of that identification? In relation to type stakeholder representation the question was how can the water users or stakeholders be best represented at various levels? A related issue was the most appropriate organisational form that could serve the interests of the various stakeholders. Table 4.1 shows the analytical framework that was used.

Table 4.2: Analytical frameworks at different levels

Level of analysis	Clauses/issues	Stakeholder identification	Type of stakeholder representation	Organisational form
Regional/ basin level				
SADC Protocol, Strategy and Policy, RSAP,				
LBPTC Agreement LIMCOM Agreement				
National level				
Water Act [Chapter 20:24] Statutory Instrument 47 of 2000				
Sub-national level				
Catchment and Subcatchment council				
Local level				
Ward (8, 14, 6)				

CHAPTER FIVE: RESULTS AND DISCUSSION

5.1 Introduction

This chapter presents the findings and discussion of the results that were obtained from the research. The order of presentation is in line with the objectives that were formulated for the study (see section 1.3). The analytical framework presented in section 4.4 informed data analysis. First to be presented are top-down attempts to structure local participation in transboundary water resources management, which include the regional, basin, national, and the sub-national levels, as captured by the various policies and laws. A bottom-up attempt at structuring local participation, which was obtained from three wards, is also presented.

5.2 Appropriateness of provisions for local participation in regional and basin frameworks

5.2.1 Regional frameworks

The focus on the regional frameworks, in the form of SADC guidelines for participation in transboundary water resource management, was informed by the fact that the Limpopo basin is not just shared by Botswana, Mozambique, South Africa and Zimbabwe, but it exists within SADC. It was therefore imperative to analyse SADC frameworks as these represent the combined efforts of the states within the block in terms of managing transboundary water. The region has adopted a common position on a number of issues in this regard. As can be seen in Table 5.1, SADC has a hierarchy of frameworks starting from the SADC Protocol on Shared Watercourses down to the Regional Strategic Action Plans. The clauses that touch on participation as addressed by each framework are identified in the second column and given in more detail in Appendix B.

Table 5.1: Regional and basin frameworks that address key issues in local participation

Framework	Issues/Clauses	Stakeholder	Types of stakeholder representation	Organisational form
Regional frameworks				
SADC Protocol on Shared Watercourse (2000)	Articles 3.7(b) 3.8(a)(iii) 4.3(a) 5.3(a) and (b)	Nation states	States through appropriate basin institutions	Implied through formation of basin institutions and national set up
Regional Water Policy (2005) and Regional Water Strategy (2006)	P-9.2.2., 9.2.8., 9.2.9. S-9.2(a) and (b)	Nation states	States through basin institutions	Catchment and local level fora at the national level
	P-9.3.2, 9.3.2. S-9.3(b)			
	P- 10.1.1.,10.1.2., and 10.1.3. S- 10.1			
RASP-IWRM (1998-2004, 20005-2010)	Priority area 5 Project No. WG2	Water Division Implementing agency at project level	Water Resources Technical Committee	Integrated Committee of Ministers and SADC National Committee-Infrastructure and Water Services (see Appendix C)
Basin agreements				
Basin agreements	LBPTC (1986) Article 2	Riparian states	4 representatives and any other suitable persons from each country	Implied appointment to incorporate stakeholders
	LIMCOM (2003) Articles 7.2(c) 5.2	Riparian states	3 permanent members and 3 advisors (left to basin states to appoint) from each country	Implied appointment to incorporate stakeholders

Article 5 of the 1995 Protocol provided for encouraging public awareness and participation as one of the functions of river basin management institutions (Kidd and Quinn, 2005). However it does not contain reference to civil society-led participation. The Revised SADC Protocol on Shared Watercourses (2000) confirms the same position as stated in Article 3.7(b)

> 'Watercourse States shall participate in the use, development and protection of a shared watercourse in an equitable and reasonable manner. Such participation, includes both the right to utilise the watercourse and the duty to cooperate in the protection and development thereof, as provided in this Protocol.'

However, in Article 3.8 (a)(iii), clarifying on the equitable and reasonable utilization principle (Article 7(a)) requires that states take into account among other things 'the population dependent on the shared watercourse in each Watercourse State'. The extent to which this provision may be translated to mean that the Protocol refers to local users is questionable. More importantly it is left to basin-states to determine how the population that is dependent on the shared watercourse may participate in the management of the resource.

In relation to organisational form Article 4.3 (a) urges watercourse states to enter into joint management mechanism for the management of shared watercourses. The nearest to an organisation form that includes stakeholder participation is implied through the establishment of appropriate institutions at river basin level (see Articles 5.3 (a) and (b)). One may argue that as a framework the Protocol merely gives a guide on how shared watercourses can be managed and does not need to be prescriptive - the basin institution that is formed and the basin states are expected to determine how to structure participation in water management. If this assumption is correct, then one would expect to find the details in the policy and basin agreements.

In paragraph 9.2.9 the Regional Water Policy extols shared watercourse institutions to work together with nongovernmental organisations and civil society, and support and/or establish forums at basin, national and local levels. It is stated that 'In the interests of stakeholder involvement (to support participatory management), SWCIs should develop strong relationships … through the provision of support to existing bodies and/or forums or through the creation of new stakeholder forums at a national, basin and/or local level.' Strategy 9.2(b) gives how this

can be undertaken by developing guidelines and facilitated processes, cooperating with civil society and supporting appropriate stakeholder participation through local water management institutions.

The RWP also takes into account the subsidiarity principle as stated in Policy 9.3.2. It proposes the establishment of structures, such as the catchment councils for example, to enable decentralisation of water resources management. This was meant to ensure for efficiency and to facilitate broader stakeholder participation especially local participation in decision making processes related to water resources. However, the application of the subsidiarity principle is supposed to be case specific and as such should take into account national conditions and constraints. It also requires institutional mechanisms and the working together of catchment level organisations in different countries with basin institutions. Thus this setup creates links between the different levels- the basin, national and the sub-national. Strategy 9.3 (b) gives how the policy can be put into practice. Explicitly subscribing to the second Dublin Principle, Policies 10.1.1. and 10.1.2. reiterate the need for effective stakeholder participation that includes the private sector, nongovernmental organisations and other forms of civil society. Strategy 10.1 puts effect to the above policies with the need to develop mechanisms that encourage stakeholder participation.

At the operational level, the RSAP is made up of a number of projects. Both the first and second phases of the RSAP contain specific projects on stakeholder participation. Phase 1 was made of 44 projects that fell within seven strategic intervention areas that included (i) improving the legal and regulatory framework; (iii) institutional strengthening and sustainable development policies; (iii) information acquisition; (iv) management and dissemination; (v) awareness building, education, and training; (vi) public participation; and (vii) infrastructure development. It is significant that public participation is considered as one of the strategic areas. There are also other areas, such as awareness building, that can also be supporting or materially contributing to public participation. RSAP 2, that is scheduled to run from 2005 to 2010, is made up of four clusters, namely capacity building, infrastructure development, water governance and resource.
There is a project WG2 which touches on public participation in water resources development and management. This project can be said to be aimed at the local level as it is aimed at

strengthening and broadening regional awareness of IWRM concepts and principles at the user level through stakeholder participation in policy and strategy formulation and implementation (SADC, 2005). Participation is supposed to be undertaken through what are called implementing agencies that are appointed by SADC. How this will be done is left to the ingenuity of the implementing agency as no best practices or guidelines are given.

