Mainstreaming Gender in Transboundary Water Management in SADC

Evidence, Challenges and Opportunities

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PREFACE

Economies are more resilient, productive and inclusive when gender inequalities are reduced and the equal participation of women and men is actively supported. Participation in water resources management is not only a means for women and men to secure livelihood, but it also enables the exercise of agency, maintenance of dignity, building of social capital, and increased empowerment. It is increasingly recognized that gender equality is "smart economics".

Member States of the Southern African Development Community (SADC) agree that gender mainstreaming has become a key driver of sustainable development in the region. In fact, gender mainstreaming is no longer restricted to just a few sectors of government, but has spread its wings across all ministries be it in agriculture, tourism, water resources and energy, among others.

In order to buttress the benefits already gained, Member States and River Basin Organizations have moved a step further in advancing the participation of men and women in development as indicated in the existing gender protocols in SADC. The SADC Protocol on Gender and Development is one of such instruments at regional level that has several provisions for promoting gender mainstreaming in all institutions and systems for the achievement of gender equality and equity.

One of the areas that has seen progress as a result of gender mainstreaming is the management of transboundary water resources in the SADC region. Despite the fact that gender mainstreaming has brought significant benefits in transboundary water management, the dissemination of such success stories has remained low.

This publication marks the first step towards documenting the evidence of Mainstreaming Gender in Transboundary Water Management in SADC. The report highlights the unique experiences of both men and women in management of transboundary water including the decision-making processes. The case studies provided in this report should advance participation in transboundary water management in SADC through shared experience as more communities across boundaries begin to learn from success stories taking place in other communities.

The report is also expected to build and strengthen collaboration between policy makers and communities in promoting sustainable utilisation of transboundary water for the benefit of all stakeholders. The evidence contained in this report, and the opportunities, challenges and lessons provided, should inspire stakeholders in southern Africa, and elsewhere in Africa, to get more involved in action to manage their water resources.

SARDC's institutes for environment and for gender – the I Musokotwane Environment Resource Centre for Southern Africa (IMERCSA) and Beyond Inequalities (BI) Gender Institute – are pleased to present this publication on gender mainstreaming in transboundary water management in SADC.

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It is well known that the process of researching and producing a publication of this nature cannot be achieved by one individual. The successful implementation of this project thus fulfills the African proverb which says that "sticks in a bundle are unbreakable".

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The production of this report could not have been possible without the valuable input from the Member States through their representatives and Gender Focal Points (GFPs). The feedback they provided through questionnaires and interviews forms the foundation of the evidence of gender mainstreaming in transboundary water management presented here. The GFPs consulted were mainly drawn from the ministries and departments responsible for water in the Member States.

Three site visits were undertaken in preparing this report – in Malawi, Namibia and Zimbabwe. SARDC would like to thank the district officials, community representatives and the communities themselves for availing their time to discuss issues regarding gender mainstreaming and transboundary water management in their areas. Special mention goes to Smart Gwedemula, the District Commissioner for Ntcheu District, Malawi; Getty Mulokoshi, Hydrologist from the Ministry of Water, Agriculture and Forestry, Namibia; and Engineer Drought Musungo from the Mutare Rural District Council, Zimbabwe, for their welcoming spirit, as well as their deep knowledge of how community livelihoods have transformed as a result of mainstreaming gender in the management of transboundary water resources.

SARDC also appreciates the valuable contributions from various gender and water experts who were consulted during the production of this report. Representatives from River Basin Organisations such as the Zambezi Watercourse Commission, Orange-Senqu River Commission, Limpopo Watercourse Commission and the Permanent Okavango River Basin Commission were ready to share their gender strategies and other documents requested, as were other water-related institutions such as the Global Water Partnership-Southern Africa (GWP-SA), WaterNet, and Climate Resilience Infrastructure Development Facility (CRIDF).

