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The practice of Integrated Water Resources Management in South Africa: challenges of women in water user associations

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Abstract South Africa's National Water Act and National Water Resource Strategy set out an ambitious societal vision with a strong focus on the redistribution of water resources towards the marginalised and on empowering historically disadvantaged communities including women. This vision is reflected in the framework for Integrated Water Resources Management (IWRM) that acknowledges women as pivotal in water management practices. Based on this premise, this paper examines the challenges women face in performing their roles in IWRM in rural South Africa. It draws on a study of a water user association that operates in the Limpopo Province of South Africa. The design of the study was qualitative in nature with a semi-structured interview as the main data collection tool. The interview involved 14 respondents from Limpopo. The results showed marked gender difference in terms of roles performed. Based on the study, three kinds of roles were revealed: domestic, productive and decision-making roles. Men were significantly involved in productive roles, giving low priority to domestic roles. The key factors found to affect the role of women in decision-making in IWRM were cultural practices, low self-confidence, low levels of capacity, and high workloads. These factors were identified as key institutional inherent within the specific society. As such, these findings have significant implications for the efforts aimed at promoting gender equality. Particularly, the impact of culture on women in water management raises concerns regarding gender issues in rural and remote areas where people are poorer and more culturally conservative.

Keywords Water resources management · Women · South Africa

Introduction

Integrated Water Resources Management (IWRM) explicitly challenges conventional, fragmented water development and management systems and places emphasis on an integrated approach with more coordinated decision-making across sectors and scales (Butterworth et al. 2010). It recognises that exclusively top-down, supply-led, technically based and sectoral approaches to water management are imposing unsustainably high economic, social and ecological costs on human societies and on the natural environment (White 2013). The quest for development has led to a consensus that participation by both men and women, not as objects of development but as equal partners, is essential for sustained interventions (Hamdy et al. 2004). According to the Global Water Partnership, one of the principal components of

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IWRM interventions includes the involvement of women in water activities due to their invaluable role in water management practices. However, what women's involvement looks like is not necessarily clear beyond the initial IWRM rhetoric (Lasiter and Stawicki 2014; Meinzen-Dick and Zwarteveen 1998; Mjoli and Nenzhelele 2009).

To bridge the gap between the rhetoric and practices of gender-inclusive IWRM there must be a broad and clear understanding of who women are, what they do, what they care about, and what the socio-cultural constraints and opportunities are, that either prevent or encourage their participation in broader development initiatives (Lasiter and Stawicki 2014). To simply include women for the purpose of fulfilling a mandate is not enough and will not necessarily unearth and or remedy those systemic and structural barriers that prevent them from engaging in broader development initiatives at the same level as their male counterparts. Rather, women's inclusion should be reflective of their socio-cultural identities and indigenous knowledge systems to more accurately and appropriately integrate them as meaningful members (Lasiter and Stawicki 2014).

The aim of the study was to investigate the challenges women face in IWRM with a focus on a water user association. This paper provides the contextual factors affecting the effective and equitable roles played by women in IWRM in rural South Africa. It draws on a study of the Mutale water user association that operates in the Limpopo Province of South Africa. Following this introduction, the next section introduces the concepts of the study. It succinctly reviews the current state of knowledge about IWRM, water management structures in South Africa and gender roles. The subsequent sections successively describe the study environment, and the procedure used in the study. Presented also is the research results and a discussion of the results in relation to existing body of knowledge on women in the natural resources management. Lastly, it concludes with a brief synopsis as well as policy recommendations for better placing women in the water sector.

Integrated Water Resources Management in South Africa

Recently, an increasing number of countries are focusing on ways to achieve IWRM. Although loosely defined and interpreted in many different ways in the past, there now appears to be a stronger consensus regarding the need for IWRM and what it should entail (Waalewijn et al. 2005). IWRM explicitly challenges conventional, fragmented water development and management systems and places emphasis on an integrated and holistic approach with more coordinated decision-making across sectors and scales (Butterworth et al. 2010). Hence, implementing IWRM, according to Elias (2015) requires a change from a single sector and centralised approach to a sector that is integrated and locally focused which incorporates the interest of multiple stakeholders. Its main goal is to ensure sustainable water use through multi-disciplinary and interdisciplinary approaches.