5.2.2 Basin agreements

Agreements in the Limpopo basin date back to 1971 between South Africa and Portugal, the Massingir Agreement, developed for the purposes of constructing the Massingir Dam. The Agreement also recognised that the inflow would decrease as South Africa developed more dams in the future. In 1983, the Agreement on the establishment of the Tripartite Permanent Committee (TPTC)[1] came about with the purpose of making recommendations on the management of water shortage being experienced in the Limpopo, Incomati and Maputo rivers. However, this agreement did not bear fruit as it excluded Zimbabwe. The Agreement on the Establishment of the Limpopo Basin Permanent Technical Committee (LBPTC) was signed in 1986 and was designed to move from bilateral to basin level agreements. It aimed at addressing issues such as (i) division of flows; (ii) aspects related to droughts, floods and pollution; (iii) programmes and activities that jointly benefit the 4 countries. However, despite it including all riparian states it also failed to function at its inception until a decade later mainly because of the historical and political differences among the riparian countries with Mozambique and Zimbabwe formerly among the frontline states block against the apartheid regime in South Africa. There was neither regular exchange of information on hydrometric data nor on water development plans. In addition, distrust among riparian states has also contributed to failure of the agreement to materialise (Turton, 2003; Vaz & Pereira, 2000). The LBPTC became functional after the political changes in South Africa which enabled riparian states to negotiation and resulted in the development of the Limpopo Watercourse Commission (LIMCOM) Agreement in 2003 to which all are signatories.

Participation can be seen as provided for in Article 2 of the LBPTC agreement which enables the contracting parties to co-opt additional people apart from the three state representatives. The

[1] This may be looked at as the first attempt at establishing a basin-wide regime in southern Africa (Turton, 2003)

study found that basin states have taken advantage of this provision to take at least what they call a representative of stakeholders- the closest being the Catchment Manager. At times a ZINWA representative from the head office attends LBPTC meetings. However, one can question the extent to which these can be said to represent stakeholders as they are ZINWA employees and as such may be regarded more as state representatives than stakeholder representatives. Even then the study also found out that these 'stakeholder representatives' do not always attend meetings because of inadequate funds to finance their trips. On the other hand it was felt that stakeholder participation in the basin was not given a priority as compared to other basins like the Zambezi and Pungwe for example. This was because the donors in the other basins placed emphasis on stakeholder participation and also because the agreements or strategies were more recent- 2006 for the Pungwe strategy and 2008 for the Zambezi one (Government of Zimbabwe and Mozambique, 2006; Euroconsult Mott MacDonald, 2008). This means that they reflect the changes that have occurred in water management worldwide- IWRM.

The LIMCOM agreement explicitly acknowledges the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses, Chapter 18 of Agenda 21 and the SADC Protocol. It commits riparian states to the basic principles of equitable and reasonable utilisation, sustainable development, intergeneration equity principle, prevention principle and transboundary impact assessment principle (Article 3.2). Article 7.2 (c) of the LIMCOM agreement, provides room for participation. This is through the advisory role the Council would play in terms of advising member states on among other things how people within the states would participate within the basin. Yet this article does not provide for how this participation can be structured- how the people can interact at the national or basin level. It can be said that Article 5.2, which is related to Article 2 of the LBPTC agreement, provides for this by enabling states to have not more than three advisors. In both agreements a stakeholder representative can be taken on board even though in practice it has not always happened. Thus, the agreements still to a large extent, leave it to the respective countries to structure participation of inhabitants within the basin under their jurisdiction. One can also question how far 'advice' goes and how can the Commission ensure effective participation. However, respondents felt that LIMCOM would be more effective in enabling stakeholder participation as it will have to be in line with regional frameworks. However, they were not sure how such participation would be structure- whether a

basin-wide structure or individual states separately. Yet although the LIMCOM agreement is the only basin instrument that explicitly provides for participation (Article 7.2 (c)) beyond the basin negotiations, it is not in effect because Zimbabwe has not ratified it. This means that the LBPTC is the legally recognised basin institution in the Limpopo even though it does not have any legal capacity to enforce its decisions on member states.

From interviews with various key informants, in 2005 the LBPTC in conjunction with the SADC Water Sector Unit produced a LIMCOM Action Plan. Plans are also progressing to set up the interim LIMCOM secretariat. It is not clear how these actions were and are being undertaken given that the LIMCOM agreement is not in force raising questions on how the Action Plan will be implemented. Similarly it also not clear what legal standing the interim secretariat has and what its duties are. There was a view that the interim secretariat, though without legal standing, will carry out tasks that are assigned to it by the LBPTC.

5.3 Impact of national frameworks on local participation in transboundary water management

The Water Act [Chapter 20:24] provides for stakeholder participation at the national and sub-national level. Participation is organised on the basis of the 7 catchment councils that the country has been divided into. The catchment councils (CC) are sub-divided into subcatchment councils (SCC). In the Zimbabwean part of the Limpopo basin, participation is under the auspices of the Mzingwane Catchment Council. Table 5.2 provides details of national provisions for stakeholder participation (see Appendix D for details).

Table 5.2: National provisions for local participation in Zimbabwe

Instrument	Clauses	Stakeholders	Type of stakeholder representation (selection)	Organisational form
1998 Water Act [Chapter 20:24]	Sections 12(2)(a) 15(1) and (2) 20(1)(a) and (b) 21(3)(i), (ii) and (iii)	Provided for in Statutory Instrument	Nominated by stakeholder groups	Catchment and Subcatchment Councils
Statutory Instrument 47 of 2000	Section 2 Section 3(3)(a) and (b) Section 3 (5)	Rural District Councils. Communal Farmers. Resettlement Farmers. Small scale commercial farmers. Large scale commercial farmers. Indigenous commercial farmers. Urban authorities. Large scale mines. Small scale mines. Industry and any other stakeholder group the subcatchment council may identify	Three nominations in priority order from each stakeholder group. Five representatives from each stakeholder group for the election of the subcatchment council	Through establishment of subcatchment council

In relation to stakeholder identification, it is interesting that national level provisions for participation provide a predetermined list of who should be included as a stakeholder. During a catchment council meeting held in Bulawayo (15-16 April, 2009) participants were of the view that the Statutory Instrument groups in Box 5.1 were out of date because of changes in the socio-political structure of the country. Similarly, it was felt that stakeholder groups should reflect the activities within the catchment and should not be uniform for the whole country. This was

reflected in the stakeholder groups they identified which in their opinion mirrored the reality in the catchment (see Box 5.1).

Box 5.1: Stakeholder groups as identified by Mzingwane catchment stakeholders

Primary users
Miners
Irrigators
Commercial farmers
Livestock farmers
Game ranchers
Recreational users (non consumptive use)
Urban users
Rural Development Council

The other problem that affected participation was that some of the stakeholder groups were based more on social classes rather than anything else. The list given in the national provisions as such raises questions as regards to representation. Researchers have found that the representatives elected using this system lacked legitimacy (Latham, 2002; Kujinga, 2002). The next section shows how local people viewed the subject of stakeholder identification and representation. As provided for in the Water Act [Chapter 20:24], the organisational form that is supposed to facilitate stakeholder participation and representation at the lowest level is the subcatchment council, a hydrologically-based institution (see Figure 5.1). The existing structure was seen to have gaps especially as far as stakeholder participation is concerned.

