

Rethinking domestic water resource management

A shift from gender-biased to gender-based approach

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ABSTRACT

Historically, socially and economically, women in many societies have been given the onerous responsibility of travelling long distances, often in unfavourable weather conditions, to carry home containers of water on their heads for drinking and domestic purposes. Women are over-represented in performing these tasks but are under-represented in offering a significant contribution in water management at decision-making levels.

This article aims to explore and analyse the definitive transferral of gender responsibility from 'carrying' water to 'carrying responsibility' for water. The article [qualitative] builds on a literature review, policy regulations and case-studies that reflect transformational reallocation of set tasks and explores the way forward to utilise water as a means of enhancing gender empowerment. The article recommends the use of gender disaggregated data and a close consideration of gender-based and gender-sensitive approaches in defining water policies. Importantly, scope is also left for further investigation of strategies and policies which promote gender empowerment in and through water programmes.

The article emphasises the roles of women in water resource management in South Africa as a case study.

INTRODUCTION

Historically, women have devoted time and energy to the organisation of environmental reserves. From a global perspective, they accept noticeable

responsibility (distinct from men) for the equitable use and consumption of natural resources, complemented by their collection of water, firewood and fuel. Their responsibilities incorporate involvement in and development of family, society and community at large. Despite these diverse dimensions of responsibility, capacities and experiences, women's role in water resource management remains negligible.

The identification of responsibility for water is the stepping stone of developing a gender planning process for effective water resource management. It is vital to conduct research into needs analysis which identifies the gender-based utilisation of water (gender-based disaggregated data). Research of this nature is necessary to identify the level of gender-representation and involvement in water governance so that gender-sensitive policies can be formulated. It is equally significant that a focus on gender in water resource management should identify the diverse range of limitations experienced by men and by women. This recognition of gender-based responsibilities is imperative to provide equity in dealing with water governance. The issues of gender in water resource management should be recognised as broad matters of authorisation for the use by women (and men) of necessary resources. This awareness of the relationship between gender and sustainable development for water resource management was fully supported at the International Conference on Water and the Environment Development Issues for the Twenty-first Century¹ (ICWE 1992:2) held in Dublin in 1992. At this conference it was highlighted that women's involvement is also vital in water conservation (ICWE 1992).

This message is a clear indication that there is a shift away from the old paradigm. The gender-inclusive approach in water resource management is now being explored, discussed and debated at various local and international forums.

At a conceptual level, the researcher aims to utilise the "empowerment approach of feminist theory" (Govender and Vyas-Doorgapersad 2013:107) as a framework for the study. The aim is to "raise the need to engage with critical issues hampering the social, economic and empowerment of women" (Kithatu-Kiwেকে 2011:2). This approach will assist the researcher to translate the "political ramifications of women's empowerment that is the transformation of gender relations, into gender planning" (Wieringa 1994:830). Against this background, the study focuses on the relationship between gender and water as a tool for empowerment, sustainable development of individuals, families, and communities at large. 'Gender', in this paper, is contextualised as a role-player that can handle specific delegated responsibility; women, who represent the female aspect of gender, demand appropriate recognition and opportunities in water resource management. At a contextual level, the

study emphasises the roles of women in water resource management in South Africa as a case study.

The study concludes with the suggestion that a holistic approach should be taken by organisations dealing with water policies and programmes and that there is a need to encompass gender-based indicators for development and empowerment on a global scale. According to the United Nations Department for Economic and Social Affairs (UN-DESA) and the UN Water Decade Programme on Capacity Development (UNW-DPC) (2009:21), "a relatively easy entry point would be to incorporate into these indices statistics on women in governmental decision-making bodies on water and sanitation".

GENDER-INCLUSIVE WATER RESOURCE MANAGEMENT: POLICY ENTRY POINTS

Women have an equal right to participate in decision-making processes. Moreover their contributions in development initiatives have been the stepping stones of feminist movements. The literature reviewed for this study shows that the gender equality issue was first raised and discussed at some length in 1971 and that this laid the foundation of women's participation in social, cultural, economic and political decision-making structures. Internationally accepted resolutions that have been instituted to support women's involvement in decision-making processes include the Universal Declaration of Human Rights (1948); the Convention on the Political Rights of Women (1952); and the Convention for the Elimination of All Forms of Discrimination against Women (1979), among others. These conventions have established a strong paradigm that women are more than capable of handling specific delegated responsibilities. In the context of this study this responsibility is limited to water resource management, with the rationale that women are the main consumers and the foremost stakeholders of water and water resources. Constraints on access to water and sanitation facilities may have a negative impact on women in terms of unfinished household activities; a degraded hygienic environment; health concerns; and occupation issues. There is a close interactive connection between women, water and empowerment.

