

Derman, B. and Prabhakaran, P. 2016. Reflections on the formulation and implementation of IWRM in Southern Africa from a gender perspective. *Water Alternatives* 9(3): 644-661



## Reflections on the Formulation and Implementation of IWRM in Southern Africa from a Gender Perspective

### Bill Derman

Norwegian University of the Life Sciences, Department of International Environment and Development Studies, Aas, Norway; [bill.derman@nmbu.no](mailto:bill.derman@nmbu.no)

### Preetha Prabhakaran

Institute of Development Studies, University of Sussex, Brighton, UK; [preethapb@gmail.com](mailto:preethapb@gmail.com)

**ABSTRACT:** While it is claimed that the founding principles of integrated water resources management are the Dublin Principles this does not appear to be the case for Principle No. 3, which underlines the importance of women in water provision, management and safeguarding. Mozambique, South Africa, Tanzania and Zimbabwe are members of SADC and have signed the SADC Protocol on Women and other international human rights instruments. However, we do not see an incorporation of these instruments and other empowerment frameworks into water policies. We find that Principle No. 3 has been sidelined in the implementation of Integrated Water Resource Management (IWRM). In examining the gender practices in these four nations of Africa, gender equality remains distant from the concerns of the water sector. We enumerate many of the commonalities among these countries in how they are marginalising women's access to, and use of, water.

**KEYWORDS:** Gender, IWRM, Dublin Principles, southern Africa

### INTRODUCTION

This article focuses on one aspect of the more general Flows and Practices project: What has been the place and importance of women's equality in the rolling out and implementation of Integrated Water Resource Management (IWRM)? What have been the policies and strategies promoted and followed to ensure that women were included in all phases of the old and new institutions tasked with formulating IWRM at the various levels involved in water governance and management? How have the general gender policies of the four nations been included in the water sector? If women's management of water has not figured centrally to date what are the implications for their access to land and water in the context of large-scale water and land appropriation?

The IWRM discourse recognises women as important stakeholders in achieving the stated goals of efficiency, equity and environmental sustainability (GWP, 2006). It advocates for gender-sensitive approaches in the implementation of IWRM principles in order to ensure women's greater involvement in water management (ibid). But, does this focus on women address gender issues that shape differential access to water? While policy interventions to address issues of inequitable water allocation and distribution have included gender in the overall 'field of vision' (Seager, 2010), this focus has often been limited to representing women either as a separate 'add-on' category, or as a vulnerable and homogenous group with undifferentiated interests (Cornwall et al., 2007; Rathgeber, 2003.). This narrow vision tends to overlook or oversimplify issues of gendered power relations, which lie at the core of inequality that determine one's access to, use of, and control over, water resources (Prabhakaran, 2013).

This article locates gender as a key analytical category for understanding issues of differentiation in water access and equity. The focus on gender is important because IWRM has influenced water-sector reforms around the world, where gender relations shaped within specific socio-political histories, have led to vast inequalities in access to, and distribution of, water. Policy framings on gender have emphasised gender sensitivity and gender mainstreaming. There is strong agreement as to the content of gender mainstreaming: Gender mainstreaming is:

The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.<sup>1</sup>

The implementation of the four Dublin Principles<sup>2</sup> is at the heart of IWRM although Principle No. 3 has been neglected. It reads:

Principle No. 3 – Women play a central part in the provision, management and safeguarding of water. It goes on to state:

This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle require positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision making and implementation, in ways defined by them.

This reads and sounds very much like gender mainstreaming and women's empowerment but yet the water sector has been strongly resistant to accomplishing this.<sup>3</sup> The Dublin Principles include all waters no matter how they are conceptualised and divided in law and in practice. These principles do not say that only primary or domestic water must include women but rather say that all aspects of water governance should include women (De Jong et al., 2012). Moreover, according to the Global Water Partnership, IWRM is not an end in itself but a means of achieving three key strategic objectives: efficiency to make water resources go as far as possible; equity, in the allocation of water across different social and economic groups; environmental sustainability, to protect the water resources base and associated eco-systems. IWRM was to incorporate all Dublin Principles<sup>4</sup> which leads us to ask what have been the difficulties faced in recognising the importance of women and supporting their domestic, livelihood, and productive water-related activities? Furthermore, if the importance of women has been recognised, have their interests and needs been neglected and ignored in the implementation of IWRM (Prabhakaran, 2013)? IWRM has become the dominant discourse in how to analyse and resolve water issues while claiming to incorporate all the Dublin Principles.<sup>5</sup> According to most accounts, IWRM has

---

<sup>1</sup> [www.un.org/womenwatch/daw/csw/gms.pdf](http://www.un.org/womenwatch/daw/csw/gms.pdf) Report of the Economic and Social Council for 1997 (A/52/3, 18 September 1997).

<sup>2</sup> The Dublin Statement on Water and Sustainable Development, Dublin 1992 prepared for the Rio de Janeiro Conference on Sustainable Development.

<sup>3</sup> We are of course aware of the role that women play in borehole committees, and on some irrigation committees depending upon context. However here we are focusing on IWRM and its adoption by ministries of water. We also consider national water policies.

<sup>4</sup> We recognise that the Dublin Principles have been subject to multiple and controversial interpretations.

<sup>5</sup> World Bank's Water Resource Sector Strategy, the European Union's Water Initiative, UNEP's Water Policy Strategy Document, Asian Development Bank, the African Development Bank and the Inter-American Development Bank.

not included, although this may be changing, the right to water<sup>6</sup> and in general the human-rights based approach to development.<sup>7</sup>

In the domain of gender there have been strong international pressures to support women's issues and equality. Alongside the adoption and spread of IWRM have been the signing of international human-rights instruments. These include the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), The Southern African Development Community Protocol on Women, the Covenant on Economic, Social and Cultural Rights, and many others. These often provide an important context in which international, national and local NGOs seek to improve the position of women. All four countries are members of SADC and have signed the SADC Protocol on Gender and Development (1997) and other international human-rights instruments. We have not found these other gender frameworks incorporated into water policies (Hellum et al., 2015a).

This special issue has discussed the ways by which IWRM has come to, and been modified and translated, in five African countries, namely South Africa, Zimbabwe, Mozambique, Tanzania and Uganda.<sup>8</sup> The various articles have discussed different aspects of IWRM implementation and roll out such as permits, user pays principle, commodification of water and decentralisation. We believe and will demonstrate in this article that these aspects do not address the structural and economic vulnerabilities of women. Water is inextricably connected to the construction of gender, of livelihoods and of cultural ideologies and practices. In many rural contexts, the provision of water by women and girls has material and symbolic dimensions. Clean water is essential for the health of the family. Simultaneously, women have to provide sufficient water for bathing meaning, often, a large time and energy commitment.<sup>9</sup> Women and girls are also mainly responsible for hand-irrigating gardens (large and small) for a more balanced diet and an income for the children's needs. Or, more broadly how gender, nature and life are intertwined (Walsh, 2015) in the multiple dimensions of water and how gender figures in all dimensions of access to, and use of, water.

All the aforementioned nations belong to SADC which has issued its own critique of water policies within SADC. In its water strategy there is a strong critique of SADC's own approach to gender in its Regional Water Strategy.<sup>10</sup>

IWRM in SADC has taken little cognisance of the role that women play in water resources development, utilisation and management, and has made little effort to involve women in the decision-making processes. The challenges that exist in gender mainstreaming are highlighted by:

- a) Limited understanding and integration of gender sensitivity in IWRM
- b) Lack of recognition and appreciation of the role of women in IWRM
- c) Inadequate capacity by women to engage in IWRM

---

<sup>6</sup> General Assembly Resolution (64/292 July 28, 2010) and General Comment 15 from the Committee on Economic, Social and Cultural Rights (2003) that clean drinking water and sanitation are human rights. For a multi-level account of the human right to water for domestic and productive purposes in Africa see Hellum et al., 2015b.