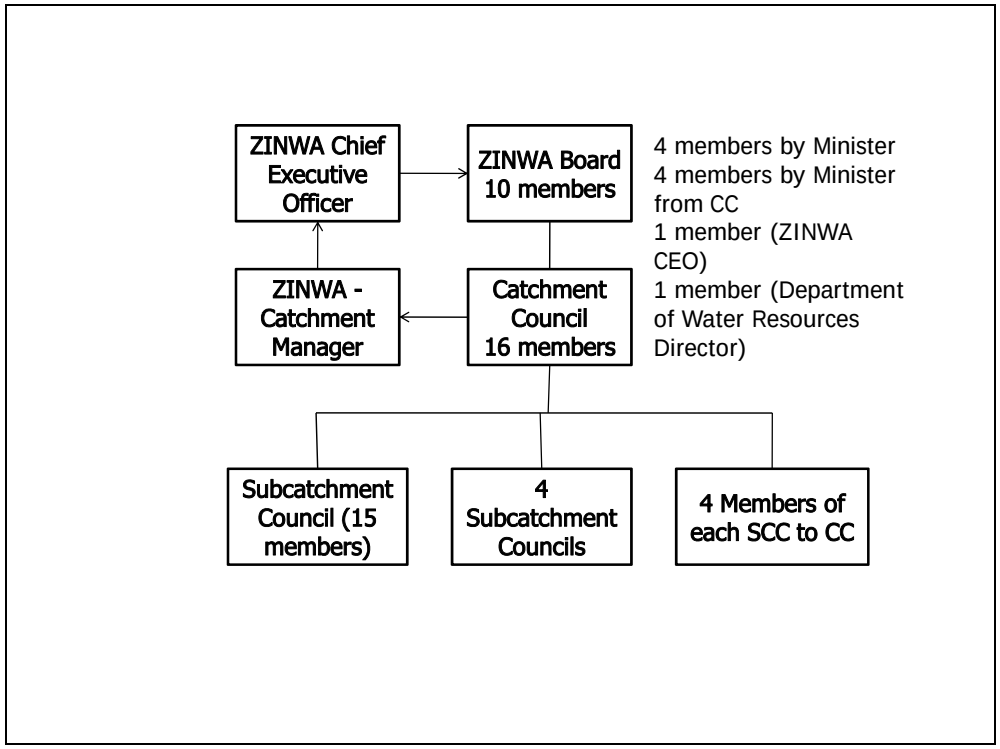


Figure 5.1: Existing organogram for water management in Mzingwane Catchment (Source: Ncube, 2009)

This was highlighted in a presentation made by the Catchment Chairman at the Mzingwane Catchment Council Stakeholder Participation Planning Workshop held at Londa Lodge,

Beitbridge from 24 to 25 September 2008 as captured in the workshop report (Box 5.2).

Box 5.2: Issues identified in Mzingwane Catchment

To date there has been minimal stakeholder participation especially by the lower tiers especially communal and resettlement farmers. Except for large scale commercial farmers and Bulawayo Municipality there has been minimal participation. This is why the Council proposes to work with all relevant social groups to address the two tier system of reporting. The current gap between the grassroots water users, e.g. irrigation schemes, and the subcatchment council needs to be bridged. This can only come through awareness, which will bring in water user associations that will now report to the subcatchment councils, which then report to the Catchment Council. The water user groups have to be equipped with water monitoring skills and other relevant skills. Among others, this will equip to determine which catchment activities impact on water resources as well as equip with capacity to elect their representatives to Subcatchment councils. Other activities may include lobbying for specific interests of their group. For this to happen, coordination of activities of water point committees is a must.

(Source: Nyamukure and Manzungu, 2008)

The situation presented may be attributed to the pulling out of donors from the catchment before the set activities, which included creating awareness, had been completed. The process of establishing these stakeholder driven institutions was mainly top-down, prompt and donor-driven (Jaspers, 2001; Swatuk, 2002). The study concurs with Swatuk (2002) that targeting the lowest appropriate level as set out in the reforms can be questioned as the state played a central role in the process. At the catchment level Bulawayo (15-16 April, 2009) workshop representatives of the Catchment Council provided reasons why this was the case. They identified five problems that were limiting the effectiveness of the catchment and subcatchment and that would address the issues presented in Box 5.2. These were awareness, water resources management, equity, capacity building, and finance. When asked to list the problems in order of priority 1 to 3- in other words what should be addressed first- results were as shown in Figure 5.2.

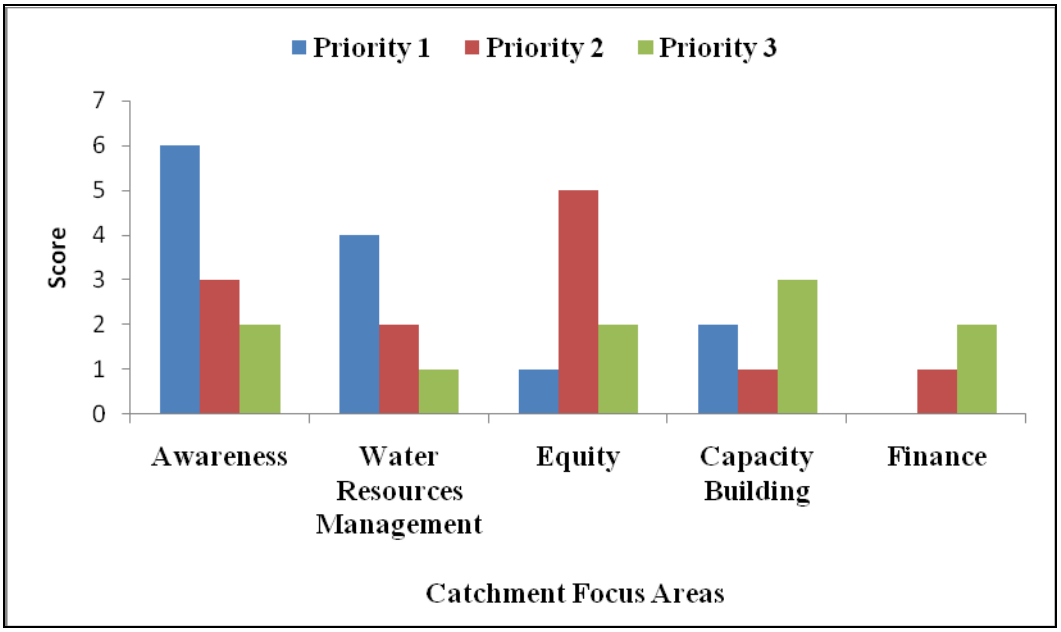


Figure 5.2. Mzingwane catchment focus areas

A summation of the exercise was as shown in Figure 5.3.

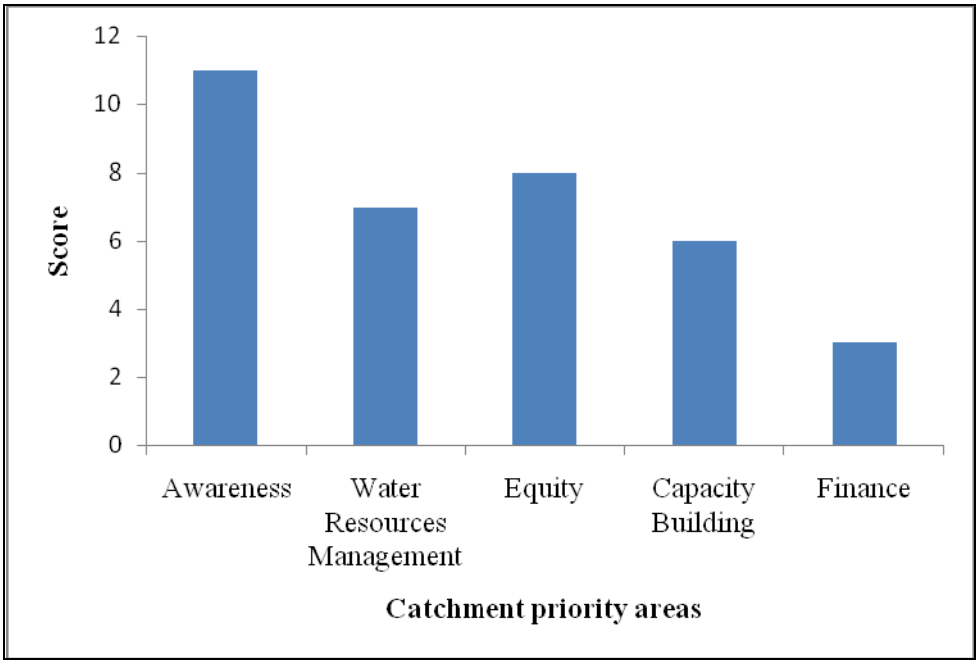


Figure 5.3. Overall catchment priorities

Awareness was identified as being the most critical to enabling effective participation within the catchment with finance being the least to be dealt with. This could be attributed to people perceiving that they have to solve awareness, water resources management, and equity first. It was felt that financial resources were merely a symptom not a cause of the problems in the catchment.