The issue of bringing gender into the mainstream of water resource management was raised at the UN Water Conference in Mar del Plata, Argentina in 1977. Thereafter policy frameworks were established for women to perform a transformational role in managing water resources at a global level. The International Conference on Water and Environment (ICWE) held in 1992 led to the Dublin Declaration which emphasised the need to empower women

for effective implementation of water resource management (refer ICWE 1992). The principle was also supported at the United Nations Conference on Environment and Development held in 1992 at Rio de Janeiro, commonly known as the 'Earth Summit'. At this conference Agenda 21 was adopted and chapter 18 of the declaration² emphasised the need for financially and socially feasible projects embracing a participatory approach involving women in water resource management (Earth Summit 1992).

The gender issue was comprehensively discussed at the Bonn International Conference on Freshwater³ and the 2001 Ministerial Declaration emphasised the need to encourage both men and women to become involved in water resource management. It was recognised that women should be capacitated for contributing towards effective water resource management (refer Bonn 2002). The Second World Water Forum (SWWF) organised in Hague in 2000 also recognised the need to empower women through water management (refer SWWF 2000). Furthermore the World Summit on Sustainable Development (WSSD) held in 2002 at Johannesburg stressed that in order to afford safe drinking water, a Millennium Development Goal, the relevant services must be gender-sensitive (<http://www.johannesburgsummit.org>). The Third World Water Forum (TWWF) held in Japan in 2003, gave close attention to gender issues for sustainable water management to achieve the Millennium Declaration (<http://web.worldbank.org>).

These discussions and debates at global level paved the way for the Inter-agency Network on Women and Gender Equality (IANWGE) by establishing an Inter-agency Gender and Water Task Force in 2003. This task force is responsible for highlighting gender issues of the International Water for Life Decade, 2005–2015. In order to incorporate the gender component in development initiatives, the task force has formulated a policy brief entitled 'Gender, Water and Sanitation Case Studies and Best Practices'. The task force also takes responsibility for examining the existing constraints in establishing and maintaining water-related gender-based disaggregated data. It can be deduced that in water resource management, a gender sensitive outlook is imperative to ensure that resources are managed in a sustainable manner and "help to empower women and so furthers broader goals of equality within society, contributing to poverty alleviation and social inclusion" (Sandys 2005:3) for sustainable development.

Further research is required to assess the implementation of the Millennium Development Goals (MDGs) and for analysing the impact of established linkages. The gender aspect features prominently in the Millennium Development Goals. The relationship between gender and the Millennium Development Goals (prepared by the Millennium Project Task Force on Water and Sanitation 2005 cited in UN-Water 2006:2) is provided in Table 1:

Table 1: Relationship between Gender and Water Millennium Development Goals

MDG relevant targets	Ensure Environmental Sustainability (Goal 7) Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation (target 10)	Contribution of sound water resources management and development
	Contribution of domestic water supply and sanitation	
Promote gender equality and empower women (Goal 3)	Reduced time, health, and care-giving burdens from improved water services give women more time for productive endeavours, adult education, empowerment activities, leisure	Community-based organisations for water management can improve social capital of women by giving them leadership and networking opportunities and building solidarity among them
	Convenient access to water and sanitation facilities increase privacy and reduce risk to women and girls of sexual harassment/assault while gathering water	
	Higher rates of child survival are a precursor to the demographic transition to lower fertility rates; having fewer children reduces women's household responsibilities and increases their opportunities for personal development	

This line of thinking concerning women partaking in water resource management has opened up opportunities for gender empowerment. The follow-up surveys of this paradigmatic shift indicate that it is imperative in the quest to preserve global water resources and protect public health by providing an acceptable standard of sanitation facilities.