In light of this paradigm shift, South Africa embarked on an ambitious water reform process which emerged from a new, democratic dispensation after 1994, for which it is widely recognised. Essential to this is the elimination of riparian rights, the establishment of the principles of equity and sustainability as foundations in water management and allocation, and the recognition that catchments, rather than administrative boundaries, as the basis for water management (Pollard and du Toit 2011). These changes underscored the emergence of a holistic approach that recognised the political, technical, socio-economic, environmental and technical dimensions of water. The guiding framework and philosophy for this process is captured in the concept of IWRM which, as envisaged in the National Water Act (Act 36 of 1998) and the National Water Resource Strategy, is regarded as a process rather than an end in itself (Pollard and du Toit 2011; Colvin et al. 2008).

Water user association

The National Water Act promotes an integrated and decentralised water resources management system. The Act, among other things, calls for the restructuring of the water management system based on administrative boundaries towards management along hydrological boundaries. This includes the Department of Water Affairs and Forestry (DWAF) now Department of Water and Sanitation at the national level, with the Catchment Management Agencies (CMA) at the intermediate level and the WUAs at the lower levels (Herrfahrdt-Pähle 2010).

The National Water Act outlines the establishment of WUAs as a management institution that operates at a restricted local level. They are made up of individual water users within a community who undertake water and water-related activities for their common benefit and are also supposed to serve as a mechanism for the implementation of the CMA's Catchment Management Strategies for the area in which they operate (Manzungu 2002). Irrigation boards, which previously manage water resources at the local level on behalf of the commercial agricultural sector, are to be transformed into a broader and more inclusive WUAs (Brown 2011). The WUAs, among other things, aims at involving Historically Disadvantage Individuals (HDIs) in the functioning of water resources management organisations. It also included persons, such as women, small-scale farmers, and the poor, that were previously not included in the process of water management (Faysse 2004). This transformation to a more inclusive organisation, according to Faysse (2004), should crystallize a move from a purely commercial farmers' organisation to one that will include all water users of the same resource.

The management and administration of the WUAs are the full responsibilities of the water users within the locality of that catchment area, with monitoring and supervision from the national level. The main function of WUAs is to operate the waterworks under their responsibility and to monitor the allocation of water resources among their members (Faysse 2004). The WUAs provide a local institution through which the catchment management strategy can be implemented at a local catchment level. WUAs may be represented in the CMA board and catchment management committee to ensure that the interests of their members are taken into consideration in the decision-making processes (Mjoli and Nenzhelele 2009). A WUA may be concerned with a single purpose such as controlling recreational activities on a river or providing water for emerging farmers. Alternatively, a WUA may be multi-sectoral, dealing with a variety of water uses within its area of operation (Department of Water Affairs and Forestry 2011).

Gender roles

Gender roles are a set of perceived behavioural norms associated with women and men. The roles performed by both males and females are not determined biologically; rather, they are constructed socially. That is, they are based on the societal norms and historical antecedents of people (Kabeta and Gebremeskel 2013). In examining the different roles of women and men, the gender division of labour provides the underlying principle for differentiating the water-related work that men and women do. However, there is nothing natural about the task and responsibilities that women and men are assigned on the basis of their gender (Ahmed 2005). Roles performed by men and women can broadly be categorised into reproductive and productive roles. Reproductive roles include childbearing and related responsibilities and domestic tasks. However, the reproductive role extends beyond biological reproduction and also includes the care and maintenance of the home (Tasli 2007). These roles, according to Ahmed (2005), are largely unpaid activities which go into the maintenance and reproduction of the household. In relation to water management, domestic roles involve responsibilities for collecting water for household purposes.

Productive roles, on the other hand, refer to activities that involve the production of goods and services and related activities. Both women and men use water for productive purposes, whether it is for subsistence, rain-fed agriculture, irrigation of crops or for livestock (Ahmed 2005). Upadhyay (2003), postulated that women use water not only for domestic purposes but also for significant, productive uses. Productive uses include small-scale activities that enable women to grow a wide range of agricultural produce, from homestead vegetables and fruits to subsistence crops, livestock rear and running micro-enterprises. Despite women's significant involvement, they are often denied equitable access to water, membership and irrigated land.