<sup>7</sup> There have been several attempts to see if IWRM and the human right to water are compatible. The most thorough is Tremblay, 2014.

<sup>8</sup> Uganda is not considered in this article in part because it is not a member of SADC.

<sup>9</sup> This perspective can be understood through the article 'A good wife brings her husband bath water' (van Houweling, 2016) which directs our attention to the multiple functions of water, the importance of domestic relations in the lives of men and women, and the differences in responsibility and caring

<sup>10</sup> The Regional Water Strategy for the Southern African Development Community (SADC) is "aimed at providing a strategic framework for sustainable, integrated and coordinated development, utilisation, protection and control of national and transboundary water resources in the SADC region. This strategy supports the SADC Common Agenda of socio-economic development and regional integration and improvement of the quality of life of all people in the region". [www.sadc.int/files/2513/5293/3539/Regional\\_Water\\_Strategy.pdf](http://www.sadc.int/files/2513/5293/3539/Regional_Water_Strategy.pdf) (accessed September 1, 2016).

- d) Lack of opportunities for women and other disadvantaged groups to participate in IWRM at different levels. For instance, lack of child-care facilities can deny women with small children from participating in stakeholder fora
- e) Inadequate capacity and/or reluctance by some service providers to engage women and other disadvantaged groups in IWRM processes
- f) An inadequate conceptual framework to include women's productive uses of water as part of broader development strategies to increase women's access to and use of water
- g) A systematic consideration of how women's difficulties in accessing land and land rights can limit their access to, and control of, water (SADC, 2006).

Given this critical analysis of gender in the water sector, we were surprised to learn how little has been done to shift water policies and practices to systematically include gender in practices and policies.

The paper is organised as follows: After a discussion of methods and sites of research we present four national summaries. We briefly describe national gender policies of Mozambique, South Africa, Tanzania and Zimbabwe. We select examples at the river basin or catchment level to explore gender issues. Following the country descriptions, we compare broad commonalities (and some differences) among the four nations with respect to gender policies and practices. This is followed by our conclusions.

## **METHODS AND SITES OF RESEARCH**

We have been carrying out research on IWRM in four countries: South Africa, Tanzania, Zimbabwe and Mozambique from 2011 to 2014. We were surprised by the lack of attention to gender issues in general and women's incorporation at all levels of IWRM planning and implementation in light of Dublin Principle 3. To explore the gender dimensions, we reviewed international policy documents and recommendations on gender and water, and regional documents on gender and water before turning to the relevant national documents. Where relevant we also read international donor and NGO documents and then sought to take a gender lens on our own IWRM research. Moreover, we read water-related research which used a gender focus in order to supplement our own research. Additionally, we read literature on gender and development. One caveat, this paper is about IWRM and not about all water policies that these governments have framed, attempted or implemented. In general, much more attention has been given to gender in rural water supply than in water resources management. For example, the UK-based NGO Water Aid focuses heavily on gender in its water and sanitation work.<sup>11</sup> Moreover, there may be different gender outcomes for example, for water supply in contrast to irrigation water.<sup>12</sup>

## **MOZAMBIQUE**

Mozambique introduced IWRM as the basis of its water laws and policies in the early 1990s (Bolding and Alba, this Issue; Alba, 2013). With a majority of its population as rural smallholder farmers, they have managed their own waters in a complex array of customary practices and norms. As a member state of SADC and the African Ministers' Council on Water (AMCOW), Mozambique has ratified the SADC protocol on gender and development (2008) and the AMCOW Policy for mainstreaming gender in the water sector (2010) which promotes full and equal enjoyment of rights for women in all aspects in the region. Additionally, it is committed to the other regional and international legally binding

---

<sup>11</sup> [www.wateraid.org/uk](http://www.wateraid.org/uk). They have numerous papers on gender issues in general and applied to specific national contexts.

<sup>12</sup> Who benefits and who loses more generally from IWRM is the subject of the articles in this special Issue.

documents including the Convention on the Rights of the Child (1989), the Africa Platform of Action (1985), the Beijing Declaration and Its Platform for Action (1995) as well as the most powerful document for gender equality and women's rights being the United Nations Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979). With the assistance of donors, Mozambique has been active in adding a gender dimension to climate change (Ribeiro and Chauque, 2010), agriculture (Gender Unit of the Ministry of Agriculture, 2005, Republic of Mozambique, 2005), and the Ministry of Women and Social Action (2014, Republic of Mozambique 2014). What is surprising in these particular documents is the absence of water despite women's importance in agriculture and domestic work (van Houweling, 2013). This is not to deny progress in other areas.

Research in Mozambique, as in much of Africa, demonstrates women to be the primary water collectors and the major carers. Women are associated, in general, with water supply while irrigation tends to be focused on men. These generalisations ignore women's roles which vary. Nonetheless, like many other parts of sub-Saharan Africa the gender division of labour is highly unequal. Women bear the brunt of household work while men's contribution is minimal (Arora, 2015). In a detailed study of men's and women's time Arora found that women's total work per day is almost twice as much as men's work time and men enjoy more leisure, around three times that of women. According to her, gender is the most important determinant of time-poverty (ibid: 214). This begins to explain the difficulties in changing domestic patterns of labour and the importance of incorporating the domestic relationships and structures tied to water practices (Van Houweling, 2016: 1066).

The Mozambican case studies took place in two large catchments: The Inkomati and the Limpopo. As with the other countries, Mozambique has shifted from a state-managed centralised water management system to one to be decentralised and driven, in principle, by stakeholders. Simultaneously, emphasis and priority have been given to investors to promote large-scale irrigation projects based upon large-scale concessions of land (and therefore of water). In the allocation of irrigable land, water must also be allocated in order to provide water security for the large farms. As part of our research, Elke Praagman conducted research on two large-scale irrigation schemes: the first was Massingir Agro-Industrial Company and the Massingir Dam in the Limpopo Basin and the second the Irrigation Scheme of Baixo on the Limpopo River. Praagman analysed how and in what ways different categories of water users (stakeholders) engaged with the different levels of water governance. In the case of the Massingir Reservoir there were two very large proposals for using the water for vast sugar cane plantations. The first was ProCana Company who have now left the scene to be replaced by Massingir Agro-Industrial (MAI) owned by a combination of South African and Mozambican companies. She documents the focus on land while the implications and rights of water users were not discussed in approving the project.<sup>13</sup> In presenting the replacement of ProCana by MAI poorer members of communities were not consulted nor were they aware of what was happening. The heterogeneity of water users was not recognised and those in positions to benefit from the new sugar cane plantations spoke on behalf of the 'communities'.

Without discussing the details of each case, both projects involved the appropriation of large amounts of water resources in one case for sugar cane and in the other for rice. In neither case was consideration given to upstream users, and what would happen to their access to water.<sup>14</sup> In the formulation of the National Water Resources Strategy 2005, stakeholders' involvement was regarded as a core element for the comprehensive strategy development process.<sup>15</sup> While this underlies one of the

---

<sup>13</sup> The Mozambican Land Law of 1997 is regarded as progressive since it recognises customary land tenure and provides for communities to delimit their land and hold a certificate of occupancy (DUAT) (Tanner, 2010).

<sup>14</sup> Upstream, because irrigators would be obliged to let water flow freely to the downstream users.