WOMEN'S PARTICIPATION IN WATER RESOURCE MANAGEMENT

A paradigm shift in gender approach

According to (Lundqvist 2012:13), "When water resources management is part of the unpaid, informal economy, governed by traditional male/female norms, women are the responsible parties. But once it enters the paid, public domain, it becomes subject to hierarchical rules which state that men are managers and women carry out the decisions they make". In reaction to the progressive decisions taken at global deliberations, the awareness has grown on the significant contribution that women can make in water resource management as individual stakeholders. Equally significant is the realisation of the need to re-assess gender-based responsibilities that can assist in the endeavour to "share benefits from use of water; make progress towards more sustainable use of water; and maximise

social and economic benefit from sustainable use of water” (Guio-Torres and Taylor 2006:10). Policy reflections also support the fact that a gender-inclusive outlook to water resource management is vital for accomplishing most Millennium Development Goals, “including not only those related to health, but also to poverty and hunger eradication, education, women’s empowerment, environmental sustainability and global partnership for development” (Eid 2009:8). The need for gender-inclusive water resource management is also reflected in the words of Fabiano Kwaule, the Minister of Works in Malawi. He emphasised that:

efficiency, effectiveness, equity and affordability are the main gains of adopting a gender approach. It requires detailed attention to social realities during the design, and throughout the execution, of water delivery systems (Lundqvist 2012:6).

The transformative approach on gender-inclusiveness has led the way towards Integrated Water Resources Management (IWRM) with an emphasis that “there should be recognition that women play a central role in the provision, management and safeguarding of water” (Sandys 2005:3). It is true to say that “Water is not ‘gender neutral’. Water resource management is incomplete without a gender perspective” (Swiss Agency for Development and Cooperation 2012:4).

Empowering women through water

“In sub-Saharan Africa twenty five percent of the female population spends roughly thirty minutes a round trip gathering water on a daily basis” (WaterWideWeb 2011). At family, social and community levels, many women, particularly those in developing countries, exhaust the majority of their time and effort accessing water. To bring water closer to communities, the Water Project has been implemented in Africa with the aim of allowing women to utilise the time previously used to collect water, to gain an education and perform jobs for social and economic upliftment as well as their own empowerment. The Water Project (2011:1–4) [summarised version] involves:

- Community engagement and education about the water project, which helps to prepare local people on how to manage their own water schemes.
- Constructing a well. This involves drilling a borehole and installing a hand pump.
- Follow-up education on how the system operates and handing over the facility. This includes reviewing the education provided and discussing general maintenance. The installation is finalised; the water quality is tested; and finally the project is officially handed over to the community.
- Monitoring and evaluation of the completed facility is imperative. The impact of the process must be assessed. There must also be an evaluation of the level achieved compared to the perceived outcome.

The Water Project has been implemented in a number of African countries including Kenya, Rwanda, Sierra Leone, Sudan, Uganda and Burkina Faso. Improved access to water with water technologies such as borehole and hand pump can make a significant transformation in the lives of women through involvement in the water process at community level, saving time for education, improved hygiene and health, and job opportunities.

Another initiative known as the Water and Sanitation Project has been implemented at the Namanganga village in Uganda. In order for the community to own the project, a water and sanitation committee has been established and "at its formation, gender balance was considered whereby women are inclusive in making decisions at this level" (Safe World for Women 2012:3). The women in this village are the victims of domestic violence where husbands accuse them of spending too much time at the boreholes and ignoring household activities. The outcome of the project therefore, is to improve women's empowerment in terms of reducing levels of harassment and domestic violence.

The outcomes of water projects can be expanded with the assistance of the Women for Water Partnership (WfWP), a worldwide strategic coalition of women's organisations and networks which recognises and gives full acknowledgment to "the pivotal and central role of women in sustainable development" (WfWP Annual Report 2010:6) through the promotion of gender equity and equality. The WfWP maintains that water and sanitation are foundational landmarks for sustainable and human development. The WfWP's small grants programme assists women's organisations in African countries by "enhancing their capacity to develop and manage their projects and development activities; supplying communities with drinking water and/or sanitation and hygiene education; and facilitating knowledge and experience transfer" on comparative and country-specific approaches related to women and water (WfWP Annual Report 2010:4).

These initiatives capacitate women, enabling them to manage water, sanitation, hygiene, and eco-health dimensions of water resource management. Such outcomes can be endorsed thus:

A healthy woman is a confident woman. A confident woman is the cornerstone of her community, leading the way to economic prosperity and sustainability (WaterWideWeb 2011:3).

Women, water and empowerment: the case of South Africa

There is positive affirmation of the empowerment of women in the 2011 Report on Assessing Progress in Africa towards the Millennium Development Goals. It states that "African countries have shown good overall progress in gender equality and the empowerment of women in recent years" (African

Development Bank 2011:32). Impressive advances have been made in South Africa, where gender equality has been made a constitutional requirement. The White Paper on a National Water Policy for South Africa was issued on 30 April 1997. Section 7.3.2 emphasised the need for capacitating personnel to ensure effective water resource management. Furthermore the involvement and empowerment of women is made obligatory (refer White Paper 1997). The National Water Act, 1998, following the notion of 'division of labour', stipulates that additional members of Catchment Management Agencies must be appointed with due regard to satisfactory gender inclusiveness.