In preparing this report, SARDC utilized its team of knowledgeable researchers composed of specialists in water resources management, gender experts and environmental experts, among others. We particularly thank Egline Tauya, Admire Ndhlovu, Nyarai Kampilipili, Neto Nengomasha, Pedzisai Munyoro and student intern Primrose Katehwe, as well as photographer Danai Majaha, who was an integral part of the team.

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ACRONYMNS

AMCOW	African Minister's Council on Water
BMZ	German Federal Ministry for Economic Cooperation and Development
CORBWA	Cubango-Okavango River Basin Water Audit
CRIDF	Climate Resilience Infrastructure Development Facility
DFID	Department for International Development
EPA	Extension Planning Area
FAO	Food and Agriculture Organization
GAP	Gender Action Plan
GDD	Gender Disaggregated Data
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESI	Gender Equality and Social Inclusion
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GFP	Gender Focal Point
IKPA	Indigenous Kapenta Producers Association
IWRM	Integrated Water Resource Management
KFA	Kapenta Fishers Association
KPA	Kapenta Producers Association
LIMCOM	Limpopo Watercourse Commission
MCCM	Multi-Country Cooperation Mechanism
NASC	National Stakeholder's Coordination Committee
NFP	National Focal Points
OFRB	Orange Fish River Basin
ORASECOM	Orange-Senqu River Commission
OKACOM	Permanent Okavango River Basin Water Commission
RBO	River Basin Organisation
RSAP IV	Regional Strategic Action Plan IV
SADC	Southern African Development Community
SARDC	Southern African Research and Documentation Centre
SIGI	Social Institutions and Gender Index
STAS	Stampriet Transboundary Aquifer System
SWI	Shared Watercourse Institutions
TWM	Transboundary Water Management
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation and Hygiene
WDM	Water Demand Management
WRTC	Water Resource and Technical Committee
WUA	Water Users Association
ZAMCOM	Zambezi Watercourse Commission
ZAMTEC	Zambezi Watercourse Technical Committee
ZAMWIS	Zambezi Water Resources Information Systems

GLOSSARY

Term	Definition
Gender	The roles, duties and responsibilities which are culturally or socially ascribed to women, men, girls and boys. These attributes, opportunities and relationships are socially constructed and are learned through socialisation processes. They are context/time specific and changeable.
Gender machinery	National structures with the mandate of executing and monitoring gender and related policies and programmes in line with national, regional and international commitments.
Gender mainstreaming	The process of identifying gender gaps in making the concerns and experiences of women, men, girls and boys integral to the design, implementation, monitoring and evaluation of policies and programmes so that they benefit equally. This concept of bringing gender issues into the mainstream of society was clearly established as a global strategy in the Platform for Action adopted at the United Nations Fourth World Conference on Women, held in Beijing in 1995, which highlighted the necessity to ensure that gender equality is a primary goal in all areas of social and economic development. *Gender mainstreaming* is not a policy goal in itself, but a *means* to achieve gender equality.
Gender equity	Fairness of treatment for men and women according to their respective needs. This may include equal treatment or treatment that is different but considered equivalent in terms of rights, benefits, obligations, and opportunities.
Gender equality	Refers to norms, values, attitudes and perceptions required to achieve equal status between women and men. Equality refers to the equal treatment of men and women, for example equal pay for equal work, equal representation of men and women, equal rights and access to opportunities and outcomes, including resources.
Gender Responsive Budgeting	A budget is the most comprehensive statement of a government's social and economic plans and priorities. In tracking where the money comes from and where it goes, budgets determine how public funds are raised, how they are used and who benefits from them. Therefore, implementing commitments towards gender equality requires intentional measures to incorporate a gender perspective in planning and budgeting frameworks and concrete investment in addressing gender gaps. Gender-responsive budgeting is not about creating separate budgets for women, or solely increasing spending on women's programmes. Rather, gender-responsive budgeting seeks to ensure that the collection and allocation of public resources is carried out in ways that are effective and contribute to advancing gender equality and women's empowerment.
Social inclusion	The process of improving the terms on which individuals and groups take part in society. The removal of institutional barriers and the enhancement of incentives to increase the access of individuals and groups to development opportunities – improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity without discrimination based on sex, age, geographical area, ethnicity, place of origin, educational background, economic status, caste, religion, disability, health, status, and so on. Social inclusion is about feeling you are part of a community, bonded together by a common identity and shared values.