A third dimension of gender roles, community management role, is presented by Tasli (2007), and Peter (2006). Community management roles are activities performed not for family gain but for the well-being of the community (Peter 2006). This is an extension of women's domestic role at the community level and covers activities which ensure the provision and maintenance of scarce resources of collective consumption, such as water, health care and education; it is voluntary and unpaid work (Tasli 2007). These roles are not entirely distinct and may overlap. Men are predominantly involved in productive and

community tasks, while women play these triple or multiple roles.

Study area

This study was based on field research conducted in 2014 in the Limpopo Province of South Africa. Mutale Water User Association was chosen as its inhabitants live in an area which is predominantly rural with the majority of settlements situated in the former homeland areas, where most of the population are poor and cultural practices play a significant role in the governance and functioning of the community, particularly in natural resource allocation and use since the pre-colonial era.

Mutale WUA was established by the DWAF, according to the National Water Act (Act 36 of 1998), on March 24, 2006, after an extensive public participation that included various stakeholders within the catchment. The Mutale WUA can be found within the Vhembe District Municipality of the province of Limpopo. However, its operational area covers three local municipalities; Mutale local municipality, Makhado local municipality and Thulamela local municipality (South Africa 2006).

The Mutale WUA is divided into nine sub-areas, each managing an irrigation scheme. These sub-areas are Matangari, Tshilavulu, Mianzwi, Tshipise, Tshiombo, Rambuda N.T.K., Pile, Makuya and Thengwe (South Africa 2006). The WUA's main task is to manage, operate and control water use within its jurisdiction. It is also mandated to ensure equitable distribution of water to all water users in the area and oversee the management and control of any water resources within the catchment of its operation (Mjoli and Nenzhelele 2009).

Methods

The study used a case study of members of the Mutale Water User Association located in the Limpopo Province of South Africa. The study involved open-ended interviews with 14 members of the WUA to get detailed information. The Mutale WUA has a total of 1319 members on its register. However, the study sampled only 14 members, representing about 1 % of the members. This included nine women and five men from the Mutale WUA. The small sample size was due

to the fact that members of the Mutale WUA were scattered within the Vhembe District Municipality, which is further divided into three local districts (Mutale, Makhado and Thulamela local municipality). Also, saturation point was reached at that moment since the same responses were being expressed by the members. As Fusch and Ness (2015) stated, in qualitative research the general concept and principle is that when there is no new data or emerging theme from the data collected, saturation point is reached. All the members interviewed were involved in small-scale farming as their main source of livelihood. The approach used allowed the study to explore the breadth and depth of interviewee experiences (Charmaz 2014). Purposive sampling was employed to obtain information from the respondents with the aim of generating qualitative data on the roles and challenges of women in water management.

Data gathered from the study was analysed using content analysis of the interview transcriptions. This approach systematically identifies key words and phrases within the transcript, which enables the understanding and interpretation of the data (Nieuwenhuis 2007a). The following steps were followed for data analysis (Creswell 2013). These were: data was transcribed immediately after the interviews. Through this process, the researcher became familiar and immersed in the data. Following transcription of the interviews, concepts and typologies like common words and shared experiences that respondents used were grouped so as to identify patterns. Themes were then developed from these patterns. Similar patterns were grouped together under the same theme (Creswell 2013). This is consistent with the philosophical assumptions of the research: constructivism (i.e. reality is constructed by people) and interpretivism (i.e. by reflecting on human experiences people construct their own understanding of the world) (Guba and Lincoln 2004). According to Creswell and Miller (2010) constructivism and interpretivism are used interchangeably. The study was based on its philosophical assumptions because the approach is hinged on understanding the meanings that motivate actions of individuals and their subjective experience (Nieuwenhuis 2007b). The researcher relied on naturalistic methods of data collection (interviewing and analysis of existing texts). Using this technique, the researcher was able to have a discourse with key stakeholders in order to construct a

meaningful, collaborative perception of reality. In the qualitative research, difference in responses was stated, rather than definite numbers of individuals who responded in particular ways. Rigor was achieved through the reporting of key themes, including any contradictory findings in the data (Elias 2015).
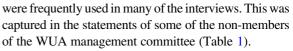
Ethical clearance to conduct this study was sought and obtained from the Monash University Research Ethics Committee (MUHREC). Permission was also obtained from the Mutale WUA before selection and interviews were conducted. The study was classified as a low-risk research, implying that questions asked were simple and straightforward with minimal level of risk to respondents.

