

Full Length Research Paper

Representational participation of informal and formal smallholder irrigation in the Zimbabwe water sector: A mirage in the Mzingwane catchment

Oniward Svubure^{1*}, Rhodante Ahlers² and Pieter Van Der Zaag²

¹Department of Irrigation and Water Engineering, Chinhoyi University of Technology, P. Bag 7724, Chinhoyi, Off Harare-Chirundu Highway, Zimbabwe.

²UNESCO-IHE Institute for Water Education, Westvest 7, P. O. Box 3015, 2601 DA, Delft, The Netherlands.

Accepted 19 November, 2015

The water sector reform process in Zimbabwe culminated in 1999 with the establishment of catchment councils and their respective sub-catchment councils in all the seven delineated catchment areas of the country. These councils provide the formal arena where stakeholders articulate and safeguard their interests in the water sector through representational participation. This study focussed on the key stakeholder, formal and informal smallholder irrigation and investigated their representation in the sub-catchment and catchment levels respectively. A framework of analysis, informed by the notions on representational participation was constructed to help us understand how smallholder irrigation gains representation in the new water councils. Using the case of the Mzingwane catchment in southwest Zimbabwe, the study found that the new water councils were virtually unknown to the water users on the ground. The representational participation of smallholder formal and informal irrigation in the Mzingwane catchment can be best described as a mirage. The research study recommends the adoption of the micro-catchment level as the lowest tier for integrated water management and a union for smallholder irrigation Water Users Associations (WUAs). Also, more financial support to provide technology can leverage the participation of more community members in productive water use. A review of the framework to include the role of politics is also recommended to improve its analytical power.

Key words: Smallholder formal and informal irrigation, water users association (WUA), representational participation, catchment councils, sub-catchment councils, Mzingwane catchment, Zimbabwe.

INTRODUCTION

The Water Act of 1998 together with the Zimbabwe National Water Authority (ZINWA) Act provided the legal framework that led to the birth of new institutions of water resources management in Zimbabwe. The country was subsequently delineated into 7 catchments or hydrological units namely, Gwayi, Manyame, Mazowe, Mzingwane, Sanyati, Save and Runde based on the country's major river systems. Sub-catchments were also delineated in each catchment and together these were adopted as the water resources management units. The

statutory regulations identified different water users and classified them in stakeholder categories or interest groups. The interest groups identified include the Commercial Farmers Union (large scale commercial farmers), Rural District Councils, Zimbabwe Farmers Union (smallholder farmers), resettlement farmers, traditional leaders, smallholder irrigation, small scale commercial farmers, indigenous commercial farmers, urban authorities, forestry and mining (Zimbabwe, 2000a, b). Thus the fact that government identified the stakeholder categories without consultation tacitly mandated participation along certain lines (Derman et al., 2000). Thus each stakeholder category elects a representative into the sub-catchment councils (SCC) to safeguard the group's water interests. The SCC itself should not have more than 15 members; the catchment

*Corresponding author. E-mail: osvub@yahoo.com or osvubure@cut.ac.zw Tel: +263 67 2203-5, 29053-5. Fax: +263 67 28957.

Table 1. An overview of Zimbabwe's irrigation sector in 1999.

Farming sector	Area under irrigation (ha)	Area (% of total)
Large (white) scale commercial	126 000	73
Parastatal (ARDA) estates	13 500	8
Communal and resettlement	9 300	5
Small scale out-growers	3 600	2
Informal/micro-scale	20 000	12
Total	172 400	100

Adapted from: FAO (1999).

council (CC) on the other hand is composed of members from the SCCs who include the chairpersons and their vice-chairpersons and one or two other members. Clearly stakeholder participation in the water sector is premised on representation. Understanding how representational participation unfolds both conceptually and in practice as a tool to safeguard the interests of stakeholders in the new water councils arena becomes an imperative. Using the case of smallholder formal and informal irrigation, a key stakeholder group in the water sector in Zimbabwe, this study sought to understand how representational participation unfolds conceptually and in practice as an instrument to uphold stakeholders' interests.

Agricultural water use in Zimbabwe

Agriculture is by far the largest user of harnessed water in Zimbabwe. The agricultural water uses include irrigation, fish farming and livestock watering. The irrigation sub-sector is the largest and most significant consumer of water among these uses accounting for over 80% of total water use in the country while the balance is shared by urban, industrial and mining activities (WRMS, not dated). By 1999, over 152 000 hectares of land were under irrigation (FAO, 1999). In addition there are estimates of about 20 000 ha of informal or micro-scale irrigation activities in the communal areas (FAO, 1999) (Table 1). These informal irrigation activities are in the form of vegetable gardens normally used in the dry season along stream banks and floodplains. Some gardens are located around water points (boreholes and wells) and also in wetlands. In these small gardens, water is provided for by hand from the nearby water pools in rivers and streams or from the hand-dug wells in the wetlands. Because of its informal nature, micro-scale irrigation is not usually included in official estimates of the total irrigation area.

Situating smallholder formal and informal irrigation in Zimbabwe's irrigation sector

A smallholder irrigation scheme refers to a group of

farmers irrigating together and sharing the same water source and supply line. Irrigators are allocated plots within the irrigation command area and there is individual control of irrigation and farming activities by each farmer in his/her plot. The plot sizes are small and normally range between 0.1 and 2 ha (FAO, 1999). Such irrigation schemes are considered as formal in the smallholder farming sector. At each irrigation scheme, farmers Irrigation Management Committees (IMCs) have been established with the help of the government extension agency, Department of Agricultural Technical and Extension Services (AGRITEX). The main objectives of the IMCs are to enhance farmer's participation in management and decision making at the scheme level, introduce a system of discipline among the farmers and to control infield water distribution. The IMC functioned in such a way as to prepare farmers for a complete take-over of the management functions after withdrawal of government support. Government's policy since independence in 1980 has been to promote farmer-managed schemes where possible (FAO, 1999).

The value of the informal irrigation land as gardens sites for production of vegetables in urban and peri-urban areas has already been confirmed (Manzungu and Van Der Zaag, 1996; FAO, 2005). Once they were considered women's activities but perceptions have changed due to the harsh socio-economic conditions prevailing in Zimbabwe. Gardening activities are now an important source of family food and income. It is also likely that these informal irrigation sites would grow in importance due to the dietary nutritional requirements needed to mitigate the effects of the HIV/AIDS pandemic. A recent FAO study concluded that the potential to improve both household and community food and nutrition security through garden activities is high if issues of access to water, inputs, produce marketing arrangements, and farmer empowerment can be addressed (FAO, 2005). As the informal irrigation lands continue to grow in importance for agriculture and grazing, and also as protected environmental areas, they have also become sites of intense contestation in the rural areas (Derman et al., 2002). This can be anticipated as they have become critical for household food security, income, and survival. The new Water Act though is silent on the informal

Table 2. An overview of Zimbabwe's irrigation sector in 2003 after the Agrarian Reforms.