INTRODUCTION

Water resources are essential in achieving a sustainable economy, environmental requirements and social development of the region. The coordinated management, protection and utilization of shared watercourses is recognized by the Southern African Development Community (SADC) Revised Protocol on Shared Watercourses as contributing to the advancement of the SADC agenda of regional integration and poverty eradication.

The Protocol further recognizes the need for participation and cooperation in water resources management within shared basins and within gender groups. To this end, it is widely recognized that gender equality is a critical area of regional development. The Regional Indicative Strategic Development Plan (RISDP) 2015-2020 stipulates the need for mainstreaming gender in all sectors.
This concept of bringing gender issues into the mainstream of society was clearly established as a global strategy in the Platform for Action adopted at the United Nations Fourth World Conference on Women, held in Beijing in 1995, which highlighted the necessity to ensure that gender equality is a primary goal in all areas of social and economic development. Gender mainstreaming is not a policy goal in itself, but a means to achieve gender equality.

It is "the basis for establishing a level of equality between women and men that can help to stimulate economic growth, create higher level jobs, support communities, raise productivity and reduce poverty" (UNIDO, 2014). There is therefore a synergy that exists between gender equality and water management.

Women and men play different roles in the use and management of water in the SADC region and are affected differently by water issues such as drought, floods and pollution. Women play a more central part in the provision, management and safeguarding of water than men. The daily work of women involves close contact with water and related resources, and thus women are in a position to quickly notice changes in the quality or quantity as well as impact on the environment. Despite the close interaction with water, women in most cases are not involved in decision-making processes that involve the resource. However, in cases where both women and men are involved in decision-making in water management, positive results have been achieved.

Within the Transboundary Water Management (TWM) Programme in the SADC region which seeks to enhance the capacities of regional and national water institutions, there are several projects on gender mainstreaming in implementation, but there is little documentation on the benefits derived from these, as well as little gender disaggregated data to track progress in order to inform future plans and interventions. This publication on *Mainstreaming Gender in Transboundary Water Management in SADC: Evidence, challenges and opportunities* is intended to bridge the knowledge gap and provide evidence-based data on gender and impacts on transboundary water management in the SADC region.

The evidence-based research on the role of gender equality in TWM assists in adoption and replication of effective practices among SADC Member States and beyond. Policy makers and other stakeholders will be better informed on the advantages of consulting and involving both women and men at all levels when crafting policies and frameworks on transboundary water management.

As a result, gender mainstreaming in transboundary water management will be strengthened through provision of evidence-based results and comprehensive monitoring, evaluation and reporting practices. This will contribute to gender-responsive design, planning and implementation in the SADC region, which ultimately leads to equality of participation by men and women. The improvement of tracking and reporting systems related to the implementation of gender-responsive actions, including development of gender disaggregated indicators, will facilitate better planning and management of transboundary water resources.

The publication is directed to policy and decision-makers, planners, River Basin Organizations (RBOs), and marginalized groups including single and child-headed households, and people living with disabilities, as well as the general public. It contributes to the fulfilment of regional, continental and global goals and targets on strengthening gender roles in resource management.

At regional level, the publication contributes to Programme 3 of the SADC Regional Strategic Action Plan Phase IV (RSAP IV) on Gender Mainstreaming, Youth and Stakeholder Engagement. The publication is aligned to the provisions outlined in the revised SADC Protocol on Gender and Development as well as the SADC Regional Indicative Strategic Plan 2015-2020, crosscutting issue 4.3.1.3 on Gender Equality and Development, whose overall goal is to facilitate the empowerment of women and gender equality, and the promotion of gender-responsive, human-centred development and poverty alleviation with a view to contribute to inclusion and social justice. The specific focus area is "Gender mainstreaming in all SADC structures and institutions and at Member State level" (SADC RISDP 2015-2020).