Results

The results presented indicated that the decision-making role of women in the WUA was limited. It was revealed that the confidence levels of women and the cultural practices of the people are major leading factors hindering women's decision-making roles in the WUA. In addition, the low levels of capacity and the high volumes of workload were identified as obstacles hindering the effective role of women in the WUA. These factors during the interviews were frequently repeated by all the respondents. The obstacles have been presented in details in the subsections with illustrations from selected respondents. Other factors which contributes to the exclusion of women in decision-making included distance to the meeting area, financial issues and lack of incentives. These factors were classified as minor as they were not repeated by the respondents' interview and had less influence on women's roles in the WUA. The results presented include a direct quoted from the respondents. These quotes were edited for grammar as well as for clarity of understanding.

Low self-confidence

The study revealed that women members of the water user association lacked self-confidence. Respondents associated low self-confidence with people exhibiting signs of fear and shyness in expressing their view. The study showed that women were unable to express their views freely during the WUA's meetings when men are involved. The words "shy", "fear" and "undermine"

were frequently used in many of the interviews. This was captured in the statements of some of the non-members of the WUA management committee (Table 1).

One male member of the WUA management committee shared similar sentiments and posits that the problem of confidence among women stems from their lack of involvement in management activities in the past, which they still regard as an issue. The respondent stated:

> That is because in the past, women never had the privilege of participating in such organisations. This was due to the fact that women were regarded as the domestic caretakers. Therefore, their current involvement in the WUA makes them shy and unable to challenge men during proceedings of the association.

Many female respondents claim that men are not supportive of whatever idea women bring on board, and they often undermine them (Table 2).

However, one male respondent asserted that no woman is being undermined; rather, they undermine themselves. Over and above that, he explained that they believe in gender equality and they do not intentionally undermine the role of women in the WUA. He said:

> The women themselves, some of the women they are undermining themselves. They say in culture women are under men, that's why they undermine themselves. But as men, we don't allow women to do that situation because there is gender equality. Even we busy teaching them. You have the right to do anything.

Other views expressed indicated that women do not enjoy support from their male counterparts within the WUA. They are less familiar with the public sphere and have little experience in public debates. Even women have been found to express themselves less freely or frequently than men. Women's low confidence level may be due to cultural restrictions which, according Nkonya (2008), prohibit women from freely expressing themselves and participating in discussions at public gathering of men and women.

Culture

The study showed that the cultural practices in Limpopo constitute an obstacle for women to enter

Table 1 Selected comments from respondents on low self-confidence

Yes, some of the women feel shy but we are trying to learn those things because it is new to us as a woman to participate in the association and to talk to men

No, it's because when they nominate a woman, she tends to be shy in accepting it. Other women have a shy problem so they cannot lead bigger men. When you are in the midst of men, most of the women tend to be shy but as for me, I always try my best to put that aside

Sometimes some women are too shy, and they don't want to participate and talk, but we as a gentlemen, we like them to be part of the meetings but most of them are too shy

First, they don't want to participate in the association activities. Second, they are shy and afraid. They don't want to contribute their opinion. I don't know what they are afraid of. Maybe because they are shy to talk, women do not really participate

The women are filled with fear; they are still living in the past where women fear men. The women still fear the men in the association

They must participate in any event that happens in the association. They must be strong to talk and do everything even if they don't have money

Table 2 Selected comments of women members on low self-confidence

Sometimes women are been undermined in the meeting. Men sometimes take women down by neglecting what women say. They don't take what we say serious; they don't believe we can do good things

They use to be undermined because whenever a woman is talking, men don't take that thing serious

Yeah, some men have pride, so they take women as if they can control the women, but in these modern times, we women have improved that circumstances of allowing men to do what they think are right or undermining us. We are trying to be strong

Women have got problems because when they go home, they go empty-handed. They don't get paid or whatever thing, so their husband said is better to be ploughing or doing some work at the home

the public space and specifically to participate in the WUA. These practices originate in deeply rooted socially constructed roles that heavily favour men, thus creating a strongly male-dominated society. In this paper, culture and tradition has been used interchangeably to mean the same thing. According to respondents, though some of their traditional practices have been scrapped due to democracy and education, there are still practices in place (Table 3).