5.4 Experiences of local participation in transboundary water management

Local workshops were held in the Shashe subcatchment to find out how best local participation can be structured followed a facilitated process as the study attempted to learn what processes were involved in local water management. The Shashe Subcatchment Council is made up of 15 members (2 female, 13 male) representing different stakeholders in the subcatchment. As per the regulations (Section 3 (3) (a)) that establishes subcatchment councils, members are supposed to be nominated by their stakeholder group. However, the research found that the members that made up the subcatchment council were not nominated by their stakeholder groups but were simply called by the Data Collector to form the subcatchment council. This resulted in some not being known by those they are supposed to represent and as such lack legitimacy. The representatives are supposed to be elected at an Annual General Meeting (AGM) scheduled in September each year. However, as a result of lack of funds, the last AGM was held in 2007 because the SCC was collecting levies that were pegged in local currency that was hit by hyper inflation. Various respondents said that participation in the Council was minimal especially from other districts apart from Gwanda. This was attributed to Gwanda being where the subcatchment office is located. The way the subcatchment council was constituted also creates problems in terms of information flows between the councillors and their respective stakeholder groups as they do not interact. Currently participation at the local level can be summarised as in Table 5.4.

Table 5.3: Local participation experiences in Shashe subcatchment

Level	Stakeholder identification	Type of stakeholder representation
Subcatchment	Names picked from a list of permit holders and agreement water users Attempts to follow predetermined list set in Statutory Instrument 47 of 2000	Supposed to represent stakeholder groups
Ward 8	Members of irrigation scheme Community members	Elected by irrigation scheme members Elected by people from around the borehole
Ward 14	Members of irrigation scheme Primary water users	Elected by irrigation scheme members Elected by people from around the source
Ward 6	Members of irrigation scheme Primary water users	Elected by irrigation scheme members Elected by people from around the source

Local perceptions on participation were solicited through group discussions and plenary sessions at ward workshops as mentioned in Box 4.1. Group 1 was tasked to map the water resources in the ward while group 2 looked at water issues. Group 3 was divided into two sub-groups composed of men and women separately and group 4 looked at water institutions and their effectiveness. Water sources in the wards and beyond it where possible were mapped. The groups that mapped the wards tended to emphasise on big water sources- mainly river and dams, and put less focus on water sources that were used for domestic purposes. This may be attributed to the fact that the groups were mainly composed of men and tended to focus on water sources for productive uses. This was similar to Group 3 (men) where most of the problems identified mainly touched on water for productive purpose such as irrigation. Group 3 (women) on the other hand looked at problems affecting water for both productive and domestic purposes. However, the even though this was so (differences in water problems identified), the committees that manage boreholes or the irrigation schemes were composed of both men and women. For instance the Makwe irrigation scheme management committee was made of eight males and four females while the one for Gaswa was composed of two males and five females. Water issues

(Table 5.4) identified by the participants largely influenced the end product- the organisational form.

Table 5.4: Water issues at the local level

	Makwe	Guyu	Wabayi
Water sources	dams, rivers, boreholes and wells	boreholes, dams, rivers and a tap water system	shallow wells, dams, rivers, boreholes
Water uses	livestock watering, laundry, drinking, building, brick making, cooking, bathing and mining	drinking, cooking, bathing, brick making, irrigation, livestock watering, laundry, gold panning, and fishing	drinking, cooking, bathing, brick making, livestock watering, irrigation and laundry
Water users	Irrigators, brick makers, domestic water users, miners, livestock farmers	Gardeners (small gardens), irrigators (plot holders at schemes), builders/contractors, cattle owners, domestic water users, clinic, training centre, local police station and 13 Infantry Battalion of the Zimbabwe National Army	Farmers, livestock farmers, brick makers, builders, business and domestic water users
Water issues	-Livestock drinking from canals -People drinking water from dams because 'there was no good alternative nearby' and 'we have been drinking this water since we were small girls, as far back as 1966' -Relationship between ZINWA and the farmers as farmers (i) paid for the full allocation ever if they did not use the entire allocation, (ii) paid during the rainy season; and (iii) paid when water was little because of pump breakdowns. Consequently, "Payment for water was not a guarantee of receiving water" farmers complained. This was because management arrangements with ZINWA were not clear	- Behaviour of the Army (and police) which took the water meant for the irrigation scheme. The villagers complained of being threatened by the army. ZINWA did not seem to be doing anything.	-Farmers did not have a water permit and were not keen to have one

The issues identified above influenced the local water users' perceptions of how they want participation to be structured in terms of stakeholder identification, stakeholder representation and organisational form (Table 5.5).

5.5 Effectiveness or lack thereof of local participation in transboundary water management

Formation of stakeholder driven institutions (CC and SCC) links the 1998 Water Act to the RWP and RWS in terms of decentralising the management of water to promote effective stakeholder participation. However problems still exists between the institutions set up and local water users. Thus, implementation of provisions shows limited participation as a result of gaps in linkage between levels. Variances exist in terms of stakeholder identification as presented under section 5.3. Similarly, there is a variation between the current and proposed (by local water users and endorsed by catchment representatives) representation as shown in Table 5.5.

Table 5.5: Variance between current and proposed representation

Location	**Stakeholder identification**	**Current representation at SCC**	**Proposed representation at SCC**	Organisational form
Ward 8 (Makwe)	Irrigators Primary water users Miners	IMC chair is communal farmers rep at SCC None None	One representative from primary water users, irrigators and miners	Ward Water Users Association >District Water Users Forum>Subcatchment council>Catchment Council
Ward 6 (Wabayi)	Irrigators Primary users Others if need be	None None	One representatives per village to the ward level	Ward Water Users Association > District Water Users Forum >Subcatchment Council >Catchment Council
Ward 14 (Guyu)	Irrigators Primary water users Other interests (police and infantry for example)	None None None	One representative from primary water users, irrigators and miners	Ward Water Users Association>District Water Users Forum>Subcatchment Council>Catchment Council

For a detailed account of how Table 5.5 was arrived at, see Appendix E. The organisational form as capture in Table 5.5 can be presented pictorially as in Figure 5.4. The result is a modified structure of how water can be managed with Mzingwane catchment. The researcher generalises to the entire catchment because findings at the local level were approved by representatives at the catchment workshop held in Bulawayo. Figure 5.4 shows a variation in terms of the current and the proposed organisational form by including the two lower tiers.