At continental level, contribution is made towards Aspiration 6 of Agenda 2063, which calls for "strengthening the role of Africa's women through ensuring gender equality and parity in all spheres of life (political, economic and social)." It will lead to attainment of Aspiration 1.18 where "Africa shall have equitable and sustainable use and management of water resources for socio-economic development, regional cooperation and the environment."

At global level, a contribution is made towards:

- Sustainable Development Goal 5 "Achieve gender equality and empower all women and girls", and
- Goal 6 "Ensure availability and sustainable management of water and sanitation for all".

Chapter Outline

The Overview of Gender Mainstreaming in Transboundary Water Management in SADC (Chapter 1) provides historical and current perspectives on gender mainstreaming, policies, strategies and approaches in transboundary water management in southern Africa. The chapter tries to demystify the concept of gender, and reports on the assessment of international, regional and basin-wide legal agreements/frameworks on transboundary water management.

Chapter 2 tracks development of Gender Mainstreaming Strategies and Action Plans at regional and basin level, while Chapter 3 provides Evidence Based Gender Mainstreaming, giving qualitative and quantitative data on benefits of and costs of not mainstreaming gender in TWM in the SADC region. It interrogates several programmes that have been implemented on water in the region, and evidence of gender mainstreaming. State and trend analysis of gender mainstreaming in transboundary water management at regional, basin and country level is provided. Using a set of indicators, disaggregated data on evidence of gender mainstreaming in transboundary water resources management is collected and profiled in the chapter.

The Case Studies on Evidence-based Gender Mainstreaming in Transboundary Water Management (Chapter 4) consist of case studies from river basins in the SADC region, demonstrating benefits of mainstreaming gender in transboundary water management.

The Findings and Lessons Learnt, Challenges and Opportunities in Chapter 5 reports on the results of the research, including key challenges and opportunities to improve gender mainstreaming in transboundary water management.

The Conclusions and Recommendations contained in Chapter 6 provide policy options that can be taken forward by policy makers and water resources managers when designing and implementing water resources management and development programmes.

Process

The study that informs this publication on *Mainstreaming Gender in Transboundary Water Management in SADC: Evidence, challenges and opportunities* was conducted between June 2018 and April 2019. The process involved an inception meeting with the Programme Management Unit (PMC) comprising of SADC, SARDC, and GIZ for strategic guidance and finalisation of methodology and approach. This was followed by a literature review and consultations with key stakeholders in the region during SADC and and RBO meetings. Sites which showed some evidence of gender mainstreaming in TWM were

identified through guidance from Gender Focal Points (GFPs) in ministries/departments of Water, as well as from gender machineries in the SADC Member States. Additional guidance was obtained from partners working on similar or related interventions. Literature review provided the baseline and foundation for the research. In consultation with Member States through the gender focal points, visits were arranged to three selected sites in the region. The selection of sites was based on data collected through interviews with GFPs and partners, and through a literature review on: interventions highlighting evidence of gender mainstreaming; relevance to water management; geographical balance; and, accessibility of the site.

Working with GFP, National Focal Points (NFPs), and Gender Machineries, prior arrangements for site visits were made with the host country and host community with assistance from the local authorities. Targeted interviews with key informants were arranged in advance and appointment made with the help of the GFP, Gender Machineries, and NFP. Questionnaires were also administered with the GFPs, Partners and communities. Focus group discussions were conducted with community-based farmers and beneficiaries, in addition to general observation of activities on the ground. Information collected from the site visits built on the literature review and other forms of data collection.

Online discussions with the SADC Secretariat, GFPs, Gender Machineries and key gender and water experts in the region helped to review the publication and video.

Target Audience

The target audience for the publication and video includes:

- SADC Secretariat;
- River Basin Organizations;
- Policy and decision-makers at regional, basin and national level;
- Parliamentarians;
- Civil society;
- Scientific and research communities;
- Senior government officials in the riparian countries;
- Regional and international development community; and
- General public within and outside the SADC region.