The norms and traditions of the people play an instrumental role in terms of the way women and men interact in society. Respondents believe and practice their culture. Two female members of the management committee of the WUA explained that it is disrespectful to express one's view in the presence of a man. They stated:

> It is tradition among our people. It is not good for a man to look after the children and do washing. It is the job of the women. You have to respect the man and do what they tell you.

> I cannot stand and talk in front of a man that is not respect. Our culture teaches us to respect men and not to talk when they are talking.

A member of the management committee of the WUA succinctly stated that such practices were of the past, hence are not being practised any longer, but women are still afraid to go contrary to what traditions says. Women are not supposed to speak up in a group of men because it is considered disrespectful, so what they say may not be acknowledged. Similarly, women stated that they would feel uncomfortable voicing their opinion in front of men. As a result, even women who attend meetings may not be able to voice their opinions and therefore are excluded from decision-making. These cultural norms assign women to certain roles, consequently restricting women from participation effectively within the WUA and the public sphere at large. The norms are reproduced through generations and are assumed to be normal procedures of society. Thus, discrimination against women and

Table 3 Selected comments of respondents on culture

In our place here, we respect our culture. But some of them are not here again. In our place here, you have to respect the man because culture here. So sometimes in the meeting, we don't talk even if what they say is not good. They will say you don't respect, and they will tell your family

I will not let my husband cook food, wash plates, or go and fetch water; it is my duty as a woman to do it. Even our people here will not agree; they will say that is not our culture, a man is a man, and a woman is a woman. It is shame for a man to do the work at home, and the village will talk about that thing. I will not let my husband do it, maybe if am sick or I travel

It is respect for a woman to keep quiet when a man is talking. Women don't have to talk like we men. I am a Venda man, so I don't play with my culture. But certain things, we don't do now

gender disparities are often deeply inherent in these cultural norms and traditions.

Low capacity

The ability to understand and assimilate technical issues related to water management is essential to any water-related institution (Elias 2015). However, the study revealed that women not only have low capacity but also lack the experience in dealing with technical issues related to water and the activities the WUA are involved in. Respondents described low capacity as the inability to read and understand technical issues concerning water management. These were characterised by words such as "capacity", "capability", "educate" and "understand" which were repeated during the interview session. These were captured in respondent's statements (Table 4). The "department" refers to the DWAF.

A key member of the WUA management committee explained that becoming a leader requires understanding and the ability to steer proceedings. This was captured in his statement as follows:

…Women must know what the meaning of the chairperson is and have to be able to understand and work with people. For this kind of job, one has to be patient and compassionate because to being a chairperson is difficult. It is difficult to be a chairperson. To be a chairperson, you must have a heart because you are working with people, and you must have the spirit of a leader just because to be a chairperson, you are a leader of the people. The women, most of them, did not go to school. They are members of the association because they are farmers who use water of the association. Sometimes, if some people from the department come to speak to us, they don't understand the meaning, so we explain to them again.

Another WUA management committee member explained that women do not have the capability to represent the WUA in any capacity. However, the WUA tends to place women in what he termed "small position" in order to train them to assume bigger roles. This was captured as follows:

Table 4 Selected comments on low capacity

We want women to be members of the association because it is not only the man that use water in the farm. The association is for all of us, but the women don't have the capacity and some of them don't understand what we talk about in the meetings. The department said they will start doing workshop for women but they have not start yet. They always say there is no money. The women need more education

Yes, sometimes I don't know what they talk about. I don't know anything about the water things they discuss

I am the secretary here, but I don't do anything. I can speak English but not very well, and I cannot write in English well so someone else writes the minutes during the meetings but am the secretary

… It will be wonderful if a woman also is given the opportunity to become a chairperson because I believe we can do the job. But we need more education because most of the women in the WUA do not have any form of education, so they find it difficult to understand certain issues when they are been discussed

We don't participate as much as we should, so we need the government to help in educating us about the issues so that we can participate well like the men do

I have nothing to complain about that but if she has capability to lead that is not a problem. Sometimes, we select them in small position for them to grow her intellectual mind and also we need women but men must guide wherever possible.