<sup>15</sup> "One of the Act's main objectives is to progressively decentralise the responsibility for water resources management from national to regional institutions, the principal institutions being catchment management agencies. These agencies must

core principles of IWRM, there is no indication of the process that was followed to ensure the involvement of all categories of water users in decision making. How were women represented in this mix, and was the heterogeneity of women and their particular needs given due consideration? While the Water Act distinguished between what are termed 'common uses' and private uses, there is no legal protection for 'common uses', which are using water for drinking, cleaning, washing, watering cattle and irrigation for less than one hectare without mechanical means. In the law it is said to take priority over other uses but in practice uses are not registered and become invisible (Praagman, 2013).

The marginalisation of common water uses over private uses consequently render women's access to water potentially more difficult keeping in mind their already gendered positioning in access to water for private uses. Private uses are supposed to be registered, licences for the quantities of water set, and the user is supposed to pay the appropriate fees and costs. In Praagman's cases water was allocated without knowing the amounts of water available or its seasonality. While a process was followed to establish community landownership, water allocations were not included. In general, once the government granted large land concessions to private parties they also turned over the responsibility for community issues to the lessee.

Overall, though involvement of women in all stages of decision making and managing water resources forms one of the central pillars of IWRM and within the Water Resources Management Strategy of Mozambique, the issue of gender itself is treated as a separate subject and is articulated under the section on gender mainstreaming without demonstrating how it should be carried out. This has removed consideration of gendered uses and gendered access to water while strategising processes of water allocation in each river basin. This makes it easier to ignore the needs of different categories of women.

Common to the treaties that Mozambique has signed is the view of gender equality as a fundamental right based on non-discrimination of civil, political, economic and social rights. Article 18 of the SADC (2008: 16) Protocol pertaining to access to property and resources, categorically states that "state parties shall by 2015 review all policies and laws...to end all discrimination against women and girls with regard to water rights and property such as land and tenure". Similarly, the AMCOW (2011: 5) policy on mainstreaming gender in the water sector seeks to "ensure that gender concerns are taken into account in policy formulation in all sectors of water (...)". Furthermore, though the human right to water is not built into the design of IWRM, the fact that the country has committed to regional and international human rights treaties which includes the human right to water, should not be ignored within the national water policy. However as is seen currently, these rights are not articulated within the Mozambican national water strategy. This is in spite of the core principles in both SADC and AMCOW that the "state parties shall harmonise national legislation, policies, strategies and programmes with relevant regional and international instruments.... for the purpose of ensuring gender equality and equity" (SADC, 2008: 9; AMCOW, 2011: 5)

## TANZANIA

Like the other countries, Tanzania has adopted IWRM as a key framework for water resources management. In the Tanzanian National Water Policy (URoT, 2002) this integrated approach is focused on addressing participatory, multi-sectoral, multidisciplinary river basin management in order to address the challenges of managing water as a scarce resource (Lein and Tagseth, 2009). A reference to the four Dublin Principles as the basis for this new approach is made; however, the policy details only three major shifts: the holistic approach for multi-sectoral integration, the principle of subsidiarity and

---

promote participation by water users and other stakeholders in all aspects of water resources management in their areas of operation (2005:151)".

decentralising decision making involving stakeholder participation and water as an economic good. There is no reference to the Dublin Principle No. 3, and the roles of women are subsumed within the principle of enhancing participation in decision making without a gender focus.

Tanzania has also adopted in its constitution the human right to drinking water and sanitation. This is reflected in the national water policy in the form of water for basic needs being accorded a human rights status; however, there is no incorporation of other gender frameworks like CEDAW etc. which envision how these rights could be realised. Indeed, many other related rights would need to be realised in order to for women's human right to water to materialise in this case. For example, the water allocation system distinguishes and separates the water use permit from land title, but typically there is no indication of the process by which women can access water irrespective of not owning land. Also participation of women and men in decision-making processes is governed by power dynamics that are shaped by landownership. Therefore, by not focusing on how to increase women's access to land, women's access to water is questionable. Men too have to apply for a permit and if large-scale users are privileged then men's access to water (and their wives' and families') can also be jeopardised. The policy overall favours large-scale over small-scale users (van Koppen et al., 2004; Hepworth, 2009; Jimenez and Perez-Foguet, 2010; van Eeden et al., this Issue). Indeed, in a quantitative study of the amount of global water grabbing the authors have found in Africa that blue water grabbing is highest in Tanzania and Sudan (Rullia et al., 2013). In policy and in practice, commercial irrigated agriculture will take precedence over customary tenure and practices (van Eeden, 2014; van Koppen et al., this Issue). It does not take into account the role that living customary law plays in providing women access to land and water (Nkonya, 2008).

Our research has focused upon the upper and lower reaches of the Wami-Ruvu Catchment. The catchment contains a wide variety of water uses but numerically it is dominated by small-scale farmers. In this catchment the Tanzanian Water and Sanitation Network has found multiple obstacles and levels to access water by people living with HIV/AIDS, people with disabilities, the elderly, by children and by rural communities. The broader requirements of a human-rights-based approach to water has not been incorporated into the interpretation of IWRM (TAWASANET, 2012).

The current development strategy of providing large amounts of land to agricultural investors works against the issue of access to water for vulnerable groups (van Eeden, 2014). In her research on large-scale land investment, van Eeden observes that the institutional shortcomings of IWRM have created many difficulties for the Wami-Ruvu River Basin Water Office (WRBWO) to effectively implement its framework. Of these shortcomings, perhaps the most controversial is the failure of the framework to recognise the major power disparities among the water users in the basin as it aims to govern water in a decentralised fashion. She contends that the IWRM framework, as it is currently implemented in the Wami-Ruvu River Board (WRRB) is subject to powerful actors' agendas that are able to capture the governing process and influence decisions regarding water allocations (van Eeden, 2014: 180).

Lecoutere (2012) in her thesis on small sub-catchments in the Rufiji Catchment recounts a different story whereby irrigators and water users have had to solve their own issues and conflicts. In a fine account of legal pluralism, she conducted her research in a context of customary norms and practices. According to her research, water conflict resolution relies on pragmatic problem-solving rather than being based on well-defined institutions. The norm where she was carrying out her research was that everyone has an equal right to water. Lecoutere (2012: 106) writes:

It is noteworthy that none of the irrigation schemes in our case study operates with a legal water right, which implies all water appropriation is illegal according to national water laws. Still the village government intervenes in governance of 'illegally' appropriated water.

While in most cases she found that cases of water conflict were amicably resolved at the local level there were, however, four cases of conflict that were not resolved. In these cases persons with a lower status simply gave up their claims. Of the four, three were women. As in most rural areas institutional

pluralism remained important despite the formation of new institutions for water and irrigation management. Resolution, or what Lecoutere terms pragmatic problem solving is not always fair but nonetheless accepted. But from her analysis it seems clear that if powerful outsiders are able to get water rights/permits they will be able to appropriate water, and the local mechanisms for problem-resolution will most likely be lost. Water scarcity does and will produce conflict. She suggests that where there are norms of sharing and equity, scarcity does make it more difficult to comply with such norms. Those norms will become even more difficult to maintain if outside actors seek to obtain irrigation water.

As in Mozambique, it seems that to date much of Tanzania's use of IWRM relies on gender stereotyping. For example, the focus on gender is limited to improving gender participation in rural water supply programmes (Cleaver and Toner 2006). To this effect, gender finds mention primarily in the section on rural water supply in its water policy.<sup>16</sup> The focus on empowering women, increasing their representation and involvement in decision making in order to improve the efficiency of water supply programmes is far too limited. The limited emphasis upon water supply rather than water management relies upon gender stereotyping which categorises women as primary users and responsible for the provision and maintenance of domestic water. It does not challenge the notion of why it should be primarily women's responsibilities. Second, empowerment of women is approached as a means to improve the functioning of water supply programmes and the infrastructural investments rather than ensuring that women's multiple needs for water, which includes productive uses of water, are met. Third, the goal should be women's equality not a reinforcement of their subordinate status.