Limitations of the Research

Extensive interviews and detailed analyses of good practices of gender mainstreaming in transboundary water management could not be undertaken in all SADC Member States due to the limited resources available for the study. However, the study was well informed by three selected site visits that were representative in various ways and revealing about the subject matter in the context of other knowledge available from a regional perspective.

Another limitation was the lack of adequate gender disaggregated data in most institutions and from the literature review. This was mainly due to the fact that analysing data by gender has not been accorded the importance it deserves. However, this presents an opportunity for Member States to prioritize collection of Gender Disaggregated Data for all national surveys and to record the data in that form.

Despite these limitations, the study relied on a comprehensive literature review and collected data from stakeholder consultations and the site visits undertaken. Although the information presented in this report does not provide a fuller picture of the successes and benefits of gender mainstreaming efforts in all SADC Member States, it does provide a fresh impetus towards documenting the evidence, challenges and opportunities of gender and transboundary water management in the SADC region.

CHAPTER 1

Overview of Gender Mainstreaming in Transboundary Water Management in the SADC Region

1.0 Introduction

The quest for development has led to a consensus that participation by both men and women, not as objects of development but as equal partners, is essential for sustained interventions. This has encouraged the promotion and use of gender sensitive, and responsive approaches in Transboundary Water Management (TWM).

Gender mainstreaming in this context is the process of assessing the implications for women and men of any planned action (including legislation, policies, projects or programmes in any area of work and at all levels (SADC 2015). It is a strategy to make the concerns and experiences of women and men an integral part of the design, implementation, monitoring and evaluation of any action or process, to ensure women and men benefit equally and that inequalities are not perpetuated.

Gender mainstreaming is therefore not about adding a woman's component into existing activities or projects. It goes beyond simply increasing participation of women. It means bringing the experiences, knowledge and interests of women and men to bear on the water development agenda.

A contextual overview of gender mainstreaming TWM in the SADC region provides a background to this publication.

1.1 General Perspective of Gender Mainstreaming in TWM in the SADC Region

SADC Member States are working towards an all-inclusive gender-based approach in TWM as the basis for establishing a level of equality between women and men that can help to stimulate economic growth, promote regional cooperation and integration, support communities and reduce poverty. This is in recognition that men and women are affected differently by water issues such as droughts, floods and pollution.

The rationale for the African Ministers' Council on Water (AMCOW) Policy and Strategy for Mainstreaming Gender clearly states that women and girls in Sub-Saharan Africa will bear the brunt of the climate change induced prevalence of drought and low crop yields, as a result of their socially constructed roles (AMCOW 2015). The Dublin Principles also put up a strong case for women to play an equal part in water-related activities given their pivotal role in the provision and use of water, and in the protection of the environment. Where both men and women are involved in decision-making in water management, positive results have been achieved.

The 2019 World Water Week attended by representatives of most SADC Member States underscored gender issues noting that both men and women are innovators and important agents of change, and that women have a role in every water-related sustainable development goal and target.

The African Water Vision 2025 includes targets to mainstream gender in water resources management, with the vision calling on women to take on key positions and functions in decision-making on water issues and for stakeholder involvement in water resources management by, in particular, women and youth. Furthermore, the vision aspires for 30 percent gender-mainstreamed national water policies by the end of 2005 and 100 percent gender-sensitive national water policies by 2015.

The 2030 Agenda for Sustainable Development recognizes gender equality as a singular developmental issue to be addressed. Goal 5 of the 17 goals focuses on key issues and it recognizes that for humanity to realize the gender equality aspirations of the goal, action needs to be taken across all sectors. This includes water resources management.