It was quite clear that in all of the interviews, the level of capacity was low among women members of the WUA. Most of the women had low capability and the capacity to understand certain issues, especially technical ones, due to perhaps their low level of education and the low exposure of such practices. The male respondents who were also interviewed concurred with what the women stated during the interview session.

Workload

Many of the female respondents who were interviewed explained that, though their involvement in the activities of the WUA was essential, especially since they are farmers, they are most often overwhelmed with activities at the home and on the farm, which sometimes limits their role in the WUA. Respondents described these in several words such as "time", "lot of work" and "tired" (Table 5). These words appeared frequently in the interviews held with the participants selected from the WUA. One respondent described her experience as follows:

You see, the problem is that I go to the farm every day as well as do the domestic work,

though sometimes my children help me. I don't get the time to go to the association because I have a lot of work and sometimes I get so tired. That is the reason why I don't involve myself much in the activities of the WUA.

However, a few of the female respondents maintained that, though it is a challenge combining house and farm work and attending to the activities of the WUA, they are able to manage the situation. One respondent noted:

… no, it doesn't disturb me; I try to balance my domestic work, farming as well as participating in the activities of the WUA. I do my housework and I also go to the farm. Sometimes I stay long in the farm because it is my job. I always involve myself in the activities of the WUA because it is important. The WUA helps us to get water for the farm and our community too, so I try to manage it.

The results of this study indicated that balancing work and family obligations constrained the women's fulfilling their roles within the WUA. It is not surprising that the women in this study had a heavy workload due to the effort involved in balancing domestic roles with their work as farmers. Men, on the other hand, were not faced with multiple burdens. This can be traced back to the cultural norms assigned to women within that locality. Obviously, these women had to manage burden of responsibilities on their farm and at home and were under great pressure to meet the

Table 5 Comments of selected respondents concerning workload

Sometimes am in the farm working and they will say there is meeting. The time they put the meeting is not good. I am tired, and I even sleep in the meeting. Me, I work in the house and I also work in the farm with my husband. My husband told me to come so I cannot say anything

Sometimes the meeting affects my farming activities. They organise meetings without taking into consideration our occupation. Farming is the only thing I do and disrupting it sometimes affects me and also I get tired when I have to go to the meetings straight from the farm

Although the men work at the farm, the women work both on the farm and also engage in domestic activities. As a woman, I clean the house, wash, cook, fetch water, and take care of the children and go to the farm with my husband. Going to the WUA sometimes is impossible for me because I get overburdened by all the work I do. The work I engage in are a lot, but that is the role of a woman

You see, the problem is that, we spend many hours at the meeting, sometimes 3 h. If I stay home or if I go to the farm, I can do many works there. Sometimes I go but if I don't go, I ask some of my friends what they say in the association

I want to attend meetings, but it is difficult for me because I have responsibilities in the house, the farm, and the children. I can only manage a limited number of things in a day

norms, which forced them to place family and collective's interests ahead of their own. This burden carried by women limits their involvement in the WUA's activities.

Discussion

It can be argued that women were nominally represented in the WUA, with no influence on decision-making roles. The findings as revealed about women's nominal role are corroborated with other studies on gender and natural resources management such as that of Agarwal (2001), who found that the nature of women's involvement in decision-making is nominal, where women are often not made aware of meetings, and when they did attend, they would rarely speak up, and if they did speak up, their opinions carried little weight. Frequently, male executive committee members choose women members in their absence and without consulting them. In her studies of natural resources management in South Asia, Agarwal (2001) further contends that women are involved in participatory institutions, yet simultaneously excluded due to traditional practices and established norms of gendered exclusion, and social perceptions of women's ability to contribute to user groups, among other things.