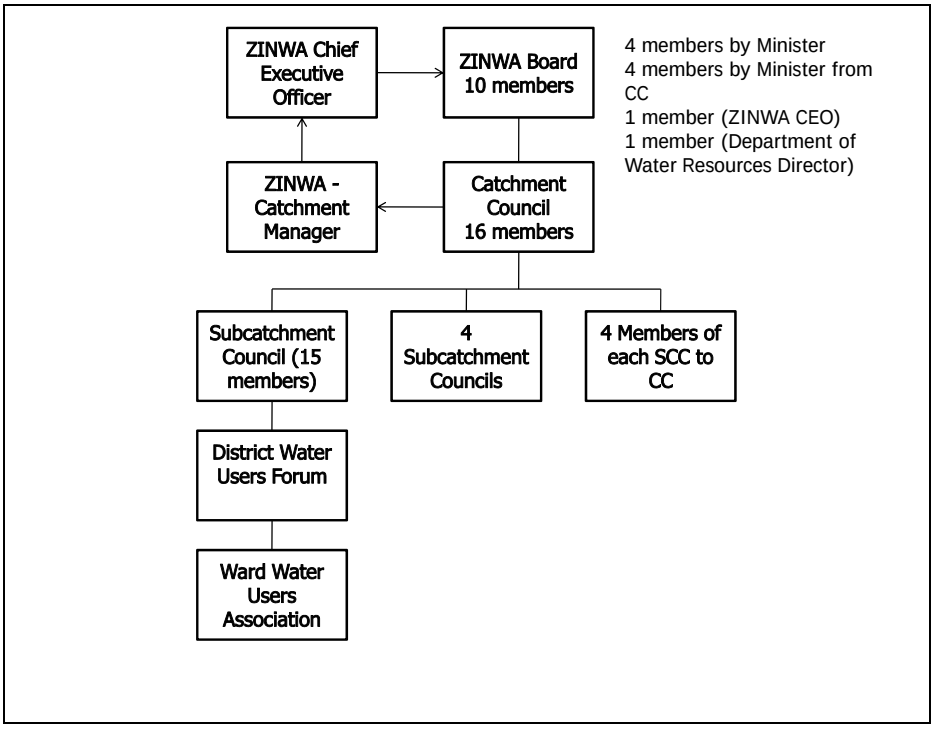


Figure 5.4. Proposed organogram for Mzingwane Catchment

Stakeholder identification was based on water use showing that stakeholder interests and the local power dynamics involved in local water management. This was demonstrated by the irrigators being viewed highly in all wards. Similarly, the identification of primary water users as major stakeholders demonstrated an oversight on the part of the Statutory Instrument as they were an important stakeholder group at the local level. The stakeholder groups listed in the instrument gives room for the incorporation of other stakeholders apart from those listed as it states '...and any other stakeholders the subcatchment may identify'. But this has remained on paper.

The proposed organogram brings into question management of water along hydrological boundaries (see Sneddon et al., 2002) as promoted by IWRM. The proposal to include the ward and district levels highlights that in reality the hydrological unit is not feasible as the operational unit and does not enable effective local participation. It shows that water management at the local level follows the administrative boundaries which are where the people live and reflects local dynamics. The organogram represents a bottom-up approach to structuring local participation developed by the water users themselves to reflect their own realities and to enable

them to participate. However even though the model presents a feasible and a more enabling approach of structuring local participation, one still has to be mindful of issues such as the relative power relations within communities. Other issues include how gender issues will be addressed in terms of representation and involvement of all in decision making at the ward level for instance. Similarly there is need to be aware of the emergence of hew stakeholders and how this may or may not affect the proposed organisational form.

5.6 Conclusions

Local participation provisions at the regional level are mainly captured in the RWP, RWS and the RSAPs. However, these documents are not legally binding (Malzbender and Earle, 2008). The Protocol on the other hand, which is legally binding, does not have specific provision for local participation. Perhaps this is because it is merely a framework which gives a guide on how shared watercourses can be managed in the region. Given that the RWP and RWS reflect the region's interests on how water should be managed and they put effect to the Protocol, one can argue that the onus is on states to implement what they commit themselves to. It therefore rests on individual basin states and basin institutions to make local participation a reality at the sub-national, national and basin level. The basin level has not made much progress either - local participation in the LBPTC was felt to be nearly nonexistent- the closest to it being when the Catchment Manager attends the meetings. Although there exist provisions in basin agreements that can facilitate local participation in transboundary water management, not much has been done.

The provisions for the formation of stakeholder driven institutions, namely catchment and subcatchment councils within Zimbabwe show a similarity between the Act and the RWP and RWS. These provisions allow for the operationalisation of the subsidiarity principle. However, in practice there is limited involvement of local nongovernmental organisations in water management. Though they operate in the area under study, they do not work together with the subcatchment council for example. In terms of civil society involvement, the research found that the most recognised civil society involvement in water management at the local level is through the work carried out by the Challenge Programme where the Mzingwane Catchment Council is a partner. The involvement of academics can be said to have brought to light problems with local

participation in the catchment but one can question to what extent what studies have revealed will be taken up. As far as transboundary water management is concerned, there exist differences between the national and international frameworks.

The new organogram proposed at the local level questions that existing institutional structure as provided for in the Act in terms of how participation can be structured at the local level. Predetermined stakeholder groups do not reflect what is really on the ground when compared to what local water users suggest. Representatives identified in the proposed structure are what is in existence at the local level and reflects the local reality in terms of who uses water and how it used. The model shows the willingness of local water users to participate in water management. The main thing that stands out, however is that local people's attempt located the lowest level of decision making as the water users.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study aimed to investigate the applicability of the subsidiarity principle, especially the concept of 'local' participation in the Limpopo Basin. It was guided by the following specific objectives:

1) Assess the appropriateness of provisions for 'local' participation in regional and basin frameworks;
2) Evaluate to what degree national legislation facilitates local participation;
3) Asses the experiences to date of local participation; and
4) Explain the effectiveness or lack thereof of local participation.

Data was collected from document reviews, key informants, focus group discussions and observations. Semi-structured interviews using a checklist were conducted with groups of farmers. Analysis of data used the thematic approach. Themes identified were stakeholder identification, type of stakeholder representation and organisational form. Below is a presentation of the major findings, conclusions and recommendation of the study.

6.2 Major findings of the study

The study found out that regional, basin and national frameworks recognise the need for participation in water management as captured by participation clauses within them. These top-down attempts to structure participation were seen as generally providing the necessary space for local participation. Regional frameworks however, were found as merely exhibiting intent of participation. Similarly, basin agreements did not facilitate participation not least because of the non-ratification of the LIMCOM Agreement. The national and sub-national instruments were full of promise but yielded little. The 1998 Water Act [Chapter 20:24] allows for broader participation and situates the lowest appropriate level as the subcatchment council. The study found out that that the subcatchment is too large to effectively enable local participation. There were problems with stakeholder identification, stakeholder representation and organisational form. The political and economic environment that prevailed within the country did little to help the situation.

Among local people, knowledge of the formalised institutions for water management was very minimal. Those that were supposed to represent stakeholder groups were not directly chosen by them and they did not know their functions as subcatchment council members. The organisational form proposed through local level and catchment level workshop attempts to structure participation by linking levels together. It shows how linkages can be created between the subcatchment as the legally provided for institution for enabling broader stakeholder participation and the local level where the water is used. Secondly, through the identification of stakeholder groups according to water use and the relationships between different users, the model also attempts to address issues identified at the local level. It demonstrates that the practical implementation of IWRM and the subsidiarity principle in particular goes beyond the hydrological boundaries as provided for in the 1998 Water Act, and to the administrative boundaries as important for stakeholder participation. The model challenges the existing top-down approach to participation and shows how a bottom-up approach not only reflects the users' aspirations, but also situates the lowest possible level of decision making in water management. The proposed organisational form addresses the current water crisis by empowering users to take part in water management.

6.3 Main conclusions

Local participation in transboundary water resources management in the Limpopo is affected by regional level frameworks. This is because the various instruments are a result of southern Africa states expressing the desire to coordinate development efforts under the auspices of SADC. SADC recognises water as a catalyst for development which can help address some of the underdevelopment challenges that affect the region. The various regional instruments emphasise the need for participation. What seems to lack is a context specific definition of participation. Given the limited capacity in the region, it does not help to repeat international pronouncements (UN Convention) on participation (Merrey, 2009).

At the basin level it was clear that history has played an important role in shaping, not just participation, but also cooperation between countries. Bilateral rather than basin-wide agreements seem to dominate the debate which is a consequence of lingering mistrust between the countries. Until this is resolved, participation at basin level will not be a priority. The only

avenue for participation in such circumstances is through the nation level. There is evidence across the four basin states that there are attempts in that regard. The lessons provided by the Zimbabwe case show that the national level framework is yet to bring into reality the IWRM-led reforms by way of developing and implementing sufficient institutional arrangements. However, there is hope for effective local participation as provided by the institutional model developed in conjunction with local people. The model that is based on practical needs of the people can be used as a building block towards effective transboundary water resources management.

6.4 Recommendations

The study recommends that a bottom-up approach to participation is more in keeping with the subsidiarity principle and the objectives of the 1998 Water Act [Chapter 20:24] as it empowers local users to address their own reality and engages them in the decision making process. There is need to try out the model on the ground to see if it, in practice, will enable effective local participation. The findings presented here are based on one country within the basin and may raise questions on how far they reflect local participation in the entire Limpopo basin. There is therefore need to conduct similar studies in other basin states as local participation is shaped and influenced by the national and local realities.