Farming sector	Area under irrigation (ha)	Area (% of total)
Large (white) scale commercial	8 000	10
Parastatal (ARDA) Estates	7 620	10
A1 farming sector	7 600	10
A2 farming sector	12 500	16
Indigenous large scale commercial	9 250	12
Communal and resettlement	9 300	12
Small scale out-growers	3 600	4
Informal/micro-scale	20 000	26
Total	77 870	100

Source: AGRITEX (2003) and own computation.

irrigation activities (Derman et al., 2002). However because of the magnitude of the sector, it will no doubt have a significant impact on water consumption in the catchment areas. This may imply that the informal irrigation sector is a legitimate stakeholder category in the catchment areas.

Irrigation sector structural changes brought by the Agrarian reforms

The Agrarian Reforms, called The Fast Track Resettlement Programme brought significant structural changes to the irrigation sub-sector in terms of its composition, size and geographical distribution (Zawe et al., 2003). Beginning in July 2000, the government embarked on a hotly disputed fast track resettlement programme that saw large chunks of land being redistributed from the large-scale white minority commercial farmers to the majority blacks based on the A1 and A2 resettlement models. The A1 model is a resettlement pattern based on the village system in which settlers are individually allocated 6 ha of arable land and about 12 ha of communal grazing land whereas the A2 model is based on commercial farm settlement pattern in which settlers are individually allocated land holdings ranging from 20 ha to about 1000 ha. With this land redistribution, irrigated land redistribution also occurred (Table 2). This implies new entrants of A1 and A2 interest groups with a stake in water. The A1 and A2 farmers irrigate about 7 600 and 12 500 ha respectively (AGRITEX, 2003). The remaining large scale white commercial farms now irrigate a total of about 8000 ha (AGRITEX, 2003). About 94 500ha of irrigable land in the former white commercial farming lands became dysfunctional following the chaotic fast track resettlement programme. In some cases the movable irrigation equipment was removed by the outgoing farmers wishing to salvage anything from their once state of the art irrigation systems. While in most cases thieves took advantage of the reigning chaos to steal the movable equipment and even vandalising the immovable parts of the irrigation systems (Zawe et al., 2003). This

unfortunate episode left the irrigation sector with a huge rehabilitation bill.

The size of the irrigated area in the communal and resettlement areas has only changed marginally. The formal and informal irrigation sub-sector with a combined estimated area of more than 29 000 ha clearly became the largest stakeholder category both in terms of area irrigated and number of families depending on it. This research therefore studied several formal and informal irrigation Water Users associations (WUAs) in a selected sub-catchment in Zimbabwe in order to understand how they gain representation/non-representation in the new water resources planning and management institutions.

THEORETICAL CONCEPT

The concept of representational participation is envisaged as the basic tool to safeguard the interests of stakeholder groups in the new water councils. Our proffered conceptual framework was generated by reflecting on representational participation concepts by Lowry et al. (1997), Ohio State University (2000) as well as based on the evidence from the Mzingwane catchment case. Lowry et al. (1997) raised important analytical questions that have never been definitively answered in our endeavour to understand the concept of representative democracy. Our analytical framework reflected on some of these questions which include: How are the representatives elected? What is their motivation? What does it mean to represent? Does it mean advocating the constituents' views as accurately as possible? Does it mean acting in what the representative sees as is in the constituent's best interest? What

accountability should there be between the representatives and those they represent? In theory and practice, these questions are important. Our framework also drew from the Ohio State University (2000) concept on citizen participation in community development which lists conditions or principles under which citizens will likely participate in a community activity. We borrowed the principles of positive benefits to be gained, availability of an appropriate organizational structure and a better

knowledge of the issue as leverages to representational participation (Ohio State University, 2000). Our framework defines the term 'representation' to mean the act of representing; standing in for someone or some group and speaking with authority in their behalf. As in politics, if the public is to participate in government, citizens must select a small number from among themselves to act for them. In Zimbabwe, the stakeholder interests/stake in water resources is formally safeguarded through representational participation in the catchment and sub-catchment councils arena. We also included the combination of technology and the facilitation by other institutions and institutional arrangements leading to the formation of the formal and informal smallholder irrigation WUA models to complete our proposed analytical framework. Technologies provide the means to harness, control, and apply water on the land for productive use leveraging community members' participation in irrigation WUAs. Manzungu (2002) observed that without the resources to access water, there is no meaningful stake for the poor communities in the water sector.

Research objectives

The objectives of the study were to:

- i. Understand how representational participation unfolds both conceptually and in practice as a tool to safeguard the interests of both smallholder formal and informal irrigation WUAs in their new water councils.
- ii. Test an analytical framework that might help us understand the representational participation of smallholder formal and informal irrigation in the new water councils and see how it works in practice.

Specific questions that guided the study included: awareness of the SCC and CC by the informal and formal irrigators? How the representatives are elected? What their motivation is? What accountability exists between the representatives and those represented? What does it mean to represent? What are the main issues raised in the SCC and CC?

MATERIALS AND METHODS

Site selection

The research was conducted in the Mzingwane catchment (Figure 1). In this catchment, a large research program is currently underway that seeks to develop a framework for new IWRM based water governance from village to basin scale in the Limpopo basin. A lot of data and knowledge generation is anticipated. This research therefore intends to contribute to this body of literature and this largely motivated the choice of the study area. A recently commissioned irrigation scheme, Zhulube (commissioned in July 2003) was selected for the formal irrigation studies. The small Zhulube micro-catchment (Figure 2) encompassing the Zhulube

irrigation scheme, several dams and informal irrigation sites was subsequently delineated as the unit of study. A total of four informal irrigation sites were identified for the study as well. The small Zhulube catchment falls under the Upper Mzingwane sub-catchment area making the Upper Mzingwane Sub-catchment council (UMSCC) another decision-making arena for this study in addition to the Mzingwane catchment council (MCC) itself.

Description of the study area

The Mzingwane catchment

The Mzingwane catchment (Figure 1) is a sub-basin of the larger transboundary Limpopo basin in Southern Africa, straddling the 4 countries: Botswana, Mozambique, South Africa and Zimbabwe. The Mzingwane catchment is one of the 7 catchments in Zimbabwe and is located in the semi-arid south-western part of Zimbabwe. The catchment occupies an area of 15 695 km² and it is subdivided into 4 sub-catchments, namely: Shashe, Upper Mzingwane, Lower Mzingwane and Mwenezi.

The small Zhulube catchment

The Zhulube micro-catchment, a small part of the Upper Mzingwane Sub-catchment is located close to Filabusi (Figure 2), the main business centre of Insiza district. The river system of the Zhulube catchment consists of the Zhulube River, also referred to as the Tshazi or the Gobalidanke on different maps. The Zhulube River has its source from a seasonal wetland in the south-east part of the catchment just below the Maholehole Business Centre (Figure 3). A serious gully, called the Gobalidanke has developed in this upper part of the Zhulube River and it continues to cut back upwards toward the wetland. The Zhulube River then flows westwards into one almost completely silted dam, then into another completely silted dam before it feeds into the new Zhulube dam. It then flows southwest into the Mzingwane River. The Tshazi River forms the main right bank tributary of the Zhulube River, but it is also fed by several smaller streams. These streams only flow for a few hours after a storm, while the Zhulube River is sub-perennial. The northern part of the catchment is dominated by greenstone-derived clays and loams while the southern part is dominated by granite-derived sandy soils. These granite-derived sands have a sodium-rich (sodic) sub-layer which is largely responsible for the development of the Gobalidanke gully. The Zhulube soils are generally shallow and the high ground is gravely and stony. The soils are however rich in gold deposits. Many people are thus engaged in illegal gold panning as a source of livelihood. The environmental consequences of the gold panning activities are disastrous.