The study showed that traditional norms and practices in the area constitute a major obstacle for women to enter the public arena and specifically perform their decision-making role effectively in the WUA. These traditional norms and practices were found to originate in deeply rooted socially constructed roles that heavily favour men, thus creating a strongly male-dominated association. The traditional notions of participation are worked out through patronage systems and kinship structures which place women far down on the class hierarchy. It is within such unequal set-ups that the women were found to be socially and culturally constrained from performing their decision-making role. Socio-cultural norms and traditions define and shape behaviours of men and women in any society (Nuggehalli and Prokopy 2009). In many countries, prevailing norms present obstacles to women in resource management efforts. Norms shape gender divisions of labour, and women often cannot spare time from domestic duties to engage in community work and to attend meetings. Behavioural

norms that expect women to display "shyness" prevent them from taking initiative to engage in decision-making activities. For instance, Prokopy (2004) noted in her studies in India that women are not allowed to speak in front of people older than them, which prevents younger women from coming forward in decision-making efforts. In addition, men are considered responsible for community development and governance. Hence, women are disinclined to participate in an effort that is seen to go against traditionally defined roles.

In male-dominated societies where customs and traditions are entrenched, women's perspectives are not regarded and this tend to have negative effect with respect to how women view themselves (Moyo 2014; Nkonya 2008). Gender perception has a great impact on the decision-making process because it dictates who has the right to make decisions. Women place an emphasis on domestic roles and problems that women face every day. Women view themselves as mothers and wives, but also as being powerless and inferior, with responsibility for the family and domestic work. Although both men and women view men as powerful and as heads of the household and decision-makers, some women view men as controllers and oppressors. By contrast, men view themselves as superior, with the ability to make appropriate decisions (Nkonya 2008). Irounagbe (2010) holds a similar view and emphasises that cultural attitudes towards women have contributed to and perpetuated the image of women as inferior in most African countries. Furthermore, culture has made women to believe that decision-making and issues of development are masculine, meaning that they are a preserve for men. Men are believed to be endowed with all knowledge and wisdom, while women, on the other hand, are associated with their domestic roles, which include taking care of the family, cleaning and looking after the elderly. This state of affairs makes women view themselves as lesser beings who have nothing significant to contribute. The way society views women and how women ultimately view themselves has an effect in as far as women's role in development issues is concerned, specifically with reference to IWRM. According to Nkonya (2008), women's low level of confidence is mostly due to cultural constraints, which prohibit women from freely expressing themselves and involving themselves in decision-making roles where men are involved. This is similar to the findings

of the study where women tend to obey men and rarely challenge them when they think men are not on the right track. Women are supposed to be subservient to men in all aspect.

Budlender et al. (1999) note that while women's interests, like men's, vary according to their circumstances and identities by class, race, ethnicity, occupation, and the fact that most women tend to be constrained in their life choices to a range of reproductive and or domestic functions in the private sphere, marginal positions in public arenas of society suggest that gender affects the way other social cleavages are experienced and hence generates specific interests. This is to say that perceptions of women's role by both men and women coupled with women's traditional domestic responsibility impede their ability to participate in the water management processes. Women feel that men should be the ones who lead in political issues. Most participants in the research agreed that women focus their attention on domestic work in order to assist their families. Also, the study revealed that men tend to undermine women. It is clear that the WUA is not promoting local democracy where both men and women could really see the importance of equality so that they will be able to encourage women to be more involved.

The low level of capacity among women is another factor that militates against their meaningful role and involvement in IWRM. In this study, the research results showed that most of the women members of the Mutale WUA were unable to read and write, found it difficult to comprehend water-related issues, and also found it difficult to access information that they needed. Lack of education impedes women's understanding of issues and consequently limits their desire to participate in discussions related to water management. When women have the requisite skills and are able to comprehend issues, it becomes much easier for them to deliberate on crucial issues. Kongolo and Bamgose (2002), concur and assert that literacy is a mechanism that can transform and boost women's role and involvement in development because it can stimulate and enhance individual initiatives. Similar sentiments are shared by Shilubane (2007) who alludes to the fact that education helps bring rural women's productive potential and enables them to contribute more equitably in the growth process of the country. It is therefore critical that women's education and capacity building be strengthened in order to allow

them to participate more meaningfully. Education may help build skills and confidence. It can also influence attitudes towards gender roles and increase acceptance of women's ability to represent household interests even in the public sphere.