Access to water and its resources are liberating factors that allow women and men to participate in economic development. To this end, the region has realized that there is a high economic cost when women are not more fully integrated into their respective national economies. A UNDP finding underscores important economic losses and missed opportunities related to gender inequality noting that gender inequality in the labour market alone is costing Sub-Saharan Africa about US$95 billion annually from 2010-2014, peaking at US$105 billion (WFP 2018). It can also be inferred that the missing full growth potential from water resources development and management in SADC is partly as a result of not utilizing sizeable portion of its growth reserve who are women.

The SADC region has developed a gender strategy and action plan in water resources management which was validated in June 2018 by Member States and will soon be implemented. The strategy aims to go beyond elevating gender in the water sector, and provides evidence of the value gender mainstreaming brings to all aspects of water resources management.

Some River Basin Organizations in the SADC Region such as The Permanent Okavango River Basin Commission (OKACOM), Orange-Senqu River Commission (ORASECOM) and Zambezi Watercourse Commission (ZAMCOM) have developed gender strategies and action plans that will guide the sustainable utilization and management of resources in their respective basins. The strategies have since been approved by the Member States and will soon be implemented. This marks a great step towards mainstreaming gender at RBOs level.

Other efforts the region has embarked on include the appointment of Gender Focal Points (GFPs) in each of the SADC Member States as part of the TWM programme. The GFPs are expected to promote awareness, knowledge, and communication about gender mainstreaming in the water management in their respective Member States.

According to the SADC Gender Mainstreaming Strategy for TWM 2016-2019 (ZAMCOM 2018) at least two river basin organizations should formally involve the respective national GFPs in their structures. It would be worthwhile to assess how far RBOs have gone on this target by end of 2019.

Several training programmes have been conducted for SADC Member States on gender mainstreaming in TWM. Key outcomes of the training include the need to mainstream gender from the planning, design, and implementation to evaluation of the project, as well as the need to strengthen women's participation in the key decision-making processes and technical fields such as engineering, hydrology and water law.

In some Member States training programmes are tailored to specific activities, including sustainable wetlands resources utilization and management. Women and men have been trained in basket making using the available resources from wetlands such as reeds. Other areas for training include irrigation agriculture, fish processing and marketing.

Skills gained from the training have enabled women and men to undertake various activities that have improved the well-being of households, especially female-headed households. In Zambia, for example, fish processing, which was male dominated has now been introduced to women and has so far contributed to the increased income for wetlands households.

At the time of the assessment, results have shown that benefits of gender mainstreaming in TWM are still mainly found at micro level as opposed to the macro level such as in the construction of dams, and hydropower schemes. Such engineering approaches are essentially still male-dominated, with emphasis on construction, command and control (Earle and Bazilli 2013). As a result of this distorted discourse, the local communities relying on the resource directly are left out, including the water users, the women, and marginalized groups.

1.2 SADC Water Policy Frameworks and Strategies

Although a number of policies have been crafted in the water sector at international, regional and national levels to regulate the use and management of water bodies, research has shown that these policies do not adequately address gender equality issues. Without the inclusion of both women and men in the water sector supported by policy, sustainable development will not be achieved. According to the *SADC Handbook on Mainstreaming Gender in the Water Sector* (SADC 2015a), policy formulation should be gender sensitive and alert to the concerns of vulnerable groups, which in most cases include women.

The alignment of regional and national water policies and strategies to gender is a pre-requisite for effective Integrated Water Resources Management (IWRM) within shared watercourses (SADC 2015). The IWRM discourse recognizes women as important stakeholders in achieving the stated goals of efficiency, equity and environmental sustainability. It advocates for gender-sensitive approaches in the implementation of IWRM principles in order to ensure the greater involvement of women in water management. In many rural contexts, the provision of water by women and girls has material and symbolic dimensions. Simultaneously, women have to provide sufficient water for different needs in the household and this consumes much of their time and energy, yet policy options do not include their day-to-day experiences.