The south-western part of Zimbabwe is generally a dry region receiving an erratic rainfall distribution pattern. The mean annual rainfall ranges from 450 to 600 mm. The rain season is short ranging from 80 to 100 days and stretching from November to March. At Filabusi, the annual rainfall averages 590 mm over the last 70 years. The rainfall range over the same period was from 250 to 900 mm. Crop production without supplementary irrigation is therefore a highly risky enterprise.

The vegetation of the Zhulube area is characterized by the *Colophospermum mopane*, the *Dichrostachis*, and the *Acacia* as the dominant tree species. These trees provide browse for the cattle and goats. The *Eragrostis*, *Aristida* and *Heteropogon* are the dominant grass species in the catchment.

The Zhulube catchment boundary almost coincides with the Ward 1 boundary. Maholehole is the main Business Centre of the ward and it is located right on the boundary with Ward 2 in the southeast part of the catchment. The Zhulube area has both a

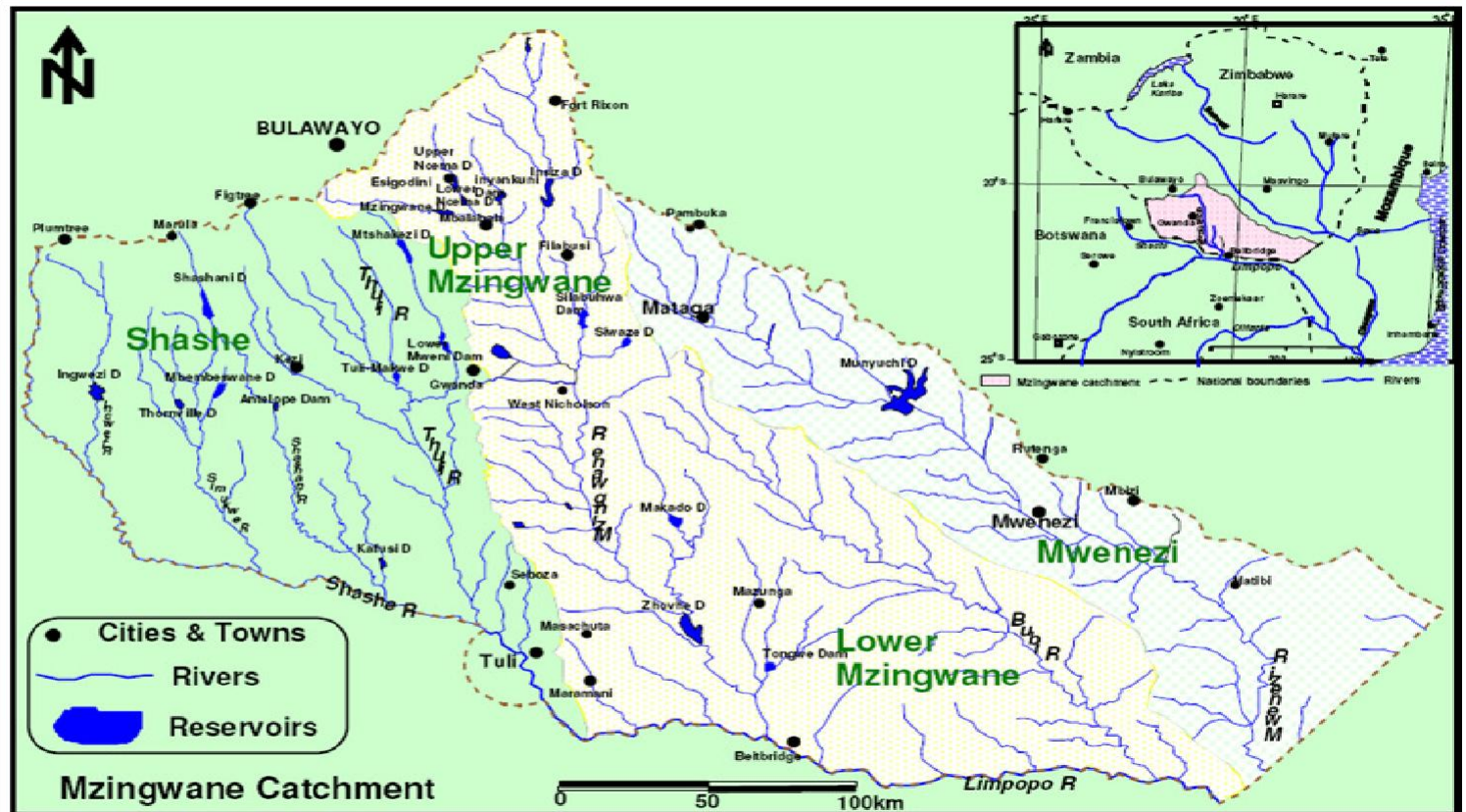


Figure 1. Mzingwane catchment map (Source: Love, unpublished).

primary and a secondary school. A clinic also serves the area and its location is under threat from the advancing Gobalidanke gully. The area is well served with over 15 boreholes and wells for multipurpose water but mainly for domestic needs. On average, a borehole or well is located less than 500m from a homestead.

Data collection methods

This research employed the case study method research strategy. Yin (2003, 21) defined the case study as “an empirical enquiry that investigates a contemporary

phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. We consciously wanted to cover the contextual conditions of the representational participation of the irrigation WUAs in the water councils and in the process benefit from the inherent multiple sources of evidence (Yin, 2003). The objective was not to make statistical generalization, that is an inference about a population, but analytic generalization in which previously developed theory was used as a template with which to compare empirical results of the case study (Yin, 2003).

A mixture of qualitative data collection techniques was used. One of the techniques we relied a lot upon was

participant observation in which we were able to see behavioural practices and patterns of the irrigators from our everyday interactions with them. We were also able to conduct several focus group discussions with the irrigators. Where we had large group numbers participating, we followed up issues of interest with smaller groups of say 3 or 4 members. We also employed the semi-structured interviews research tool conducting these on key informants. The key informant categories were: members of the management structures of the irrigation, ordinary irrigators, local leadership outside the irrigation activities, officials of government agencies and NGOs. We were also privileged to attend one MCC meeting and a UNDP