## ZIMBABWE

Zimbabwe like Mozambique, Tanzania and South Africa, adopted IWRM in the 1990s (see Manzungu and Derman, this Issue). The reforms emphasised that the waters of Zimbabwe would be managed by seven catchment councils in coordination with a new parastatal, the Zimbabwe National Water Authority (ZINWA). There was no mention in the new legislation of the importance of women in water governance, management, storage, or supply. There is a hint of Dublin Principle No. 3 being included under the principle of increasing stakeholder participation. However, representation in the sub-catchment councils which selected the catchment councils was based on economic sectors including large-scale farming, large-scale small-scale mining, etc. and did not include women. Nor were there any mechanisms set in place to ensure women's participation. The Water Act and ZINWA Act of 1998 and the statutory instruments regulating membership and elections to catchment and sub-catchment councils are all silent about the ways and means of enhancing women's participation. The majority of the members of Manyame Catchment Council and the Middle Manyame Sub-catchment Council where we did our research for many years were men.<sup>17</sup> While the new institutions were said to manage all water since all of Zimbabwe's waters – surface water and groundwater – were now owned by the president; the leadership in the new institutions contended they were doing resources management and thus drinking water and even small dams were considered outside of their remit. In this way, the catchment and sub-catchment councils ignored the water issues of the communal areas.

---

<sup>16</sup> For example, in analysing gender in an irrigation scheme, Kissawike (2008: 178-79) writes: "Even though women are central in irrigated rice production, and therefore the ones to know and decide when and where to use irrigation water, very few women participate in the formal management of the scheme. There were no female representatives at any level of water users' organisations, while the various decision-making levels related to water management within the scheme exhibit a conspicuous gender imbalance. Women's absence in meetings and committees can be largely explained as resulting from traditional norms and rules, which strongly associate water management and control over water with men, but it also reflects the gender-biased pattern of plot ownership".

<sup>17</sup> In the meetings held in May 2014 a woman was elected chair of the Middle Manyame Subcatchment Council.

In a highly centralised state like Zimbabwe the existence of customary norms and institutions for the management of water were, and are, not recognised (Hellum and Derman, 2005). The exception had been the Irrigation Boards formed by commercial farmers which were disbanded when the Water Act took effect to become part of sub-catchment councils. When the seven catchment councils were formed in 1999 and began operations there was no policy to ensure that women were included. In addition, there was, for example, no department or group in ZINWA to explore how women's access to water could be expanded. There is widespread acknowledgment that much of Zimbabwe's accomplishments in the water sector deteriorated between 2000 and 2010 (see Manzungu and Derman, this Issue) and efforts are being made, according to the new Water Policy (2013) to first; stem the major deterioration of infrastructure and rehabilitate it and then; to build new infrastructure, especially in Harare and its surrounding areas. The suggested path forward has been traced to Zimbabwe's new water policy (GoZ, 2013).

In its reformulation of Dublin Principle No. 3 which stresses the importance of women in all aspects of water governance, women in Zimbabwe's National Water Policy are included primarily in terms of participation. Participation as a right however is not articulated but rather it is an effort to improve decisions. The full text in the appendix on the principles of IWRM is as follows:

Participation in decisions improves public acceptance of those decisions, improves the quality of decisions because of the greater breadth of expertise and experience, and reduces the risk that opposition from disaffected groups will delay or even stop implementation of decisions. The 1992 Dublin Principles emphasise the importance of allowing women to participate in decisions about water, given the role that women play in fetching water and managing small irrigation plots in many countries. The ability to participate in decisions is the flip side of paying for permits to use water resources (GoZ, 2012: 34).

For instance, it is assumed in the last sentence that only people who have money and pay for permits can participate in water management. Moreover, women are viewed as those who fetch water and manage small irrigation plots but not as full irrigators or engaging in productive water use.

This is further reflected in the policy as it makes a distinction between primary water and water for commercial purposes. The policy states that "water for primary needs is a right for all Zimbabweans" and that "equity in access to water by all Zimbabweans is a right" (GoZ, 2013: 18). This continues the gender stereotyping since women's access to water or right to water is seen primarily in the context of primary needs defined as "water for direct personal consumption, personal household hygiene, and food preparation and for household productive purposes such as gardening and household stock watering, not for commercial purposes" (GoZ, 2013: 18). This makes invisible women's use of water for commercial and productive purposes through 'multiple-use systems' and the important roles that they play in commercial agriculture.

We have found a strong historical continuity which downplays the importance of small, irrigated gardens located next to a variety of water sources usually worked by women and critical for the well-being of families. Yet the new water policy also states: "Women play a pivotal role in the use, management and protection of water resources and water services and should therefore be involved fully in the decision-making processes at all levels" (GoZ, 2012: 23).

In a discussion of cross-cutting themes of the water policy it says that the policy will recognise and promote gender equity in allocation, access and utilisation of water as well as implementation of WASH (water and sanitation) activities. The policy "acknowledges the disproportionate burden placed on women and the girl child when fetching water and taking care of the sick. Targeted programming and implementation of WASH activities shall be gender-sensitive. Gender-based budgeting will be promoted" (GoZ, 2013: 25).

The policy then proposes that at least 30% of the catchment and sub-catchment councils' positions will be reserved for women and the youth. There is no comment on why these two categories are combined. In addition, at least three members of the ZINWA board will be women, youth or worker

representatives. Once again why these three are grouped together remains obscure especially given the diversity among women.

Whether it is rural or urban water supply, or water for irrigation there are few indications of how to recognise women for the contributions they are making on the one hand, and to incorporate them in their unity and diversity into water policy-making, governance and participation, on the other.

As in the two previous case studies, other gender policies ratified by Zimbabwe are not integrated within its water policy. The concept of indivisible human rights as defined in CEDAW is not integrated when looking at primary water as a human right. In order to access this right to water, women's other rights (right to land, food security, credit etc) need to be realised. The distinction made between primary vs commercial waters and institutional frameworks while designed to increase stakeholder participation are in fact predicated on one's access to land which most women lack. In practice this means that women's right to participation is not integrated with their other rights.<sup>18</sup> Nonetheless, the current water policy at least on paper marks a considerable change from the Water and ZINWA Acts.

## SOUTH AFRICA

In marked distinction from Mozambique, Tanzania and Zimbabwe, South Africa has a strong human rights orientation, a very active Human Rights Commission and a set of policies for rural and urban water to address the needs of the poor and of women. While IWRM is part of South Africa's water policies (Anderson et al., 2008; van Koppen et al., this Issue; Movik 2011) there are other major frameworks which include water as a human right, free basic water and a water reserve for basic human needs. These frameworks are included in major policy documents on the incorporation of gender along with the existence of the National Commission on Gender Equality and the South African Human Rights Commission (SAHRC). The SAHRC wrote an outstanding report (2014) on the Right to Access Sufficient Water and Decent Sanitation in South Africa. There are specific requirements for women to be employed at all levels in government departments and also in the yet to be completed Catchment Management Agencies. The current Minister of Water and Sanitation in South Africa is a woman. This is not to say that even now there are no major gender issues in the South African water sector.