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APPENDICES

APPENDIX A: INTERVIEW GUIDES

Checklist for water point users

Introduction

This interview is part of a research that investigates the concept of 'local' participation in transboundary water resources management in the Limpopo Basin. The objective of this interview is to document and assess participation practices at selected 'local' sites in the Limpopo basin

1. **General questions**

Village name :

Ward Number :

Sex of respondent :

2. **Water sources**

2.1 What are the sources of water?

2.2 In which ward is the source of water?

2.3 How many wards/villages/households does the source serve?

3. **Access to water**

3.1 What are the different types of water users?

3.2 Do they pay for the water?

3.3 How much?

3.4 Can you estimate of how much the largest users use?

3.5 Do you have a permit?

3.6 If yes, does having a permit guarantee you access to water?

3.7 Water Use

Uses	Sources of water	Quantity accessed	When is the water accessed	Quantity adequate	Right quality for its use?	Priority attached (1=high cannot do without 2= medium can do without 3= low
Drinking						
Cooking						
Washing clothes						
Watering livestock						
Field irrigation						
Other (specify)						

3.8 Who determines/decides how the water is used?

3.9 What are the problems faced in terms of water allocation and use?

4. Water management

4.1 Is there a WP Committee in place?

4.2 When was it formed and how?

4.3 Composition of the WPC- Sex, Occupation or profession, water use, NGO?

4.4 Which WPC do you belong to?

4.5 How often are meetings held?

4.6 Any special issues you recall being discussed?

4.7 How do you participate in the WPC?

4.8 Do you have a position in the Committee?

4.9 To which sub-catchment council do you belong?

4.10 Who represents the WPC at the SCC?

4.11 Does the representative report back to the WPC? How?

4.12 What major decisions have been taken by the SCC (e.g. tariffs/levies?)

Checklist for Irrigation Management Committee member

Introduction

This interview is part of a research that investigates the concept of 'local' participation in transboundary water resources management in the Limpopo Basin. The objective of this interview is to document and assess participation practices at selected 'local' sites in the Limpopo basin

1. **General questions**

Village name :

Ward Number :

Sex of respondent :

1. When was the IMC formed?
2. How was it formed?
3. How many members are there? (How many male/female)
4. How does one become a member of the IMC?
5. How often are meetings held?
6. How many meetings have you attended?
7. What is your position in the IMC?
8. What are the functions of the IMC?
9. Has the IMC been able to carry out its functions?
10. What are the problems you face as a committee?

Checklist for the Subcatchment Council

Introduction

This interview is part of a research that investigates the concept of 'local' participation in transboundary water resources management in the Limpopo Basin. The objective of this interview is to document and assess participation practices at selected 'local' sites in the Limpopo basin

1. **General questions**

Subcatchment :

Village name :

Ward Number :

Sex of respondent :

1. When was the SCC formed?
2. How many members are there?
3. How many male/female?
4. How does one become a member of the SCC?
5. If a representative of a WPC, how do you report back to the WPC?
6. How many times a year do you report back?
7. How often are SCC meetings held?
8. How many meetings have you attended?
9. What are the legal functions of the SCC?
10. Has the SCC been able to carry out its functions as?
11. What problems has the SCC faced in carry out its functions?
12. Finances: Is there full time staff at the SCC?
    Who pays them?
    How many permits have been issued?
    How much revenue is collected?
    What are the problems faced within the SC?
13. How does the SCC work with WP committees?
14. How are decision taken by the SCC taken up at the catchment council?
15. How would you describe your relationship with the CC
16. Do you think your problems are addressed by the catchment Council?
17. Is this the most appropriate one? How do the water users fit in?
18. How were the different stakeholders identified at the SCC level?
19. Are those the only stakeholders?
20. Do you think it is an effective representation of stakeholders?
21. Are the SCC the effective point for stakeholder identification? Or is there need for a parallel structure i.e. another forum where the civil society plays a central role- based on the understanding that civil society involvement and participation are embedded in the

broader development policy approach of SADC? For example the Every River Has It's People Project

22. What are the advantages with the existing set-up? What are the weaknesses?
23. How do you think the existing arrangement can be improved?
24. Do you feel represented using the current arrangement?

Checklist for the catchment council/ Catchment Manager

Introduction

This interview is part of a research that investigates the concept of 'local' participation in transboundary water resources management in the Limpopo Basin. The objective of this interview is to document and assess participation practices at selected 'local' sites in the Limpopo basin

1. How is the catchment council made up?
2. How is participation organised within the catchment?
3. Who participates and why?
4. What are their stakes?
5. Who is the most active member within the catchment council?
6. What drives participation within the catchment?
7. Being part of a transboundary river basin how do you interact (or communicate) with other catchment councils from other countries?
8. How would you describe the nature of problems faced within the catchment?
9. How are the transboundary water management problems faced within the catchment addressed by the department of water/ ministry responsible?
10. How are decisions taken at the catchment?
11. In your opinion are decisions taken at the catchment level used by representatives in transboundary negotiations?
12. Who should go to a transboundary meeting?
13. In your opinion what should influences decision-making in transboundary water management at the national level?
14. Currently what influences decision-making in transboundary water management at the national level?
15. What is the role of the catchment council in terms of transboundary water management?
16. When talking about transboundary water management, where should local in terms of participation be? Why? Is this the most appropriate one? How do the water users fit in?
17. How were the different stakeholders identified at the SCC level?
18. Are those the only stakeholders?
19. Do you think it is an effective representation of stakeholders?
20. Are the SCC the effective point for stakeholder identification? Or Is there need for a parallel structure i.e. another forum where the civil society plays a central role- based on the understanding that civil society involvement and participation are embedded in the broader development policy approach of SADC?
21. What are the advantages with the existing set-up? What are the weaknesses?
22. How do you think the existing arrangement can be improved?
23. Do you feel represented using the current arrangement?
24. What are the advantages with the existing set-up? What are the weaknesses?
25. How do you interact with NGOs that work within the basin?
26. Are you aware of the LBPTC?

Checklist for the Catchment coordinator

(Apart from questions from Catchment Council checklist)

The existing institutional structures/ organizational form

1. Is this the most appropriate organisational form? How do the water users fit in?
2. How were the different stakeholders identified at the SCC level?
3. Are those the only stakeholders?
4. Do you think it is an effective representation of stakeholders?
5. Are the SCC the effective point for stakeholder identification? Or Is there need for a parallel structure i.e. another forum where the civil society plays a central role- based on the understanding that civil society involvement and participation are embedded in the broader development policy approach of SADC? For example the Every River Has It's People Project
6. What are the advantages with the existing set-up? What are the weaknesses?
7. What NGOs are operational in the catchment or basin? Do they have a role to play in promoting useful participation?

History of the catchment

1. When it was formed- how were stakeholders informed? How were they informed to participate?
2. Who were the initial stakeholders? What was their stake? What issues did the catchment deal with initially? What is the difference now?
3. What projects have been carried out in the catchment to encourage participation within the catchment?
4. Since the SCC water tariffs are in rands will these funds be adequate to finance the activities of the SCC? (find out the number of permits first)

Interview guide for Government Officials

Introduction

This interview is part of a research that investigates the concept of 'local' participation in transboundary water resources management in the Limpopo Basin. The objective of this interview is to analyse the adequacy of multilateral, bilateral and national provisions for 'local' participation in transboundary water management.