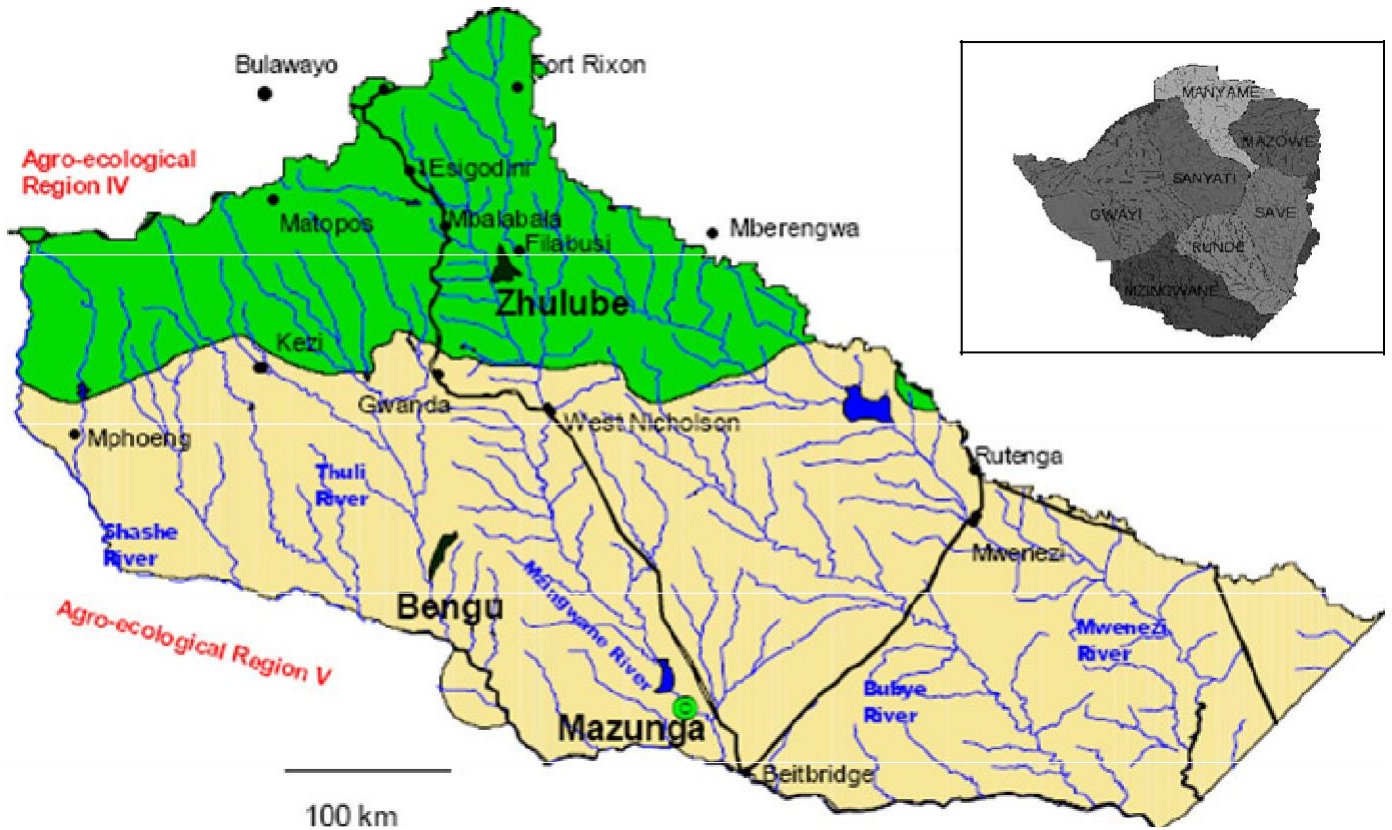


Figure 2. Zhulube micro-catchment location map, part of the Upper Mzingwane Sub-catchment in south-west Zimbabwe. (Source: Love, unpublished and own changes).

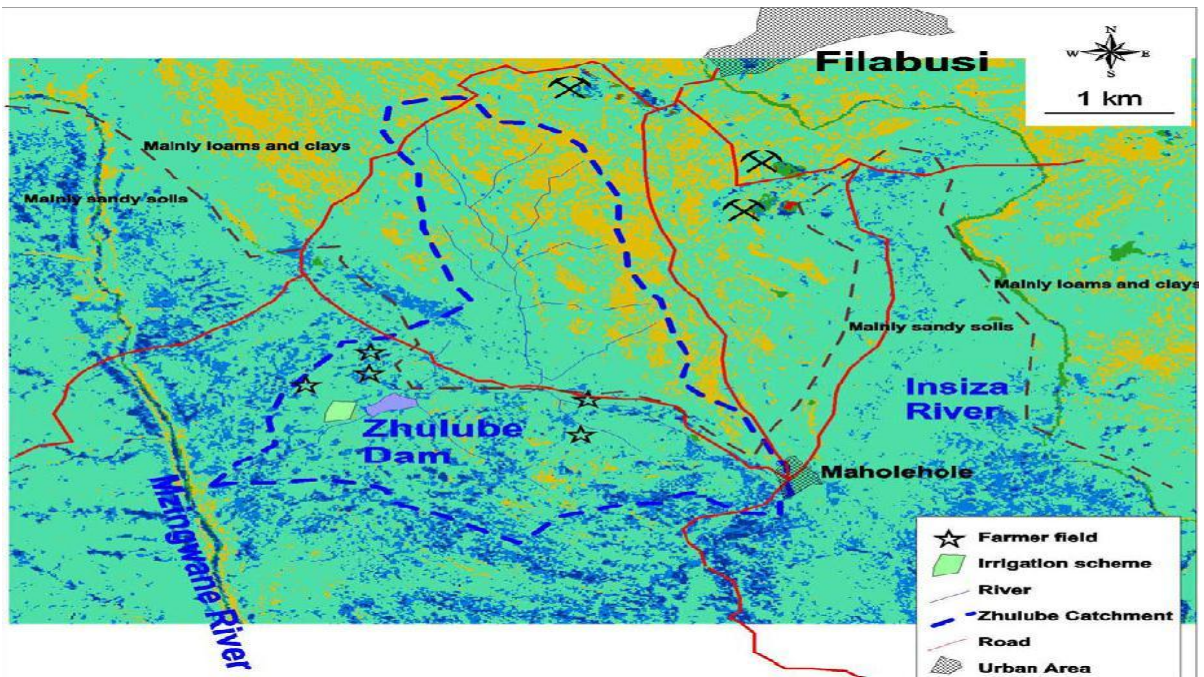


Figure 3. Land use map of Zhulube micro-catchment, based on unsupervised iso-cluster classification of Landsat Scene p170r074. Colour code: light green = mixed impact land (pasture lands, settlements and sparse bush); blue = fields/bare earth; dark green = open water; orange = trees and good vegetation. (Source: Love, unpublished).