Women are engaged in activities with a high workload. They are therefore unable to attend meetings and events organised by the WUA when they are busy with household work, farming activities or childcare. Thus, the women explained that they tend to find their involvement in the activities of the WUA to be of higher opportunity costs than it is beneficial to them. The roles women play in society is very relevant in understanding the main factors impeding women's involvement in the public sphere and in making them appear invisible. One of the manifestations of such structural barriers is women's workload. Thi Phuong Tam (2012) claim that many policymakers in the areas of development policy, especially in the water sector, enthusiastically promote the involvement of women in this area, but then they fail to pay sufficient attention to the roles that women have traditionally committed to and on how these roles interact in building a complex set of role expectations that diminish possibilities of women's decision-making abilities.

Conclusion

The paper has provided the contextual factors affecting the effective and equitable role played by women in IWRM in rural South Africa. The key factors found to affect the role of women in decision-making in IWRM were cultural practices, low self-confidence, low levels of capacity, and high workloads. The findings of the study revealed that the decision-making role was dominated by men, with women having a passive involvement in WUA. This study has significant implications for promoting gender equality, since it has unveiled barriers inherent within the specific society. The impact of culture on women in water management raises concerns regarding gender issues in rural and remote areas where the people there are poorer and more culturally conservative.

The sixth component of IWRM highlights the need for participatory water management and the inclusion of women in water-related policies and activities. What the "inclusion of women" means, however, is vague. One way to shed light onto how women can be

better included in IWRM initiatives, especially at the local level, is to first ensure there is a foundational and evidence-based understanding of who those women are and what they do. Women's inclusion should be reflective of their socio-cultural identities and indigenous knowledge systems to more accurately and appropriately integrate them as meaningful members. Once that baseline is established, recommendations can be more easily made as to how to support more contextually appropriate gender inclusive IWRM-related policies. A supportive and institutional environment is recommended to facilitate this approach. Such approach will be the primary basis to initiate and facilitate gender mainstreaming policies. Inclusive in such approach should be the research and assessment of women's needs in IWRM to enable effective participation.

It is recommended that gender should not be used in the determination and allocation of roles in IWRM and in the society at large. Women should be given an equal opportunity to participate in all the processes of the water management, especially those who are willing to do so. The need for building capacity to increase the understanding of gender implications for water management, as part of an effort to empower women so that they can acquire knowledge and skills to ensure efficiency in their decision-making role in water management issues. Traditional authorities as well as all members of water user associations should be capacitated in the importance and skills of gender mainstreaming. Local women and male leaders could be identified, to be capacitated as advocates of gender mainstreaming in the local level IWRM and to strengthen the articulation between the local and national levels of management across the water management sector. This will mitigate women's marginalization at the local level by customary authorities and laws with regards to decision-making about water access and use.

The capacity building should include, but not limited to decision-making, the development of skills in financial management, community participation, leadership, confidence building and communications. Not only should there be capacity building for women, but there is a need for investment in women as women are recognised globally as major users of water and are responsible for drawing water for family and for productive uses. Therefore, there is an urgent need to increase access to education for all, particularly girls.

Moreover, women themselves need to learn about their rights and take charge in the process of change. Women's active involvement in water management requires a strategy of empowerment. Empowerment combines education and capacity building in the water sector with participatory processes that provide women the opportunity to participate in decision-making. The government needs to enhance the empowerment of women by formulating development policies that increase the knowledge and skills of both women and men.

The limited involvement of women in the decision making regarding IWRM means that women's perspectives, needs, knowledge, ideas, concerns and experiences are often ignored. Sustainable development will be hard to achieve unless women's contribution to water management is recognised and supported. Both women and men affect the environment through their economic and domestic activities. Hence understanding gender is crucial for developing policies aimed at sustainable resource use and management. Thus, women should be treated as equal partners in the development of water management policies, and they should be involved at all levels.

Compliance with ethical standards

Conflict of interest The author declares that there are no conflicts of interest.

Ethical standard Ethical clearance to conduct this study was sought and obtained from the Monash University Research Ethics Committee (MUHREC). Permission was also obtained from the Mutale WUA before selection and interviews were conducted. The study was classified as a low-risk research, implying that questions asked were simple and straightforward with minimal level of risk to respondents.

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