1. **General questions**

Department/ministry name :

Address :

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1. How is participation in transboundary water management organised at the national level?
2. Who participates and why?
3. What drives participation in transboundary water management?
4. In your opinion where is the lowest appropriate level in decision-making in transboundary water management? Why?
5. What happens in practice?
6. How are decisions made at the catchment level regarding use and allocation and transboundary water adopted at the national level?
7. Do such decisions influence decisions at negotiations of transboundary water management?
8. Are multilateral, bilateral and national provisions for 'local' participation in transboundary water management adequate?
9. Are the SCC the effective point for stakeholder identification? Or Is there need for a parallel structure i.e. another forum where the civil society plays a central role- based on the understanding that civil society involvement and participation are embedded in the broader development policy approach of SADC? For example the Every River Has It's People Project
10. What are the advantages with the existing set-up? What are the weaknesses?
11. How do you interact with the basin organisation?
12. Why is there a rotating secretariat for the RBO?
13. Why is the LIMCOM secretariat taking long to be formed?
14. Where is it based now?
15. Why has Zimbabwe not ratified the LIMCOM Agreement

APPENDIX B: REGIONAL AND BASIN PARTICIPATION ISSUES/CLAUSES

SADC Protocol on Shared Watercourses

Provision	Issue/ clause
Article 3.7(b)	Watercourse States shall participate in the use, development and protection of a shared watercourse in an equitable and reasonable manner. Such participation includes both the right to utilise the watercourse and the duty to cooperate in the protection and development thereof, as provided in this Protocol.
Article 3.8 (a)(iii)	
(a)	Utilisation of a shared watercourse in an equitable and reasonable manner within the meaning of Article 7(a) and (b) requires taking into account all relevant factors and circumstances including:
(iii)	the population dependent on the shared watercourse in each Watercourse State
Article 4.3(a)	Management Watercourse States shall, at the request of any of them, enter into consultations concerning the management of a shared watercourse, which may include the establishment of a joint management mechanism.
Article 5.3(a) and (b)	
Article 5.3	Shared Watercourse Institutions
(a)	Watercourse States undertake to establish appropriate institutions such as watercourse commissions, water authorities or boards as may be determined.
(b)	The responsibilities of such institutions shall be determined by the nature of their objectives which must be in conformity with the principles set out in this Protocol.

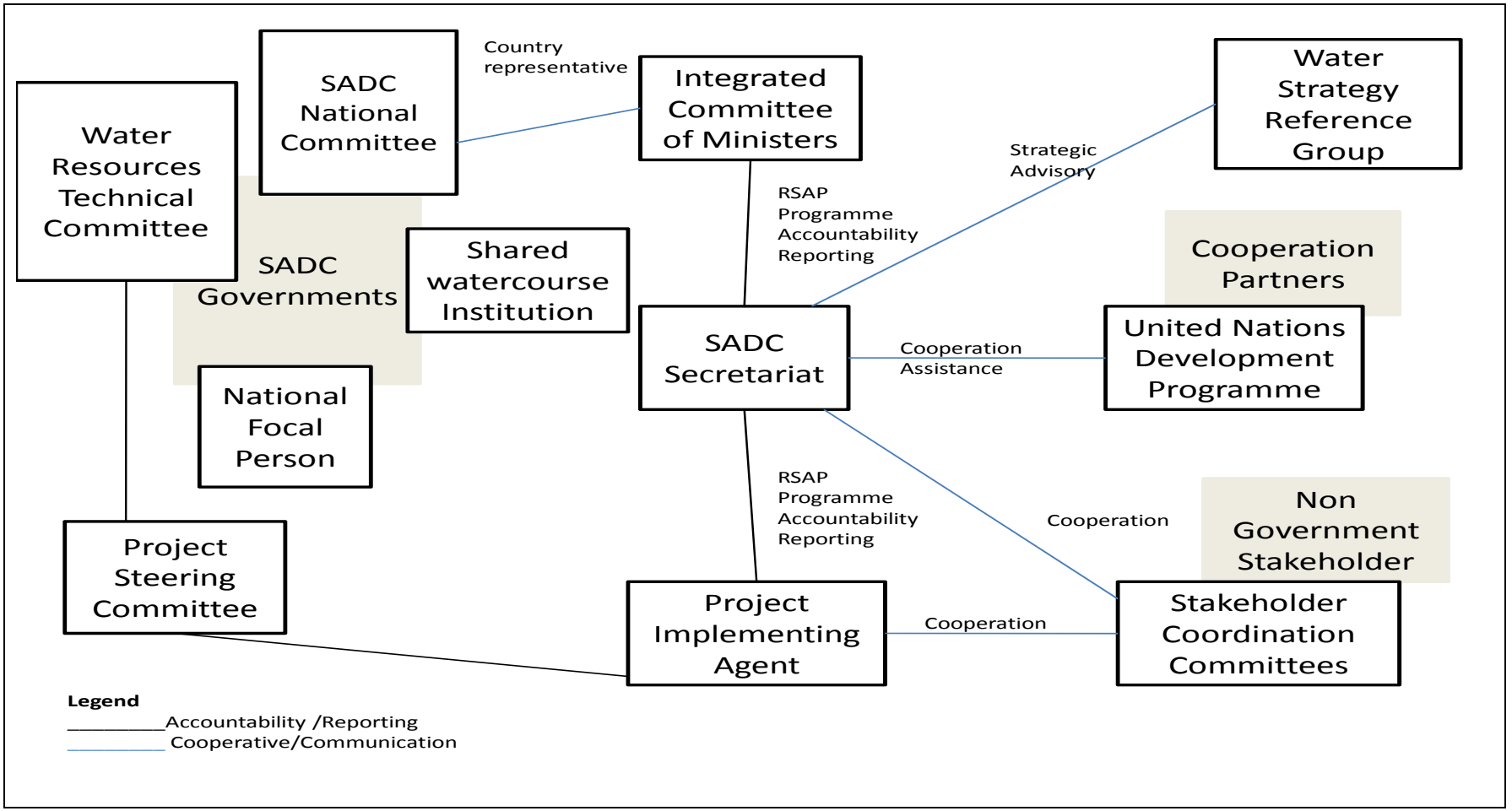
RWP (2005), RWS (2006), and RSAP-IWRM (2005-2010)

Strategic objective	Strategy	Policy	RSAP 2 (Projects)
Shared Watercourse Institutions To establish and strengthen effective and credible shared watercourse institutions in terms of the Protocol on Shared Watercourses	9.2(a) Strategy: Promote and support the accelerated establishment and institutional strengthening of shared watercourse institutions for basin management	**9.2.2. Policy:** A Watercourse Institution shall be established on each shared watercourse	**WG 1:** Implementation Programme for SADC Protocol on Shared Watercourses
	9.2(b) Strategy: Promote effective stakeholder participation in decision making by shared watercourse institutions and institutionalise cooperation with civil society	**9.2.8. Policy:** Stakeholder participation in decision making shall be promoted by Member States and/or SWCI. **9.2.9. Policy:** In the interests of IWRM, SWCI are encouraged to foster cooperative relationships with non-governmental and civil society grouping within the shared watercourse	**WG 2:** Promotion of Public Participation in Water Resources Development and Management
Institutional Arrangements at National Levels To create an enabling institutional environment at a national level, for the management of shared watercourses, decentralised decision-making and stakeholder participation to support integrated water resources management	9.3(b) Strategy: Promote and institutionalise effective stakeholder participation in decision making by national and catchment level water institutions, focusing in the role of civil society in representing community perspectives	**9.3.2. Policy:** Member States are encouraged to decentralise the management of water..., while maintaining appropriate institutional arrangements for the management of shared watercourses **9.3.3. Policy**: Member States shall develop and implement appropriate institutional arrangements to enhance the participation of NGOs and civil society organisations.	**WG 2:** Promotion of Public Participation in Water Resources Development and Management
Participation and Capacity Development To promote effective mechanisms for stakeholder participation, capacitation and empowerment	10.1 (a) Strategy: Develop mechanisms to encourage stakeholder participation	**10.1.1. Policy:** Water resources development and management at all levels shall be based on a participatory approach, with effective involvement of all stakeholders **10.1.2. Policy:** All stakeholders shall be empowered to effectively participate in the development and management of water resources at international, regional, river basin, national and community levels **10.1.3 Policy**: Member States and SWCI shall recognize the positive role played by NGOs in water resources management particularly at community level, and shall facilitate their participation at all levels in water development and management activities.	WG 2