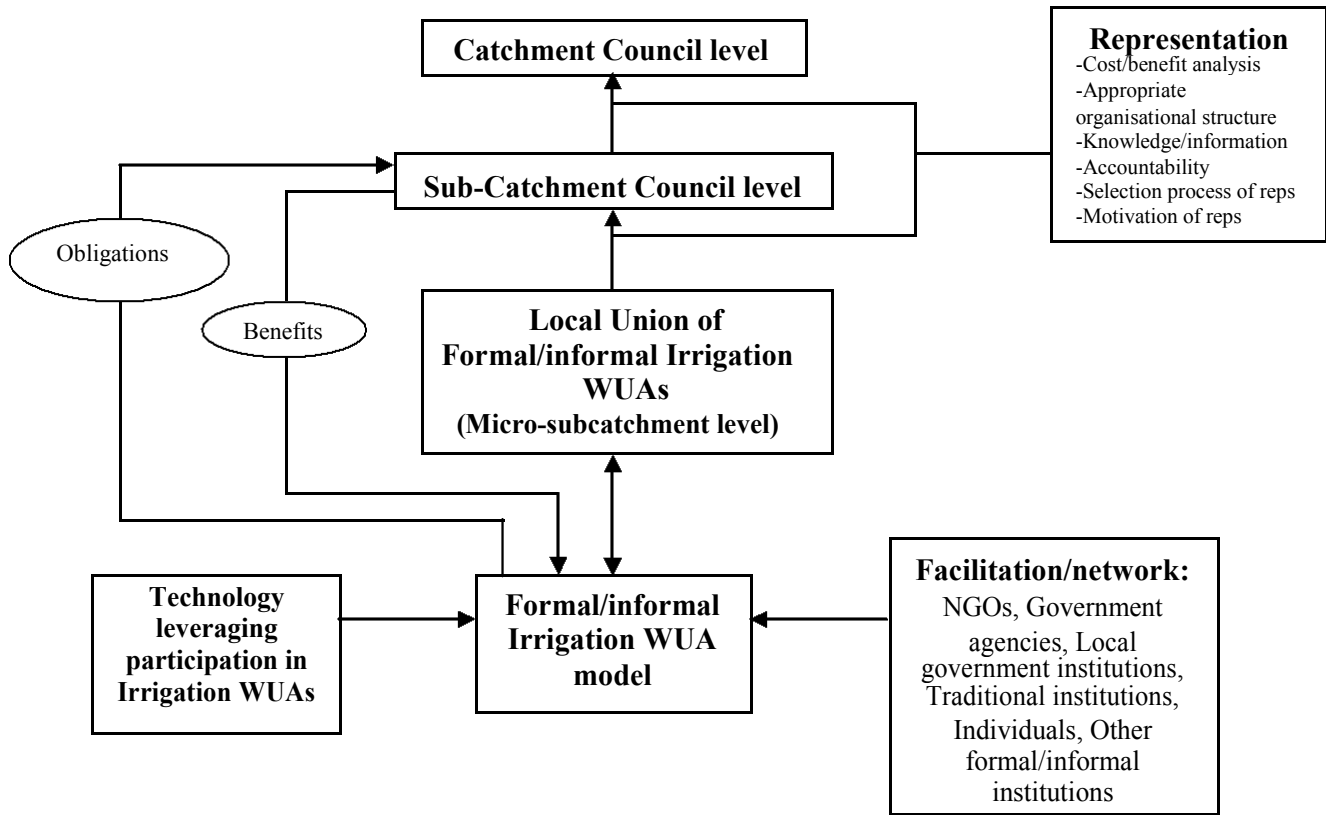


Figure 4. Smallholder irrigation and the water sector reforms in Zimbabwe: A conceptual framework for representational participation.

workshop for the councillors. In addition, we were also able to study recorded minutes of previous meetings of both the MCC and UMSCC and conduct semi-structured interviews with the respective council chairpersons. The data collection exercise for this study was quite intensive and was conducted during the period November 2006 to January 2007.

RESULTS AND DISCUSSION

Conceptual framework

This study proffers an analytical framework (Figure 4) to help us understand the representational participation of smallholder irrigation in the new water councils.

The framework was constructed by drawing on the concepts on representational participation (Lowry et al., 1997; Ohio State University, 2000) already alluded to as well as based on the evidence from the Mzingwane catchment study.

Evidence from the Mzingwane case suggested the need for a union of formal and informal smallholder irrigation WUAs at the micro-catchment level as the organizational structure (Ohio State University, 2000) from which to elect representatives to the SCC. The SCC in turn electing its representatives to the CC. Informal and formal irrigation can form separate unions for effective

representation in the sense that there will be separate representatives for each stakeholder group. The provision of technology by mainly World Vision in combination with facilitative and networking role of existing institutions and institutional arrangements to cause the birth of smallholder irrigation WUA models in the Zhulube micro-catchment was clearly evident. The donor fraternity and the government agencies play a pivotal role in assisting rural communities with technologies to access water for productive use and they also have a strong influence on the institutional arrangements/developments of the WUAs. In building the framework, we chose to focus on the technology factor in order to widen the analytical view that the lack of

appropriate technology can curtail community engagement in water related projects thereby reducing their stake in the water sector and vice-versa.

Catchment councils awareness in the Zhulube area

The smallholder formal irrigation WUAs

The Zhulube irrigation scheme WUA is the major water user in the entire Zhulube catchment. World Vision funded the construction of the irrigation scheme. Several

institutions and individuals occupying positions of power within and outside Zhulube catchment played important roles that gave birth to the Zhulube formal irrigation. A total of 41 plot holders in the WUA are directly benefiting from the 800 000 m³ Zhulube reservoir through irrigating a total area of 15 ha annually. The Zhulube catchment falls under the jurisdiction of the UMSCC, which in turn falls under the jurisdiction of the MCC. The WUA chairman was not aware of the existence of both the UMSCC and the larger MCC; water institutions that were established and became operational since 1999. The irrigators too were also not aware of the existence of the water councils. Asked about their participation in the water sector reform process of 1995 to 1998 that produced the legal framework for the water councils, the irrigators professed that the consultative process if ever it was held, skipped their entire community. This agrees with the assertion that the water reform process lacked meaningful consultation of the rural communities (Latham, 2002). Other researchers also assert that the whole process of setting up the councils in Zimbabwe was hurried (Kujinga, 2002). Such low levels of public awareness impact negatively on stakeholder participation. One of the conditions that make citizens more likely to participate in government decision-making processes is when "...they are well informed about the issue or opportunity concerning them..." (Ohio State University, 2000). The lack of awareness of the councils by the Zhulube formal irrigation WUA was well corroborated by the ward councillor. The ward councillor highlighted that the role of both the UMSCC and MCC was not spelt out to the people. The ward councillor added that the water councils still have a lot of awareness creation work to do if they expect people to cooperate with its so-called statutory obligations. While the grassroots profess lack of awareness of the water councils, one wonders why the scenario is as it was some 7 years or so after the councils were established. The fact that Zhulube is severely water-stressed should in a way have made the people inherently obligated to be aware of water councils especially 7 years after they were introduced. Probably the people may have chosen to be unaware of the water councils after noticing a lack of positive impact from them on the ground.

Zhulube Irrigation Scheme is therefore not paying fees for the use of water to both the UMSCC and ZINWA as is required by the statutes. This is ample evidence that the Zhulube formal irrigation WUA was not participating in the new institutions of water resources management (UMSCC and MCC) since payment of the Water Levy for commercial water use is one of the obligations of stakeholders represented. The irrigators too expressed ignorance of both councils and the statutory requirement to pay a Water Levy for commercial water use. Manzungu (2004) made similar observations that the emphasis on making all water users pay for water in the spirit that water is an economic good appear to convey

a message that the whole process is a revenue collection exercise. The members of the Zhulube irrigation scheme WUA are already paying a monthly levy (indirect levy for water use) which is used to cover some of the irrigation scheme needs. The water tax required by the catchment councils and ZINWA for statutory functions tends to go out of the area where it is generated and will not be used for the local water management functions. The catchment councils and ZINWA risks being seen as taxmen who must be evaded and whose functions and/or benefits to the paying water users are obscure.