South Africa adopted two separate acts: the Water Services Act of 1997, followed by the National Water Act of 1998, which governs water resources management of bulk supplies of 'raw' water and water for productive uses. These acts have been supplemented by new strategies and frameworks including: the Strategic Framework for Water Services (2003) addressing service delivery of 'potable' water, and most recently the National Water Resources Strategy, Second Edition (2013). The new water legislation introduced a nationwide system for legal water authorisations. These are:

- *Schedule 1* – Small volumes of water for household use only. No need to apply for a licence.
- *General Authorisations* – Larger volumes of water may be [authorised](#) for a specific type of water use or category of water user. These users need to register their use but do not need a licence.
- *Existing Lawful Use* – This allows water use that was [lawfully used](#) before the National Water Act (NWA) came into effect to continue until it can be converted into a licence using [compulsory licensing](#).
- *Licensed Water Use* – Licences are issued under the NWA, and require approval of an application by the Department of Water and Sanitation.

In 2000, a new municipality system was initiated with the responsibilities for water supply given to them. Some DWS technical staff were seconded to local government to assist in their water

---

<sup>18</sup> For a detailed consideration of women's human rights and water see the Zimbabwe chapters (10-13) in Hellum et al., 2015b.

responsibilities. This transition created much confusion and sometimes led to the deterioration of the water supply services that existed under apartheid. Communal areas remained literally and metaphorically at the end of the pipe (van Koppen et al., 2015).

Nonetheless, South Africa probably has the widest provision of domestic water to indigent households on the subcontinent, especially in urban areas. According to the government in their report (2013) to the United Nations, 72% of the 2.2 million indigent households received free water. The percentage however drops significantly in the provinces with those having the highest percentage of communal areas. Limpopo Province, for example, only meets the needs of 40% of its residents as does the Eastern Cape Province (RSA, 2013: 23).

Given our rural emphasis in this article we sketch some aspects of South Africa's communal areas. Communal areas are the former homelands of which there were ten African and six coloured. They pose multiple developmental challenges in general, and water ones in particular. In dismantling the homeland governance structures and creating a new unitary state apparatus, water supply (and sanitation) functions were given to the newly created districts and municipalities which incorporated the communal areas which at the same time are under the authority of chiefs.<sup>19</sup> Irrigation waters were controlled by DWS and the provincial Department of Agriculture and Rural Development.

Michael Aliber et al. (2011: 9) have estimated that there are 2,300,000 subsistence-oriented black households practising some form of agriculture along with 200,000 commercially oriented ones, nationwide. Access to water for domestic and productive use in the Limpopo Province, the most rural of South Africa's provinces remains difficult. Access to water for agriculture is based upon access to land. Land is held for the most part by men and ultimately by chiefs.<sup>20</sup> In the allocation of land, women (especially unmarried women and widows) have multiple difficulties in gaining access while married women have insecure rights because they gain access through their husbands.<sup>21</sup> While water for household purposes (including gardens) is overwhelmingly managed by women they are faced with a general scarcity of water. The scarcity in communal areas continues to be due to the appropriation of water by large-scale farmers, a general water scarcity and the need to make more water available with infrastructure in the communal areas (Rust and Hanise, 2009; Department of Water Affairs, 2012).

In terms of gender, the picture for South Africa does, however, vary considerably (Claassens, 2015). Kristi Denby (2014) reports that some projects in the communal areas such as the Recapitalisation and Development Programme (RADP), a land reform programme requires the cooperative members to allow wives and daughters the ability to hold the land title from the chief when their husband or father passes away. According to Denby this was an issue fraught with controversy while she was conducting her research. The Department of Land Reform made it very clear at public meetings that women must be involved often against the wishes of those at the meeting. They also stressed the importance of women participating in the cooperative meetings.

In contrast, the former homeland of Gazankulu represents how, in the Limpopo Province, some former homeland residents lost out in the shift from homeland water supply to the creation of municipalities due to the lack of proper or no attempt to increase the amount of water to be made available for rural residents at the time of transition. While the amounts of water allocated for residents of former white urban areas and water allocated for irrigated agriculture increased, water for rural residents remained at basic water supply levels for the villages and towns of the communal area.

---

<sup>19</sup> See van Koppen et al. (2015) and van Koppen and Schreiner (2015) on South Africa in this Issue. For the powers of traditional authorities in relationship to women see Claassens, 2013.

<sup>20</sup> This is a highly contested area. For an introduction to the issues see Claassens, 2015.

<sup>21</sup> We are speaking generally. Some projects in the communal areas such as the RADP land reform program require the cooperative to allow wives and daughters the ability to hold the land title from the chief when their husband/father passes away. In addition, the Department of Land Reform insisted on women attending meetings.

We found no evidence that account was taken of increasing rural supply to facilitate socioeconomic development or to realise the right to clean drinking water and to domestic purposes. For example, the major source of water for Giyani and Siyandhani is the Middle Letaba Dam which is rarely full and according to DWS over-committed, over-permitted (more water was allocated than available) and there is a general deficit in the catchment.<sup>22</sup> No reallocation was made to increase the amount of water or to upgrade the infrastructures to provide a better flow to Giyani and its surrounding villages (Nyabeze et al., 2007).

An example of weaknesses in the transition to municipalities can be found in the research of Thoko Masangu (2007). She documented the complicated provision of water to the village of Siyandhani a few kilometres east of Giyani Town. There was no attempt made to reduce the amount of water allocated to orange plantations down river while the amount of water delivered to Giyani often did not meet the town's basic requirements. In Siyandhani, most of the households in village had yard taps installed in the 1970s and 1980s but the taps are dry most of the time. Water for the yard taps was supposed to come from the purification plant at Nsami Dam through the pipeline from the Middle Letaba Dam. Most of the households situated on the western side of the village have not had water from the taps for seven years or more while those on the eastern side get it sporadically during the rainy season. The only reliable supplies are the irrigation canals which is from where most households, most of the time, obtain their water. Women, primarily responsible for water fetching, have to walk as long as one to five hours per day to obtain drinking water from these canals. Villagers with a bit more means have turned to water vendors who carry their containers to spigots or houses with water supply and then sell them at relatively high prices to women.<sup>23</sup>

This is one example from one province. We do know that the areas of highest poverty in South Africa are the former homelands. And these are not precisely the areas where under IWRM principles they can afford water nor will the economic benefits be sufficient to support further infrastructure development. It would appear that IWRM reflected in South African policy has not been helpful in addressing the deep poverty in South Africa's communal areas. It has been very difficult to undo the influence of 'big users' in the allocation of water. In terms of urban users however, South Africa has made remarkable progress in making drinking water available.

## DISCUSSION AND FINDINGS

In examining the commonalities among the four nations, we have found from our current research that the pivotal role of women as providers and users of water is ignored at policy levels and, most often, in the differing levels of formal institutions of water governance. Examining the understanding and implementation of IWRM in selected areas of Mozambique, Tanzania, Zimbabwe and South Africa this article finds that insufficient attention has been paid to the multifaceted roles that different categories of women play.

We have found that there are several commonalities in water gender policy and practice among the four nations that have all adopted IWRM. Each country relies on a distinction on the one hand between customary, informal or primary access to water and formal or licensed access to water, on the other. In general, this system of licensing water use has been through permit systems or authorisations (South

---

<sup>22</sup> The waters in the Middle Letaba Dam are always less than expected because of high and undocumented water abstractions (Nyabeze et al., 2007: 1043).

<sup>23</sup> President Jacob Zuma undertook a monitoring visit to Giyani in October 2014 to assess the provision of water following recent community complaints. During the visit he opened a new water treatment plant. However, the water has yet to arrive from the long completed but still unused water from the Nandoni Dam. Why this is the case is a long story and involves conflicts among the Province's political leaders. For a recent summary see The Mail and Guardian, 13 February 2015. 'Giyani: The thirst that won't be quenched' by Sipho Kings.

Africa). The distinction between customary or primary water (non-permitted<sup>24</sup>) and permitted water typically coincides with the national distinctions between domestic water (unpaid) and permitted or authorised water (paid and often mistakenly labelled productive water). Water provided through a municipal system is not permitted but ordinarily paid for.