Basin Agreements

Agreement	Issue/clause
Limpopo Basin Permanent Technical Committee Agreement (LBPTC) (1986)	Article 2 The LBPTC shall consist of four representatives of each Contacting Party, one of whom shall be nominated chairman, and each Contracting Party may co-opt additional suitable persons to take part as advisers in the deliberations of the LBPTC. The chairmanship and the venue of the meetings shall rotate among the Contacting parties in the order determined by the said chairman
Limpopo Watercourse Commission Agreement (LIMCOM) (2003)	Article 5.2 Each delegation shall consist of not more than three permanent members and such other advisors as each Contracting Party may determine, provided that a delegation may be accompanied by not more than three advisors at any meeting of the Council unless otherwise determined by the Council for any particular purpose. Article 7.2 (c) 7.2 the Council shall advise the Contracting Parties on the following matters: (c) the extent to which the inhabitants in the territory of each of the Contracting parties concerned shall participate in the planning, utilisation, sustainable development, protection and conservation of the Limpopo and the possible impact on social and cultural heritage matters;

APPENDIX C: MECHANISMS GOVERNING THE RSAP



(Source: SADC, 2005)

APPENDIX D: NATIONAL INSTRUMENTS

Instrument	Issues/clauses
1998 Water Act [Chapter 20:24]	Section 12(2)(a) (2) In preparing an outline plan, the National Water Authority and the catchment council concerned shall- (a) consult the authorities and bodies which in their opinion are likely to be concerned with the development of the catchment area or catchment areas of the river system concerned and the utilization of its water resources Section 15 (1) and (2) 15 Publication of outline plans (1) After having examined an outline plan, the Secretary shall submit it, together with his recommendations on it, to the Minister. (2) On receipt of the outline plan and recommendations submitted in terms of subsection (1) and after considering them, the Minister shall- 10 (a) give notice in tire Gazette and in a newspaper circulating in the area to which the outline plan relates of the places at which the outline plan will be publicly exhibited and the period within which objections or representations in, connection with the outline plan may he made to the Minister; and (b) exhibit at the places and for a period of not less than thirty days copies of the outline plan. Section 20 (1)(a) and (b) 20 Establishment of catchment councils (1) The Minister, in consultation with the Zimbabwe National Water Authority may, by statutory instrument- (a) establish a catchment council in respect of an area of a river system specified in that instrument; and (b) fix the number of members representing water users in the river system who shall constitute the catchment council and the manner in which they shall be elected or appointed Section 21(3)(i), (ii) and (iii) 21 Functions of catchment councils (3) For the better exercise of its functions, a catchment council may delegate to subcatchment councils, either absolutely or subject to conditions, such of its functions as it thinks fit: Provided that- (i) the power to grant permits shall not be delegated to a subcatchment council; (ii) the delegation shall not prevent the catchment council from exercising the functions concerned; (iii) the catchment council may amend or withdraw any decision of a subcatchment council in the exercise of its delegated functions

Instrument	Issues/clauses
Statutory Instrument 47 of 2000	Section 2 Interpretation 'stakeholder group ' means the following- Rural District Councils. Communal Farmers. Resettlement Farmers. Small scale commercial farmers. Large scale commercial farmers. Indigenous commercial farmers. Urban authorities. Large scale mines. Small scale mines. Industry and any other stakeholder group the subcatchment council may identify Section 3(3)(a) and (b) No later than thirty days before the date appointed by the Minister as the date on which the subcatchment concerned shall come into operation, the returning officer shall serve on all stakeholder groups a notice (a) inviting five stakeholder representatives from each stakeholder group to a meeting at a specified date, time and place for the election of members of the subcatchment council, and (b) inviting the submission of up to three nominations in priority order from each of the stakeholder groups the nominees of which may include stakeholders other… Section 3(5) The returning officer shall ensure that the different stakeholder groups under the jurisdiction of the subcatchment council elect their own representatives to the subcatchment council and shall to that end render such groups the fullest assistance possible.

APPENDIX E: DETAILED ACCOUNT OF LOCAL LEVEL PROCESSES

Ward 8- Makwe (March 2- 2009)

Stakeholder Identification

The participants at the Makwe workshop were presented with the existing stakeholder groups as reflected in the Statutory Instrument 47 of 2000. There was an argument that all water interests should be represented and not blocked together apart from a few. At first, participants identified domestic water user, irrigators, brick moulders, and livestock raring as the groups that should be represented. The facilitator however, advised them that according to the Act, domestic water users, brick moulders and livestock raring made up primary water users. The group agreed to have primary water users as a category and irrigators. Miners were identified as another group that needed specific representation after people acknowledged that the activity took place in the ward though it was considered illegal (gold panners). A question arose that how do you deal with a Sub-catchment that mainly uses water for livestock watering or ranching and not irrigation. This question came about when thinking about raising money for the SCC (this question was specifically addressed during the CC meeting. It is reflected in ranchers being identified as a stakeholder group).

Stakeholder Representation

When asked who will represent the identified groups, the participants resolved, by show of hands, that they wanted other representatives other than traditional leaders and or councillors to represent the community on water issues. Participants agreed that the three identified groups should be chosen for each ward in the district. However, they need to cooperate with existing structures in order to organise themselves at the ward level. They suggested that the councillor assists them to organise themselves at the ward level and the RDC at the district level

Organisational form

When participants were asked how best they wanted to be organised a man within the group felt that they should be told how to get it done. However, later participants proposed two ways in which they could be organised. The first was that ward level representatives go to the SCC. The second involved ward level representatives going to the district where three district representatives would be chosen for the SCC. The second proposal was passed as it was felt to be more feasible given that there could only be 15 members of the SCC.

Ward 14- Guyu (March 4- 2009)

Stakeholder Identification

At Guyu there were problems with water management since water was shared with the police and infantry. Relations between the scheme and the infantry had not been very amicable. When asked how the ward wanted to share water and how the people could find a way of working together responses varied. A woman from among the farmer said 'As far as water is concerned, we cannot share'. While the majority of the participants felt that it would be a good idea for people in the ward to come together to talk about water a man answered 'Farmers only should talk about water and not everyone'. The process of identification was as a result problematic. Progress was made and participants identified primary water users, irrigators and special interest groups (that would include the police and infantry) as the main stakeholder groups in the ward.

Stakeholder Representation

It was agreed that a special committee be formed that would take up issues to the responsible people (for example ZINWA or government). The idea of using existing leadership to represent them in water matters was rejected. Given problems faced during identification, representation was easier. Three representatives were to be chosen at the ward level to represent the identified stakeholder groups.

Organisational form

The processes of arriving at an organisational form were similarly difficult as the group wanted to be told how to go about it. In addition, the group could not agree on what happens beyond the ward level.

Ward 6- Wabayi (March 6-2009)

Stakeholder Identification

The process of identification was rather slow because people feared that choosing representatives would result in them being levied for water from Gaswa dam. It was also felt that representation was a new thing and they therefore preferred to be told how best they could represent themselves and not decide on their own. All this was discussed even though they ultimately felt that they wanted to be represented as water users. In the end primary water users and irrigators were identified as stakeholder groups.

Stakeholder Representation

Debated ensued on how they should be represented. Others felt that irrigators and those that use water for livestock could represent the stakeholders identified as it was felt that they were familiar with the other users. When asked whether to use existing committees (borehole/dam/irrigation), the group said that they wanted something new. They resolved that representation be based on stakeholder groups identified by village. Each village identifies two representatives representing each group- someone intelligent.

Organisational form

It was agreed that two representatives would be chosen per village and would come to the ward level. From there two representatives would be chosen to represent the ward at the district level.