The informal irrigation WUAs

A pattern emerges from the genesis of the community nutrition garden WUAs in the Zhulube catchment. Government agencies and the World Vision initiated the garden projects through community mobilization, donating vegetable seed, boreholes and fencing material. The Sisebenzelandawenye and Green Valley community nutrition garden WUAs were initiated by World Vision under a 'family nutrition program' as a way to fight rampant malnutrition reportedly prevalent in the area among children under 5 years. Whereas the Nyelane and Umthombo Wesizwe were started in 1991 at the initiative of the Ministry of Health as a government programme to mitigate the 1991 drought-induced food shortages. These community gardens were to be the feeding centres for the under 5 years. The facilitative role of the external institutions (World Vision and the Ministry of Health) in providing the technological means to access water for productive use is manifested here. It can therefore be argued that the access to/lack of financial/technological support can leverage/constrain the participation of rural communities in the water sector.

The entire community garden WUAs studied were completely unaware of the existence of both the UMSCC and MCC. When discussing this subject with the members of the Umthombo Wesizwe community garden, they asked what these institutions do. We took quite some time to explain about these water councils and carefully explained the cattle levy, after realizing that the majority of them were also cattle owners and the fact that it is a levy which they may be obligated to pay in future. The subject of the cattle levy inspired quite some discussion among the members. All of them wanted to say something and some were really outspoken against it; misconstruing it as another government excuse to expand its revenue base.

The community garden WUAs among other things ask a joining fee from their members and they also from time to time ask their members to contribute money for specific tasks for the respective WUAs; all this can be viewed as a system of levies. This is similar to the system of levies administered in the Zhulube formal irrigation WUA. Given this background, these informal irrigation

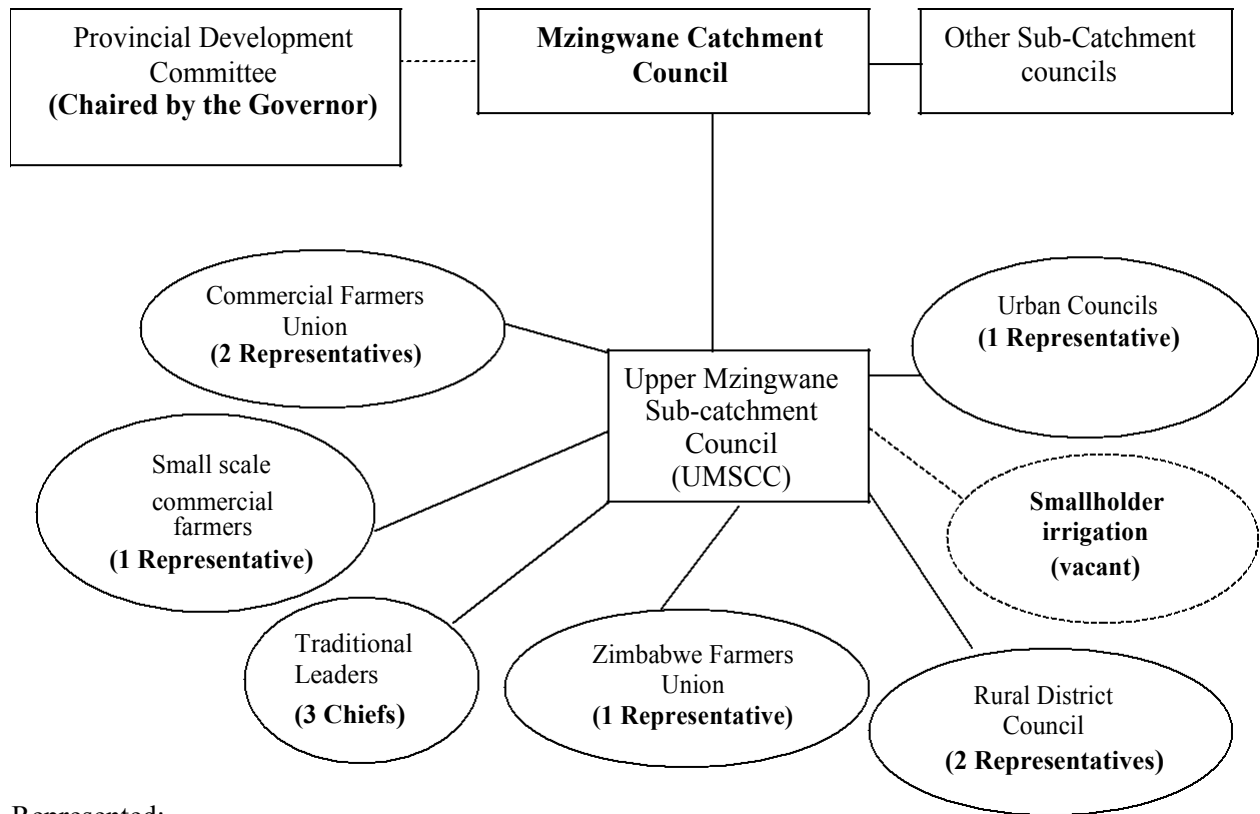


Figure 5. Represented and some non-represented stakeholder groups in the UMSCC in Zimbabwe, 2006.

WUAs may not understand the sub-catchment council levy and the ZINWA levy, levies that are remitted out of the local Zhulube area.

A glimpse of the smallholder irrigators’ seat at the UMSCC table

Figure 5 shows the seats around the UMSCC table. These seats represent the elected stakeholder representatives and the UMSCC table is the decision-making arena on water issues in the sub-catchment.

Representation of smallholder irrigators in the sub-catchment council

The smallholder irrigation sector does not have a representative in the UMSCC, implying that the smallholder irrigation seat on the UMSCC table is empty (Figure 5). Our insight into the smallholder irrigation seat at the UMSCC table was gained through a key stakeholder interview with the sub-catchment council chairman, Mr. J Moyo. The interview data was corroborated by the review of minutes of previous

meetings of the sub-catchment council. The sub-catchment council chairman represented the Zimbabwe Farmers Union (ZFU) in the sub-catchment council. The ZFU is a union of mostly communal area farmers and some from the small scale commercial farming sector. Stakeholder groups which had representatives were the communal farmers, small scale commercial farmers, large scale white commercial farmers, Rural District Councils (RDC) and the Urban Authorities (Figure 5).

Selection of the stakeholder representatives

Each sector elects its own representatives. Smallholder irrigation unlike other sectors does not have a union or body to represent their interests. This probably explains why the sector lacks representation in the sub-catchment council (Figure 5). This agrees very well with the condition that citizens are more likely to participate in government decision-making processes when they “...have an appropriate organizational structure or group available to them and feel comfortable within that structure or group ...” (Ohio State University, 2000). Evidence from Zhulube micro-catchment suggested a union of formal and informal irrigation WUAs, which we

included in our analytical framework (Figure 4). A look at the situation of smallholder irrigators in Odzi sub-catchment council, a different sub-catchment council in the eastern part of the country revealed that the council had 2 representatives for smallholder irrigation. Both representatives were from one Marange irrigation scheme. However the representatives claimed that they represent only the Marange irrigators and not the irrigators in the entire sub-catchment area (Kujinga, 2002). This certainly implied an under-representation of the concerns of all the smallholder irrigators in the sub-catchment council. In addition this pair of 'smallholder irrigators representatives' had no knowledge about the stakeholder group that should represent informal irrigators (Kujinga, 2002). This evidence further reinforces the notion that representational participation is likely to work when the stakeholders have an appropriate organizational structure or group available to them and feel comfortable within that structure or group (Ohio State University, 2000). Perhaps the two 'smallholder irrigators representatives' were genuinely not aware of the representation of informal irrigators. Or they were simply not interested in or wanted nothing to do with informal irrigation.