Despite the national emphases upon commercial or permitted water being 'productive' we find that referring to domestic (or primary) uses does not mean that the water is not productive. Van Koppen has convincingly argued for a scalar or quantity approach to productive water, especially regarding rural water (van Koppen et al., 2014). The majority of water use in Mozambique, Tanzania, and Zimbabwe is informal and without formal registration. Permits are dominated by larger-scale commercial users. In South Africa most water use is indeed formalised due to the extensive water infrastructure development. Uses prior to 1998 have been formally declared as 'existing lawful use'. New large-scale (post-1998) water users have to obtain a licence. Most use in communal areas is not individually recognised but is protected under Schedule 1.<sup>25</sup>

The distinction between domestic and productive uses of water render women's productive uses of water invisible. Formal water rights in both South Africa and Zimbabwe under the current water reforms, are applicable only for commercial use of water (van Koppen et al., 2006). Most women in South Africa and Zimbabwe cultivate crops for commercial sale by accessing water through informal sources and networks. Since commercial water rights are based on landownership, which most women are not entitled to (ibid), their role as productive users of water continues to remain invisible. Similarly, the provision of limited free water for domestic purposes or for primary uses in South Africa and Zimbabwe respectively, recognises only the basic domestic needs and roles of women, without providing water for their productive activities. This separation of domestic and productive water in policies is isolated from the gendered contexts of people's livelihoods and an understanding of how people access water in their daily lives. These discourses create an artificial separation between what constitutes as productive and non-productive uses of water. This reflects the historical bias that has existed in recognising women's productive roles, as work done within the domestic sphere is seen only as reproductive work, mostly done by women (Folbre, 2004), and the use of water for income-generation activities within the household is made invisible.

National policy documents incorporating IWRM articulate the need for 'integration' and an 'inter-sectoral' approach. Global understandings of integration in terms of coordination and regulation of water demand should be based on an understanding of people's multiple water needs and the ways in which they access and use water. This is important to achieve efficiency, equity and sustainability in water use which is relevant to people's lives.

South Africa and Zimbabwe voted for the General Assembly Resolution on the Human Right to water while Tanzania abstained and Mozambique was not present.<sup>26</sup> Nonetheless all four nations being signatories to a range of UN treaties and covenants, and the African Charter on Human and Peoples' Rights they are subject to international law on the human right to water. However, they do not make use or apply other UN instruments where the right to water features as in the Right to Health, the Child Rights Convention and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (Hellum et al., 2015a). Nor do water ministries cite or make use of the Protocol to the African Charter on Women's Rights which features women's empowerment and rights.

---

<sup>24</sup> This does not mean that it is illegal.

<sup>25</sup> The most important conditions of Schedule 1 in South Africa for this article are that people are free to take water for reasonable domestic use at the household.

<sup>26</sup> General Assembly GA/10967, July 2010

None of the four countries has provisions in its water laws and policies to recognise the existence of living customary law as a legitimate source to accessing water. This is surprising given the growing recognition of customary rights to land in Mozambique and Tanzania. Little attention is paid to how women access water under customary arrangements and whether they would lose that access and use under permit systems. In general, women are seen as a homogenous category which makes invisible the gender inequitable relations among women. The needs and interests of small-scale women farmers differ from those involved in large-scale commercial farming. This is not articulated or paid attention to in any of the policy documents.

The current water reforms focus on the use of statutory legal systems to regulate access to water resources. While each country recognises water for domestic uses,<sup>27</sup> not one of these countries has a clear complaint or legal mechanism to enable residents to protect their customary rights. On the contrary, the adoption of one single legal system can formally cancel their user-rights to access land and water within customary marriage laws and kinship systems.

With the partial exception of South Africa we have been unable to find a formal, long-term plan to include women in all capacities of water governance and management. Moreover, there are other multiple sectors where water is essential including agriculture, health, forestry, environment, and mining, etc. that involve water. If women are marginal in these sectors, then the gender consequences of water management will have profound consequences for them in their multiple roles as water managers.

We have not found any national government policy and plan to address the gender stereotyping of women as domestic providers and storers of water while their productive uses are relatively ignored. On the other hand, the national water policies reinforce this gender stereotyping of water roles and practices for women and men. We have not found policies or programmes to encourage or facilitate men to share the burdens of water fetching, storage, cleaning, and general caring.

## CONCLUSIONS

We have found in our research that despite the varied colonial histories and governments described in the other articles in this Issue, there are strong commonalities among these four countries in terms of women and water. This is not to deny that within each of the four nations there are significant and large differences in how women gain access to water and how they participate in the institutions that govern and manage water. However, every country has gender policies paying attention to the inclusion of women. Each country has been signatory to a range of human rights instruments – international and regional – which in principle should apply to the governance and management of water. It appears that the two most important ones CEDAW and the SADC Protocol on Gender have not been used in the adoption of IWRM. This observation takes on significance because despite its cross-cutting nature, water management and governance take place bureaucratically in silos. While water is essential for domestic and caring needs, agriculture, industry, health, mining, and the environment, there are few or no ways to link them in water management despite the emphasis upon integration in IWRM. The difficulties of fetching water in rural water are relatively well known but there are increasing burdens for women in obtaining water in urban areas. This has been especially true not only in Zimbabwe with the failure of municipal water systems but also in the peri-urban areas of Tanzania, Mozambique and South Africa.

While there is acknowledgment of rights to domestic water in all four nations (Schedule 1 in South Africa, primary water in Zimbabwe, common uses in Mozambique, and water for human needs in

---

<sup>27</sup> Primary water in Zimbabwe, Schedule 1 in South Africa, water for common uses in Mozambique and water for basic needs in Tanzania.

Tanzania), these have no legal protection and no way for water users to protect their customary uses. Moreover, given development strategies which are more reliant upon large-scale investment strategies rather than smaller-scale emergent farmers and smallholder irrigation this will harm women (and men) (Sitko and Jayne, 2012; Xie et al., 2014).

The discourse on participation renders invisible aspects of women's gendered participation within formal institutions which are socially embedded, with rules often set within social norms of power and gender hierarchies (O'Reilly, 2008). Participation processes are time-consuming and often the timing and location of meetings do not take into account women's reproductive and domestic tasks that exclude them from formal decision-making processes (Meinzen-Dick and Zwarteveen, 1998). Even when women do participate in formal processes, they are unable to influence decisions within unequal power relations of ownership and control of resources. Balanced against this policy emphasis upon women and gender are the overt and subtle ways by which women find themselves with weaker rights, reduced access to resources and social protections than men.

It remains to be seen if IWRM will continue to maintain its hegemonic position in water governance as water security (Lankford et al., 2013) increases its presence. However, whether it is IWRM or water security there needs to be a major change in the understanding and support of recognising the water rights and water access for the millions of small-scale multiple needs of water users. It is not just clean drinking water, or water for small-scale agriculture, or water for pastoralists' cattle but how to shift the thinking and practice underlying water governance. For women, not increasing their rights and access to water will jeopardise families' health and a weakening of human rights. The promise of IWRM to have greater integration especially with land has not met its promise. Accessing water through land which is dominant in rural Africa will become far more difficult if current trends continue.

With the exception of South Africa we have found that in the catchments where we have carried out our research no special consideration has been given as to how women might be accorded greater access and control of water, and to seek means to support those that do.<sup>28</sup> IWRM does not, on the surface at least, appear to challenge current gender divisions of labour with respect to the multiple uses and flows of water, the stereotypes that underlie them, and most importantly the power relations that guide decision making about water.