Cleaver in Jishi and Fawcett, (2012:3) points out that some "great claims have been made for both the theory and the practice of women's increased participation in the management of domestic water resources". The review of relevant policies and literature indicates that participation of women in water resource management can have dual significance in enhancing effectiveness of water related projects, and empowering women. Women's involvement can also be significant in eco-health and the hygienic aspects of water and these water related endeavours may well yield additional income.

In South Africa, the National Implementation Strategy and Action Plan 2006–2010 for mainstreaming gender in the water services sector incorporates the objective of equality and equal opportunity to all in society, regardless of race and gender. The strategy aims to realise the significant operational objectives for gender mainstreaming in water resource management for sustainable delivery of water services (WSS Implementation Strategy and Action Plan 2012). In addition, the National Policy Framework for Women's Empowerment and Gender Equality aims to establish appropriate gender-based policies, programmes, structures, projects, and mechanisms, thereby empowering, encouraging, capacitating and authorising women. Gender equality of this nature is imperative if women are to perform tasks at all levels of the labour hierarchy, including all facets of work (Department of Water Affairs and Forestry [DWAF] 2012). This policy proclamation was duly endorsed at the political level by the Water Affairs minister, Lindiwe Hendricks. She emphasised that,

we must reaffirm our commitment not only to the delivery of water, sanitation and forestry services, but to ensuring that we mainstream gender to ensure that women can also benefit from the development opportunities that arise when we provide such services (DWAF 2011:1).

The affirmation to provide empowerment to women through water schemes has indeed been put into practice by the DWAF; it implemented two women empowerment projects in the 2010/11 financial year and the impact observed includes the following:

- As many as 725 temporary jobs were created and women from poor female-headed households benefited significantly from this employment;
- Women were given training in areas concerned with water safety and were also instructed on the auditing of women-owned water projects;
- A successful rural development project was carried out. Eleven water projects owned by women were assessed for the Women in Water Awards; the prizes awarded benefited 33 rural households (DWAF Annual Report 2011:49).

The implementation of the water projects outlined above is an indication that the government is fully cognisant of the importance of women's empowerment. Furthermore, this supports the empowerment approach of feminist theory stipulated as a framework for the study.

In order to sustain the outcomes of strategic objectives linking women, water and empowerment, it is imperative to identify the challenges that must be addressed. Through analysis of the relevant literature and water policies/projects, the following challenges are identified:

- DWAF Regulations: According to the regulations of the DWAF, women must be appointed on all water boards, and be members of water committees with a 30% representation. The following implementation gaps are identified:
 - Water related proposals and schemes are directed towards houses with the appropriate water connection. Homes that are scattered in remote rural areas typically lack adequate water provision and yet are excluded from water related proposals and schemes.
 - Needs analysis, impact surveys and baseline research are not explicitly conducted to incorporate gender disaggregated data and identify the gender-based need of water.
 - In addition, "few women are involved in making decisions aimed at the creation of a healthy and sustainable environment" (National Policy Framework for Women's Empowerment and Gender Equality 2003:17).
- Policy formulation: In South Africa, the Ministry of Water and Environmental Affairs is responsible for dealing with the formulation and implementation of water policies and programmes. The political office-bearers who are responsible for policy formulation in the ministry (the minister and deputy minister) are female and yet gender analysis is lacking in the policies they formulate. In order to ascertain whether the legislative frameworks in South Africa incorporate gender equity and inclusiveness, the following questions demand analytical answers from the respective role-players: i) Are there any gender-based criteria in the utilisation of water? ii) Is a gender-disaggregated data-base available to identify the need for water? iii) "Who bears the costs (and how equitably)?" iv) "Who reaps the benefits"? And, finally, v) "Who is

most at risk and made vulnerable from a lack of water?" (Chancellor, Hussein, Lidonde, Mustafa and Van Wijk 2003:47).

- Human resources: Most of the senior positions (executive portfolios) in the water sector are still not filled by an adequate number of women. Table 2 (author's interpretation) explores the statistics of gender (male and female) appointed at the Department of Water Affairs and Forestry (national office and regional offices). The information is compiled from the website of DWAF (<http://www.dwaf.gov.za>) and the names of the [bureaucratic portfolio] personnel have been omitted here to maintain the ethical aspect of this study.