The question of the election process is also important in our endeavour to understand the concept of representative democracy (Lowry et al., 1997). On the election process itself, the sub-catchment chairman explained that the sub-catchment council just receives names of elected councillors from their respective stakeholder unions. The chairman does not know how the individual councillors are elected in their individual sectors/unions. As previously alluded to, other research studies assert that the entire process of setting up the catchment and sub-catchment councils in Zimbabwe and the election of the respective councillors were hasty and without proper consultation of the stakeholder groups represented (Kujinga, 2002; Dube and Swatuk, 2001; Latham, 2002). The legitimacy of the representatives may then be questionable thereby compromising the participatory representation of the stakeholder groups.

Main issues raised in the sub-catchment council meetings

According to minutes of previous meetings of the UMSSC, the dominant issue is the lack of finance to carry out the sub-catchment council duties. These duties include holding meetings, the processing of water permit applications and the monitoring of the exercise of granted permits and conducting water users awareness meetings. In agreement with the reviewed minutes, the chairman confirmed that no issues concerning smallholder formal and informal irrigators were ever mentioned. This was mainly attributed to lack of representation of the group at this platform.

Potential to raise revenue in the UMSSC area: An

overview of the water resources and the land use system in the sub-catchment area reveals that the UMSSC has tremendous potential to be financially sustainable. The reason is that there are many water users who have the ability to pay. Examples are the mines (examples, How Mine), the Bulawayo City Council, cattle and irrigation farmers. However the rates charged on water users is unsustainably low and there are many defaulters. The major defaulters were the senior politicians (the newly resettled A1 and A2 farmers), who ironically are consuming huge quantities of water according to the UMSSC chairman. He further explained that they were not sure of what penalties to apply to the defaulters since he too was not familiar with the provisions in the Water Act in this regard. In addition, it is alleged that many users are abstracting water illegally without permits and are not therefore paying for it. The UMSSC chairman also lamented the lack of resources for the Data Collector whose role is to process water permit applications and building a data base for all water users in the entire sub-catchment. The Data Collector is severely incapacitated to carry out this mammoth task.

The issue of infrequent sub-catchment council meetings:

Previous council meetings reveal concerns by the chairman on the irregularity of meeting schedules. Sub-catchment meetings are reduced to only 2 meetings annually, against the statutory requirement of once every month for both the catchment and sub-catchment council meetings (Zimbabwe, 2000a, b). The reason for this trend according to the chairman is because of the financial constraints coupled with the transport problems caused by the shortage of fuel in the country. Related to this was the low turn out for council meetings as some councillors fail to attend meetings. It could have been quite informative to talk to those councillors who fail to attend council meetings; it could be possible that their reasons could possibly be a lack of interest. The representation of stakeholders, whatever their identity (even if smallholder irrigation was represented) is therefore severely compromised when meetings are not held or when the representatives skip meetings. Is the sub-catchment council an appropriate organizational structure available to water users for expressing their interests? The Ohio State University (2000) assert that citizens, "...If they view the organization as cumbersome, time consuming, dictatorial, or grossly inefficient, they will not join, will withdraw after joining, or their dissatisfaction may be evidenced by high absenteeism, or a general unwillingness to be supportive or cooperative". Probably the fact that the UMSSC meetings, in violation of the statutory guidelines are sparse and with high non-attendances may be a demonstration that the sub-catchment council is inappropriate as an institution for expressing water users' interests.

Similar studies on the operation of catchment and sub-catchment councils also observed that the attendance at the meetings especially by the rural people tended to

be erratic (Manzungu, 2002). Manzungu (2002) further noted that the situation got worse when there was no money to cater for transport and accommodation, and it somewhat improved with the availability of donor funds. Another classic example is that of the Save Catchment Council which was inaugurated in July 1999 and was unable to hold a single meeting or carry out any catchment activity till May 2000 when funding was secured from the Swedish International Development Agency, SIDA (Kujinga, 2002). Using this data and the case of the absenteeism to meetings of the UMSCC, we can illustrate in the analytical framework and according to the Ohio State University (2000) that citizens are more likely to participate in government decision-making processes when they can see positive benefits to be gained. The citizen usually participates when the benefits outweigh the costs; benefits seldom come without costs. The costs could be in the form of money, costs for not participating, time and other things. The councillors use their own scale of values to determine whether or not to participate in the meetings. If the high absenteeism by the councillors is due to the lack of money to cover the transport and accommodation costs (Manzungu, 2002), then it can be argued that the benefits of participating in the sub-catchment councils is questionable. It implies that the benefits are low, insufficient to outweigh the reasonably low costs of transport and accommodation. In our analytical framework, we suggest a benefits flow from the sub-catchment council to the union of formal and informal irrigation WUAs in return for an obligations flow from the WUAs union back to the sub-catchment council.

The issue of awareness campaigns: On grassroots involvement and awareness of the new water management institutions, Mr. Moyo said that no deliberate awareness campaigns have been carried out ever since the sub-catchment council was inaugurated. This was corroborated by the minutes of previous UMSCC meetings studied as the issue kept recurring ostensibly in order to ensure that all commercial water users are levied. Lack of money was cited as the reason for not undertaking the awareness campaigns. The Upper Mzingwane Sub-catchment is a vast area extending well over 5 000 km² with a complex land use pattern and consequently a diversity of water uses. This mosaic coupled with the turbulent socio-economic and political environment currently engulfing Zimbabwe, it made reaching and involving many water users in the sub-catchment difficult and indeed a mirage.

A glimpse of the smallholder irrigators' seat at the MCC table

At the MCC table, the 4 UMSCC members drawn from the white commercial farmers, urban councils and communal farmers' representatives proceed to represent

the sub-catchment council. This study looks at the smallholder irrigation representational participation at the MCC level. The route the issues are supposed to follow seems tortuous as they in practice have to move from the small Zhulube catchment all the way up to the larger Mzingwane catchment level, through the UMSCC level (Figure 4).

Representation of smallholder irrigation and other stakeholder groups

At the MCC level, the custodians of the interests of smallholder irrigation and indeed all the other stakeholder groups now lie with the 4 councillors mentioned earlier. All the 4 members are not really close to smallholder irrigators both spatially and in their day-to-day activities. This state of affairs make the representational participation of formal and informal smallholder irrigators at the MCC level weak especially given the fact that their seat is already vacant at the UMSCC table. Asked on what issues concerning smallholder irrigators they have taken up to the MCC table, all the 4 councillors said none. A pattern also emerged at the MCC table where all of the sub-catchment council's representatives had no representatives from the smallholder irrigators.

We attended the MCC meeting of 7 November 2006 and a UNDP Energy and Environment Project workshop held for the councillors later during the same day. This together with a review of minutes of some of their previous meetings gave us an insight into the business of the catchment council. We were able to glean the major issues that dominate the MCC business and to further understand the representational participation or lack of it of smallholder informal and formal irrigation.

Main issues raised in the MCC meetings

The issues dominating the MCC meetings were similar to those frequently recurring at the MSCC table, according to minutes of their past meetings. Such issues include that of levies and the insufficient financial resources to fund the activities of both the catchment and sub-catchment councils.