Policy strategies aimed to achieve efficiency and sustainability in water use, in order to enhance women's equitable access to water, should be grounded in an understanding of gender relations and unequal power hierarchies as experienced by women in specific local contexts. The knowledge about how people access, use and control water resources should not be based on stereotypical assumptions about roles, responsibilities and relations, but derived from the social contexts of women's lives and livelihoods; and the changing social, economic and ecological conditions under which resources are accessed.

## ACKNOWLEDGEMENTS

This article is based on research from a Norwegian Research Council-funded project, *Flows and Practices: The Politics of IWRM in Africa*. We are grateful to the Norwegian Research Council for the generous support. We thank the anonymous reviewers and Barbara van Koppen, Lyla Mehta and Kristi Denby for their comments on our paper.

---

<sup>28</sup> The Water Allocation Reform Programme in South Africa, which, despite poor implementation, has a target for putting water into the hands of black women.

## REFERENCES

- Alba, R. 2013. Travelling with IWRM. The articulation of water permits and payments for water in policies and practices in Limpopo river basin, Mozambique. MSc thesis. Earth System Science Group. Wageningen University, Wageningen, the Netherlands.
- Aliber, M.; Maluleke, T.; Manenzhe, T.; Paradza, G. and Cousins, B. 2011. *Livelihoods after land reform: Trajectories of change in Limpopo Province*. Bellville: PLAAS.
- Arora, D. 2015 Gender differences in time poverty in rural Mozambique. *Review of Social Economy* 73(2): 196-221.
- AMCOW (African Ministers' Council on Water). 2011. Policy and strategy for mainstreaming gender in the water sector in Africa. Dakar: Senegal.  
[www.amcow-online.org/images/Resources/24%20June%20AMCOW%20Eng.pdf](http://www.amcow-online.org/images/Resources/24%20June%20AMCOW%20Eng.pdf) (accessed January 14, 2016)
- Anderson, A.; Karar, E. and Farolfi, S. 2008. Synthesis: IWRM lessons for implementation. *Water SA* 34(6): 665-669.
- Claassens, A. 2015. Law, Land and Custom, 1913-2014: What is at stake today? In Cousins, B. and Walker, C. (Eds), *Land divided, land restored: Land reform in South Africa for the 21<sup>st</sup> Century*, pp. 68-84. Auckland Park, SA: Jacana.
- Cleaver, F. and Toner, A. 2006. The evolution of community water governance in Uchira, Tanzania: The implications for equality of access, sustainability and effectiveness. *Natural Resources Forum* 30(3): 207-218.
- Cornwall, A.; Harrison, E. and Whitehead, A. (Eds). 2007. Introduction: Feminisms in development: Contradictions, contestations and challenges. In Cornwall, A.; Harrison, E. and Whitehead, A. (Eds), *Feminisms in development: Contradictions, contestations and challenges*, pp. 1-20. London: Zed Books.
- De Jong, E.; Sagardoy, J.A. and Sisto, I. 2012. *Passport to mainstreaming gender in water programmes: Key questions for interventions in the agricultural sector*. Rome: Food and Agriculture Organization, United Nations.
- Denby, K. 2014. Institutional integration and local level water access in the Inkomati water management area, South Africa. MSc thesis. Norwegian University of Life Sciences, Aas, Norway.
- Department of Water Affairs, South Africa. 2012. *Development of a Reconciliation Strategy for the Luvuvhu and Letaba Water Supply System: Water Conservation and Water Demand Management Strategy and Business Plan Report Prepared by: Willem Wegelin WRP Consulting Engineers*, Report No. P WMA 02/B810/00/1412/6  
[www.dwa.gov.za/Projects/Luvuvhu/Documents/Web%20Doc%20CD2/WCWDWM%20Strategy%20and%20Business%20Plan\\_Mopani.pdf](http://www.dwa.gov.za/Projects/Luvuvhu/Documents/Web%20Doc%20CD2/WCWDWM%20Strategy%20and%20Business%20Plan_Mopani.pdf) (accessed September 1, 2016)
- Folbre, N. 2004. *Who pays for the kids? Gender and the structures of constraint*. London: Routledge.
- GoZ (Government of Zimbabwe). 2012. *National water policy*. Harare: Ministry of Water Resources Development and Management (now the Ministry of Environment, Water and Climate).
- GoZ. 2013. *National water Policy*. Harare, Zimbabwe: Ministry of Water Resources and Development.
- GWP (Global Water Partnership). 2006. Gender mainstreaming: An essential component of sustainable water management. Policy Brief No. 3. Stockholm, Sweden: Global Water Partnership.
- Hellum, A. and Derman, B. 2005. Negotiating water rights in the context of a new political and legal landscape in Zimbabwe. In von Benda-Beckmann, F.; von Benda-Beckmann, K. and Griffiths, A. (Eds), *Mobile people, mobile law: Expanding legal relations in a contracting world*, pp. 177-198. Aldershot and Burlington, VT: Ashgate.
- Hellum, A.; Ikdahl, I. and Kameri-Mbote. 2015a. Turning the tide: Engendering the human right to water and sanitation. In Hellum, A.; Kameri-Mbote, P. and van Koppen, B. (Eds), *Water is life: Women's human rights in national and local water governance in Southern and Eastern Africa*, pp. 32-80. Harare: Weaver Press.
- Hellum, A.; Kameri-Mbote, P. and van Koppen, B. 2015b. The human right to water and sanitation in a legal pluralist landscape: Perspectives of Southern and Eastern African women. In Hellum, A.; Kameri-Mbote, P. and van Koppen, B. (Eds), *Water is life: Women's human rights in national and local water governance in Southern and Eastern Africa*, pp. 1-31. Harare: Weaver Press.
- Hepworth, N. 2009. A progressive critique of IWRM in sub-Saharan Africa: Beyond capacity towards self-determined regulatory personality. PhD thesis. University of East Anglia, UK.