Table 2: Gender and Executive Positions in the DWAF

Office	Positions (bureaucratic)	Female	Male
DWAF National Office	Office of the Minister Acting Chief of Staff (Head of Ministry)		X
	Office of the Minister Media Liaison Officer		X
	Office of the Deputy Minister Chief of Staff	X	
	Office of the Deputy Minister Media Liaison Officer		X
	Office of the Director General Director General		X
	Office of the Director General Deputy Information Officer		X
	Office of the Director General Acting Director		X
	Communication Services Chief Director		X
	Communication Services Director (Media Liaison)	X	
	Head Office Chief Director: Regional Co-ordination and Support	Vacant	Vacant
Regional Offices			
Eastern Cape	Chief Director: Eastern Cape		X
	Director: Operation and Maintenance		X
	Director: Institutional Development		X
	Director: Water Sector Support		X
	Director: Forestry		X
	Director: Corporate Services		X

Office	Positions (bureaucratic)	Female	Male
Free State	Chief Director: Free State		X
	Director: Water Sector Support	X	
	Director: Institutional Establishment		X
	Director: Water Regulation and Use	X	
Gauteng	Chief Director: Gauteng		X
	Director: Water Sector Support		X
	Director: Institutional Establishment		X
Kwazulu-Natal	Acting Chief Director: KwaZulu Natal	X	
	Director: Water Use and Regulation	X	
	Acting Director: Institutional Establishment		X
	Director: Corporate Services and Finance	X	
Mpumalanga	Acting Chief Director: Mpumalanga		X
	Director: Institutional Establishment		X
	Director: Water Sector Regulation and Use	X	
North West	Chief Director: North West	X	
	Corporate Service Manager	X	
Northern Cape	Acting Chief Director: Northern Cape		X
	Director: Water Sector Regulation and Use		X
	Director: Water Sector Support		X
Limpopo	Chief Director: Limpopo Region		X
	Director: Water Sector Support and Development		X
	Acting Director: Water Service		X
	Director: Water Regulation and Use	X	
	Director: Institutional Establishment	X	
Western Cape	Chief Director: Western Cape		X
	Director: Water Sector Support	X	
	Director: Institutional Operations	X	
TOTAL		14	28

The table shows that women hold fewer bureaucratic positions than men. Women's contribution in the implementation processes is therefore not fully utilised.

The government has established Catchment Management Agencies (CMAs) at provincial level for geographical representation of water needs. The staff at the provincial CMA also comprises more men than women. The Governing Board and the strategic positions in the Breede-Overberg CMA (a case-reference to validate and rationalise the concern) are occupied by men (eight) serving in the following portfolios, as listed at the Breede-Overberg CMA website (2012:1–2): Emerging Farmers; Water Cape Provincial Government: Integrated Environmental Management; Industry and Business; [Chairperson] Commercial Agriculture: Surface Water Non-Scheme; [Deputy Chairperson] Statutory Conservation and Environment; Access to Water by Poor/Rural Settlements; Commercial Agriculture: Groundwater; and Commercial Agriculture: Surface Water Scheme. Only three women serve in the portfolios of Water, Environmental Civil Society/NGOs; Civil Society; and Potential Agriculture Water Use by Emerging Farmers.

The status of women in water resource management at the local sphere of government is more unembellished in reality. Municipalities in South Africa do not have a direct mandate to deal with water resource management. Due to their decentralised status, the municipalities can however perform significant roles in the areas of water supply and waste water treatment. To do so, the municipalities require capacity, resources and the participation of relevant stakeholders. Women who are designated as 'member participants' are excluded from stakeholders' meetings.

- Grass-roots governance: The element of social inclusion (an important aspect of Integrated Water Resource Management) excludes women, thus depriving them of having any input in the decision-making processes, and ignoring their water needs. At municipal level women are involved in performing tasks in the agricultural field and yet this is ignored, restricting their responsibilities to the domestic context and weakening their economic status. Due to socio-cultural considerations (traditional societies being markedly patriarchal) the voices of women are not heard in decision-making processes, hence the deterioration of their social status. Gender equity can bring social inclusion, social empowerment, and social justice, allowing women to partake in the implementation of water resource management projects/processes at municipal level.
- Capacity-building: Studies have been conducted on water issues, exploring "a sector-wide Capacity Gap Analysis and a Capacity Building Strategy ... however, some difficulty has been encountered with the implementation of a Capacity Development Programme of Action specifically targeted at women" (Seetal 2005:4). This challenge is substantiated by the Office on the Status of Women (OSW) in a situational analysis of the water sector exploring the lack of adequate and appropriate capacity-building initiatives

and programmes enabling women as caretakers of eco-health reserves (OSW 2003). Furthermore, the training programmes that are available at DWAF are not continuously supported and supervised. The lack of mentorship and counselling creates a gap in acquiring relevant knowledge (theory) and its alignment with the execution of appropriate gender-based programmes (practice) (refer DWAF 2012).