However, the political influence of the Provincial Development Committee (PDC) to the MCC is noteworthy (Figure 5). This was evident from debate on the cattle levy. The Provincial Governor occupies the highest political office in the province and he chairs the PDC. The cattle levy was a contested issue for a long time as the councillors explored ways to broaden their revenue base. When a levy of Z\$20 (USD 0.50) per cattle per year was finally agreed upon, the MCC could not proceed to implement it because they needed the approval of the Provincial Governor. So the proposal was to be submitted to the Provincial Governor through the

PDC. This implies that decisions made in the MCC interpreted to have a political implication may not be immediately implemented needing the approval of the PDC. Conversely, it may be more worthwhile than for one to be in the PDC to safeguard one's water interests than in the MCC. Probably all what one has to do is to play the political tune. And smallholder irrigation (especially formal irrigation) has always had a political content in Zimbabwe (Zawe, 2006). This agrees with the notion of institutional embeddedness (Granovetter, 1992) that new institutions will not exist in isolation but will be somehow connected and be influenced by other already existing decision-making arenas. And a seat at the MCC table may not at all mean influence in the decisions made there as the final decisions may be made elsewhere (Ahlers, 2005).

Conclusion

The representational participation of smallholder formal and informal irrigation in the Mzingwane catchment can be best described as a mirage. As the study clearly reveals, both the UMSCC and the MCC are virtually unknown to the water users on the ground in the small 45 km² Zhulube micro-catchment and consequently neither could they have representatives in them. The WUAs in the Zhulube micro-catchment should not only be aware of their representative in the UMSCC but also aware of the existence and functions of both the UMSCC and the MCC. This state of affairs was well corroborated at the UMSCC and MCC tiers as they too constantly lamented the lack of awareness of the water councils at the grassroots.

Applying the proffered analytical framework in the Zhulube micro-catchment example, we argue that the representational participation of smallholder irrigators in the UMSCC and MCC is impeded by the absence of positive benefits from the councils and a lack of better knowledge of their purpose. Besides, the smallholder irrigators themselves lack an appropriate organizational structure or union from which to articulate their interests unlike other stakeholder groups in Zimbabwe. The Zhulube micro-catchment case further demonstrate that the smallholder irrigators feel that no aspect of their "way-of-life" is threatened (in terms of their interests in water) by the new water institutions hence they feel no commitment to be supportive. This framework recognises the new water institutions born from the water sector reforms in Zimbabwe. However, the sustainability of these new institutions depends to a large extent on the perceived and tangible benefits flow to the whole spectrum of water users (as WUAs) which in turn will compel the WUAs to honour their obligations to the water councils (Figure 4). The framework can be applied to other catchments in Zimbabwe, probably with slight contextually motivated variations. Rural communities in Zimbabwe share a lot of commonalities making it easier to adapt the framework to the different rural communities.

While the framework helps us understand the representational participation of stakeholder groups in the new water councils in Zimbabwe, a number of important questions arise to improve the framework. For example, the roles of politics need to be factored in the framework. Politics can have a negative impact on institutional development. Senior politicians were reportedly defaulting on their water levies and nothing seems to be done apparently because of fear of their political office.

REFERENCES

- Ahlers R (2005) From Increasing Participation to Establishing Rights: Evading the gender question in Water Resources Management. Paper presented at the EMPOWERS Regional Symposium: End Users Ownership and Involvement in IWRM, Cairo, 13-17 November 2005.
- AGRITEX (2003). Irrigation projects under implementation in Zimbabwe. ARES Head Office Report. Harare.
- Derman B, Ferguson A, Gonesse F (2000). Decentralization, Devolution and Development: Reflections on the Water Reform Process in Zimbabwe. BASIS CRSP Project Report.
- Derman B, Ferguson A, Peters P (2002). Promoting Equitable Access to Water Resources. BASIS BRIEF Number 9
- Dube D, Swatuk LA (2001). Stakeholder participation in the new water management approach: a case study of the Save Catchment, Zimbabwe. Paper presented at the '2nd WARFSA/Waternet Symposium: Integrated Water Resources Management: Theory, Practice, Cases', Cape Town, p. 30-31 October, 2001.
- FAO (2005). Review of Garden Based Production Activities For Food Security in Zimbabwe. A Study for the Food and Agriculture Organisation Working Group on Gardens Project. Harare.
- FAO (1999). Zimbabwe: Smallholder Irrigation Development Project. Preparation Report. Report No 99/030 ADB-ZIM. Rome, pp. 1-3.
- Granovetter D (1992). 'Economic Action and Social Structure: The Problem of Embeddedness', in Granovetter M, Swedburg R [eds] *The Sociology of Economic Life*. Boulder CO and Oxford: Westview Press.
- Kujinga K (2002). Decentralization water management: an analysis of stakeholder participation in the management of water in Odzi subcatchment area, Save Catchment, Physics and Chemistry of the Earth, 27: 897-905.
- Latham CJK (2002). Manyame Catchment Council: a review of the reform of the water sector in Zimbabwe, Physics and Chemistry of the Earth, 27: 907-917
- Lowry K, Adler P, Milner N (1997). Participating the Public: Process, Politics, and Planning. *J. Planning Educ. Res.*, 16: 177-187
- Manzungu E (2002). More than a headcount: towards strategic stakeholder representation in catchment management in South Africa and Zimbabwe, Physics and Chemistry of the Earth, 27: 927-933.
- Manzungu E (2004). *Water For All: Improving Water Resource Governance in Southern Africa*, International Institute for Environment and Development, Gatekeeper Series, London, p. 113.
- Manzungu E, van der Zaag P (1996). Continuity and controversy in smallholder irrigation. In: Manzungu E, van der Zaag P (eds), *The Practice of Smallholder Irrigation: Case Studies from Zimbabwe*. University of Zimbabwe Publications, Harare.
- Ohio State University (2000). Ohio State University Fact Sheet – Community Development: Seeking the Good Community. [online] URL: <http://www2.ag.ohio-state.edu/~ohioline/cd/fact/1703.html> [accessed on 13/03/07]
- Water Resources Management Strategy (WRMS) n.d. *Towards Integrated Water Resources Management: Water Resources Management strategy for Zimbabwe*. Harare.
- Yin RK (2003) *Case Study Research Design and Methods* (Third Edition), Applied Social Research Methods Series 5, Sage Publications, Thousand Oaks, London, New Delhi.

Zawe C (2006). Reforms in Turbulent Times: A study on the theory and practice of three irrigation management policy reform models in Mashonaland, Zimbabwe, PhD thesis, Wageningen University, The Netherlands

Zawe C, Svubure O, Shambare E (2003). Dialogue on Water for food: "Challenges in Irrigation development and management following the land redistribution program in Mashonaland West province of Zimbabwe". Paper presented at the Workshop Access to Water, its Management and Use in Food Production, Harare, pp. 27-28, August 2003.

Zimbabwe (2000a). Water (Catchment Councils) Regulations Statutory Instrument No. 33. Government Printers, Harare

Zimbabwe (2000b). Water (Subcatchment Councils) Regulations Statutory Instrument No. 47. Government Printers, Harare