- Jimenez, A. and Perez-Foguet, A. 2010. Building the role of local government authorities towards the achievement of the human right to water in rural Tanzania. *Natural Resources Forum* 34(2): 93-105.
- Kissikwe, K. 2008. Irrigation-based livelihood challenges and opportunities: A gendered technography of irrigation development intervention in the Lower Moshi irrigation scheme in Tanzania. PhD thesis. Wageningen University.
- Lankford, B.; Bakker, K.; Zeitoun, M. and Conway, D. (Eds). 2013. *Water security: Principles, perspectives, and practices*. London: Routledge.
- Lecoutere, E. 2012. Sharing scarce common resources: Local water governance in semi-arid sub-Saharan Africa. PhD thesis. Ghent: Ghent University.
- Lein, H. and Tagseth, M. 2009. Tanzanian water policy reforms – Between principles and practical applications. *Water Policy* 11(2): 203-220.
- Masungu, T. 2007. Allocation and Use of Water for Domestic and Productive Purposes: An Exploratory Study from The Letaba River Catchment. MSc thesis. PLAAS, University of Western Cape, Bellville, South Africa.
- Meinzen-Dick, R. and Zwarteveen, M. 1998. Gendered participation in water management: Issues and illustrations from water users' associations in South Asia. *Agriculture and Human Values* 15(4): 337-45.
- Movik, S. 2011. *Fluid rights: South Africa's water allocation reform*. Cape Town: HSRC Press.
- Nkonya, L.K. 2008. *Rural water management in Africa: The impact of customary institutions in Tanzania*. Amherst, NY: Cambria Press.
- Nyabeze, W.R.; Mallory, S.; Hallows, J.; Mwaka, B. and Sinha, P. 2007. Mainstreaming integrated water resources management in the development process: Determining operating rules for the Letaba river system in South Africa using three models. *Physics and Chemistry of the Earth Parts A/B/C* 32(15-18): 1040-1049.
- O'Reilly, K. 2008. Insider/outsider politics: Implementing gendered participation in water resource management. In Resurreccion, B.P. and Elmhirst, R. (Eds), *Gender and natural resource management*, pp. 195-212. London: Earthscan.
- Praagman, E. 2013. The political arenas of water management in the Limpopo Basin, Mozambique: Stakeholder participation at different policy levels. MSc thesis. Wageningen University, Wageningen, the Netherlands.
- Prabhakaran, P. 2013. Gender invisibility in global water discourses: A feminist critique of Integrated Water Resources Management (IWRM). Master thesis. University of Sussex, IDS, Brighton, UK.
- Rathgeber, E. 2003. *Dry taps... Gender and poverty in water resource management*. Rome: Food and Agriculture Organization, United Nations.
- Republic of Mozambique. 2005. *Gender strategy for the agricultural sector*. Maputo: Ministry of Agriculture
- Republic of Mozambique. 2014. Beijing+20 Mozambique Report on the Implementation of the Declaration and Platform of Action. Maputo: Ministry of Women and Social Action.
- RSA (Republic of South Africa). 1998. National Water Act. Act No. 36 of 1998. Government Gazette 19182. Cape Town: Government Printers.
- RSA. 2013. *National water resource strategy: Water for an equitable and sustainable future*. Pretoria: Government Printers.
- RSA. n.d. A gender perspective for water allocations.  
[https://intertest.dwa.gov.za/war/war\\_website\\_docs/edition\\_6/final\\_documents/extra\\_reading/a\\_gender\\_perspective\\_for\\_water\\_allocations.pdf](https://intertest.dwa.gov.za/war/war_website_docs/edition_6/final_documents/extra_reading/a_gender_perspective_for_water_allocations.pdf)
- Ribeiro, N. and Chauque, A. 2010. *Gender and climate change: Mozambique case study*. Cape Town: Heinrich-Boll Foundation.
- Rullia, M.R.; Savoria, A. and D'Odoricob, P. 2013. Global land and water grabbing. *Proceedings of the National Academy of Sciences (PNAS)* 110(3): 892-897.
- Rust, U. and Hanise, B. 2009. *The impact of gender in the rural water services environment of South Africa*. Water Research Commission Report No. TT 407/409. Pretoria: Water Research Commission.  
[www.sadc.int/files/8713/5292/8364/Protocol\\_on\\_Gender\\_and\\_Development\\_2008.pdf](http://www.sadc.int/files/8713/5292/8364/Protocol_on_Gender_and_Development_2008.pdf)
- SADC (Southern African Development Community). 2006. *Regional water strategy*. Maseru: SADC.
- SADC. 2008. SADC protocol on gender and development.

- [www.sadc.int/files/8713/5292/8364/Protocol\\_on\\_Gender\\_and\\_Development\\_2008.pdf](http://www.sadc.int/files/8713/5292/8364/Protocol_on_Gender_and_Development_2008.pdf) (accessed on January 16, 2016)
- Seager, J. 2010. Gender and water: Good rhetoric, but it doesn't 'count'. *Geoforum* 41(1): 1-3.
- Sitko, N.J. and Jayne, T.S. 2012. *The rising class of emergent farmers: An effective model for achieving agricultural growth and poverty reduction in Africa?* Food Security Collaborative Working Papers, Working Paper 140907. Michigan State University: Department of Agricultural, Food, and Resource Economics. <http://ideas.repec.org/p/ags/midcwp/140907.html> (accessed on 30 September 2014)
- South Africa Human Rights Commission. 2014. *The right to access sufficient water and decent sanitation in South Africa*. Pretoria: South African Human Rights Commission.
- Tanner, C. 2010. Land rights and enclosures: Implementing the Mozambican land law in practice. In Anseeuw, W. and Alden, C. (Eds), *The struggle over land in Africa: Conflicts, politics and change*, pp. 105-130. Cape Town: HSRC Press.
- TAWASANET (Tanzania Water and Sanitation Network). 2012. Does the water sector development program (WDSP) realize water and sanitation rights for marginalized groups? Dar es Salaam. [www.tawasanet.or.tz/files/Equity%20report%202012.pdf](http://www.tawasanet.or.tz/files/Equity%20report%202012.pdf) (accessed May 5, 2015)
- Tremblay, H. 2014. A clash of paradigms in the water sector? Tensions and synergies between integrated water resources management and the human rights-based approach to development. <http://lawschool.unm.edu/nrj/volumes/51/2/Tremblay.pdf> (accessed on 1 June 2014)
- URoT (United Republic of Tanzania). 2002. *National water policy*. Ministry of Water and Lands, Dar es Salaam.
- United Nations. 1979. Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). [www.un.org/womenwatch/daw/cedaw/text/econvention.htm#article5](http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm#article5) (accessed January 15, 2015)
- van Eeden, A. 2014. Whose waters: Large-scale agricultural development in the Wami-Ruvu River Basin, Tanzania. MSc thesis. Norwegian University of Life Sciences, Aas, Norway.
- van Houweling, E. 2013. Gender, water and development: the multiple impacts and perspectives of a rural water project in Nampula, Mozambique. PhD dissertation. Blacksburg, VA: Virginia Tech.
- van Houweling, E. 2016. A good wife brings her husband bath water: Gender roles and water practices in Nampula, Mozambique. *Society and Natural Resources* 29(9): 1065-1078.
- van Koppen, B.; Sokile, C.; Hatibu, N.; Lankford, B.; Mahoo, H. and Yanda, P. 2004. *Formal water rights in rural Tanzania: Deepening the dichotomy?* IWMI Working Paper, Colombo, Sri Lanka: International Water Management Institute.
- van Koppen, B.; Khumbane, T.; de Lange, M. and Mohapi, N. 2006. Gender and agricultural productivity: Implications for the revitalization of smallholder irrigation schemes program in Sekhukhune District, South Africa. In Lahiri-Dutt, K. (Ed), *Fluid bonds: Views on gender and water*, pp. 115-130. Stree, Calcutta.
- van Koppen, B.; Smits, S. and Rumbaitis del Rio, C. 2014. *Scaling up multiple use water: Accountability in public water sector performance for health and wealth*. Rugby: Bourton on Dunsmore; United Kingdom: Practical Action Publishing.
- van Koppen, B.; Derman, B.; Schreiner, B.; Durojaye, E. and Mweso, N. 2015. Fixing the leaks in women's human rights to water: Lessons from South Africa. In Hellum, A.; Kameri-Mbote, P. and van Koppen, B. (Eds), *Water is life: Women's human rights in national and local water governance in Southern and Eastern Africa*, pp. 457-507. Harare: Weaver Press.
- Walsh, C. 2015. Life, nature and gender otherwise: Feminist reflections and provocations from the Andes. In Harcourt, W. and Nelson, I. (Eds), *Practicing feminist political ecologies: Moving beyond the 'green economy'*, pp. 72-92. London: Zed Books.
- Xie, H.; You, L.; Wielgosz, B. and Ringler, C. 2014. Estimating the potential for expanding smallholder irrigation in Sub-Saharan Africa. *Agricultural Water Management* 131(1): 183-193.

THIS ARTICLE IS DISTRIBUTED UNDER THE TERMS OF THE CREATIVE COMMONS ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE LICENSE WHICH PERMITS ANY NON COMMERCIAL USE, DISTRIBUTION, AND REPRODUCTION IN ANY MEDIUM, PROVIDED THE ORIGINAL AUTHOR(S) AND SOURCE ARE CREDITED. SEE [HTTP://CREATIVECOMMONS.ORG/LICENSES/BY-NC-SA/3.0/LEGALCODE](http://creativecommons.org/licenses/by-nc-sa/3.0/legalcode)