1.2.1 Revised SADC Protocol on Shared Watercourse Systems

Some of the principles of the SADC Protocol on Shared Watercourses are:

- Ensuring that the use of shared watercourses is open to each riparian state without prejudice to its sovereign rights;
- Ensuring that all interventions are consistent with sustainable development;
- Respecting the existing rules of customary law;
- Maximizing the benefits from a shared watercourse through optimal and sustainable development;
- Participating and cooperating in the use, development and protection of a shared watercourse; and
- Taking all appropriate and reasonable measures when utilizing a shared watercourse to prevent significant harm to other Member States.

Though the protocol mentions participation and cooperation in the use, development and protection of a shared watercourse, it does not adequately address gender mainstreaming in all its principles. It therefore requires gender issues to be mainstreamed in all its principles and articles to ensure sustainable management and utilization of transboundary watercourses. Such an effort will allow the fulfilment of Article 18 of the revised SADC Protocol on Gender and Development which calls for SADC Member States to "review all policies and laws that determine access to, control of, and benefit from, productive resources by women in order to (a) end all discrimination against women and girls with regard to water rights…"

The Protocol proclaims the commitment of all SADC Member States to gender equality and equity as "a fundamental human right".

1.2.2 SADC Regional Water Policy and Strategy

The SADC Regional Water Policy, adopted in 2005, is aimed at providing a framework for sustainable, integrated and coordinated development, utilization, protection and control of national and transboundary water resources in the SADC region.

According to the SADC Regional Water Policy, gender mainstreaming in water resources management can be interpreted as the incorporation of the complex relationship between productive and domestic uses of water, paying attention to the importance of participation in decision-making of men and women and the equitable distribution of benefits from improved infrastructure and management structures. In this regard, the policy specifically advises that

SADC water institutions should promote gender representation and empowerment of women within their structures. This is supported by the SADC Regional Water Strategy.

The strategy recognizes that even though gender mainstreaming in the water sector is about the different roles that women and men play, women are generally the ones who play a pivotal role as providers, users and guardians of water. However, in the majority of frameworks which govern the use and management of water in the region, the role of women is often left out and unrecognized, particularly in decision-making processes.

In this regard, the strategy emphasizes the need to focus on the empowerment of women to participate at the professional and managerial levels in the water sector. Specific measures to facilitate and enhance the participation of women in water resources management include:

- Specifically targeting women and girls in awareness and education campaigns, including support for their education in science and social subjects so they may become female water- sector professionals;
- Mechanisms specifically targeted at women to encourage, promote and facilitate their engagement and participation in IWRM e.g. affirmative action or other quota system;
- Specific forums for dialogue and debate about issues of gender in IWRM;
- Mechanisms and programmes that overcome cultural and social barriers that perpetuate gender inequalities; and
- Assisting the institutions of shared watercourses and national water institutions to develop gender mainstreaming programmes.

1.2.3 SADC Regional Strategic Action Plan IV (RSAP IV)

Programme 3 of the SADC Regional Strategic Action Plan IV (RSAP IV) focuses on gender mainstreaming, youth and stakeholder engagement. By assessing the role of gender in TWM this publication contributes to specific interventions of Programme 3.1 c), d) and e) which stress the need to:

- develop a gender monitoring and evaluation framework for the SADC Water Programme including gender-disaggregated indicators to monitor progress;
- undertake gender-mainstreaming demonstration projects in RBOs with gender objectives in order to field test outcomes at different levels; and,
- advocate gender mainstreaming in the water sector programmes and disseminate tools and other capacity-building resources.

1.3 Tools and Guidelines on Gender Mainstreaming in the SADC Region

SADC has produced a number of tools and guidelines to provide guidance on mainstreaming gender in the water sector. These include:

- SADC handbook on gender mainstreaming in TWM;
- SADC guidelines for RBOs on mainstreaming gender in TWM;
- Gender and Social Inclusion synthesis report and comprehensive data sets for RBOs;
- Eye-opening stories on mainstreaming gender in water resources management; and
- Awareness raising modules on gender mainstreaming.

In addition to gender tools and guidelines, SADC Water meetings such as the multi-stakeholder dialogues and RBO forums are gender responsive and have special sessions on gender as part of the main programmes. The region has held several gender knowledge-sharing workshops to provide a platform for exchange of ideas and effective practices in mainstreaming gender in TWM.