It is suggested that the South African government should implement the following strategies to enhance women's participation in all the relevant areas within the water sector. For example, every effort should be made to support, strengthen and develop:

- the policy-making process (design, formulation and implementation) encouraging women involvement as primary stakeholders;
- strategic portfolios which accommodate women as decision-makers;
- all capacity-building programmes empowering women in water resource management;
- adequate resource allocation, educating women on the control and management of water;
- a gender disaggregated data-base and indicators identifying gender-based responsibilities in water resource management; and
- qualitative and quantitative research for gender planning.

Further studies may require both qualitative and quantitative research approaches to observe and monitor the implementation of these strategies; to assess the impact of women's participation on effective water projects; and to remain committed to expanding the association between women, water and empowerment.

THE WAY FORWARD

There are some gaps which need to be closed in order to achieve an effective outcome as far as gender-inclusiveness in water resource management is concerned. This article leaves scope for future research and suggests the following areas that require further investigation:

- The lack of access to basic services such as the provision of water (to both women and men) is against the objective of the Millennium Development Goals. There is an urgent need to identify the status of indigenous women (the knowledge source of maintaining an ecological relationships between health, environment, water, sanitation and hygiene), and encouraging them to take responsibility for water resource management.
- Global policies do not accommodate the priorities of women as compared to those of men. This leaves a gap as far as gender perspective approach

to water resource management is concerned, There is a need to conduct country-specific research (making use of both qualitative and quantitative methods) to identify the gender-biased roles, attitudes, demands, and expectations as they pertain to the social, economic, political and cultural environment of that particular country.

- Water resource management lacks trained and capacitated people to deal with water projects. There is a need to conduct country-specific Strength, Weaknesses, Opportunities, Threats [SWOT] analytical research in the urban and rural areas. Based on these findings a Work Skills Plan (WSP) should be implemented to train the personnel, the community members and the relevant water authorities in their areas of jurisdiction.
- Degradation of water not only devalues the dignity of women but also discourages them from embracing water ethics. There is a need to embolden an ethical gender-inclusive approach in water resource management.

The exploration of these areas will enhance the literature in this field and create better understanding of gender-inclusiveness in water resource management.

CONCLUSION

There are policies and programmes in place to enhance women's participation in water resource management. However there are still some gaps in the formulation and implementation stages that need close consideration. Studies already conducted globally and nationally do not absolve us of the responsibility to undertake more localised gender studies to clarify the diverse societal gender-based predispositions and inclinations of men and women. The literature review indicates that studies taking a gender approach and outlook on water accessibility and management are not absolute in concluding gender-based preferences and priorities. Transformation is required on women's inclusion in processes such as finances (expenditure related to water usage, payment of water bills, etc.); capacity-building (technical and technological aspects of water resource management, project management skills); and decision making (formulating water policies). Gender equity that emphasises the participation of women will lead to their empowerment in water resource management. Against this (hypothetical) statement, this article concludes that there is a need to conduct further research to explore social-cultural empowerment whereby women's participation is fully accepted by a male-dominated society. The issue of female and male aspects of gender should give way to an accommodation as mutual role-players in water resource management. There must be political empowerment that leads to women holding strategic

decision-making portfolios and this must go hand in hand with economic empowerment that ensures women's self-dependency through entrepreneurship opportunities and the establishment of women's SMMEs. Similarly, technical/technological empowerment will capacitate women to utilise advanced modes of communication and equipment in water projects.

NOTES

- 1 At this conference it was emphasised that "women play a central part in the provision, management and safeguarding of water" (ICWE 1992:2).
- 2 Agenda 21, chapter 18, states that "to design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full public participation, including that of women, youth, indigenous people, local communities, in water management policy-making and decision-making" (Stakeholder Forum for Our Common Future [formerly UNED Forum] 2002:2).
- 3 A 2001 Ministerial Declaration states that "water resources management should be based on a participatory approach. Both men and women should be involved and have an equal voice in managing the sustainable use of water resources and sharing of benefits. The role of women in water related areas needs to be strengthened and their participation broadened" (Bonn 2002:3).

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