A decision was also taken at the Water Resources and Technical Committee (WRTC) that gender is a standing item on the agenda, and this opportunity is used to enhance efforts in gender mainstreaming (SADC 2017).

CHAPTER 2

Gender Mainstreaming Strategies and Action Plans in Transboundary Water Management in SADC

2.0 Introduction

Strategies and action plans have been developed at national, basin and regional levels to support the implementation of SADC protocols related to gender equality. These are at various stages of completion and implementation is yet to begin. However, analysis of these strategies and action plans provides evidence of the commitment the region has towards gender mainstreaming in TWM.

2.1 The SADC Gender Mainstreaming Strategy and Action Plan for TWM

In response to the need to address gender issues adequately, SADC has developed a Gender Mainstreaming Strategy for TWM 2016-2019. The action plan for 2018 to 2020 was developed and approved by Ministers of Water in May 2018 in fulfilment of the objectives of Programme 3 of the SADC RSAP IV on gender mainstreaming.

According to the SADC Gender Strategy in TWM, gender mainstreaming brings together the concerns, knowledge and experiences of women and men in the design, implementation, monitoring and evaluation of SADC sector policies, programmes and strategic investments, ensuring that women and men benefit equally and that inequality is not perpetuated. This aligns with the Revised SADC Protocol on Gender and Development which refers gender as the socially and culturally constructed roles, duties and responsibilities of men and women, boys and girls (SADC 2016). The protocol has taken a position that gender mainstreaming should remain an integral part of planned interventions, and not an add-on. This is intended to ensure that no detrimental effects are placed on gender roles (women and men), including mitigation efforts; and that equitable participation and access to institutional processes and resources such as water and land, as well as opportunities and benefits, are well planned.

The strategy recognizes gender equality as a core principle of SADC in regional cooperation and integration, economic growth and social development. It underlies efforts focused on poverty alleviation and enabling sustainable human livelihoods within the region, as a fundamental human right. The strategy is intended to show the value that gender mainstreaming brings to all aspects of water resources management.

The SADC Gender Mainstreaming Strategy is aligned to the TWM strategic areas and aims to achieve tangible and positive results of mainstreaming gender. This is done by responding to the needs and identifying opportunities to improve the lives of men and women in planned interventions and taking a more comprehensive path to previously narrow approaches to implementing actions. The strategy builds on past achievements, including the use of Gender Focal Points as a way to raise awareness of gender in the water sector, as well as building capacity to strengthen gender-mainstreaming efforts further.

Four key gender dimensions have been identified to strengthen gender responsiveness in the design and planning of interventions, and set the basis to achieving the strategic objectives stated above. These are:

- Knowledge and awareness to bridge the gap between policy and practice;
- Access to decision-making, management processes and institutional mechanisms;
- Inclusion and participation of gendered perspectives; and
- Enabling the empowerment and participation of women and girls.

As a result of this initiative, the majority of SADC water institutions have developed, or are in the process of developing, gender-mainstreaming strategies to guide the implementation of various programmes and projects (Table 2.1). In addition, more women and men are taking part in decision-making bodies at local, national and regional levels, although progress is at a slow pace. In the Zambezi Watercourse Commission (ZAMCOM) for example, of the five people in managerial positions, two are women, while in the Permanent Okavango River Basin Water Commission (OKACOM) secretariat, of the six members of staff, one woman has a managerial position.

Table 2.1 **SADC River Basin Organizations with Gender Strategies**

River Basin	SADC Member States in River Basin	Gender Strategy
Congo	Angola, Democratic Republic of Congo	x
Zambezi	Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia, Zimbabwe	ZAMCOM Gender Strategy 2015 revised 2018
Orange-Senqu	Botswana, Lesotho, Namibia, South Africa	ORASECOM Gender Mainstreaming Strategy 2014 revised 2018 2015
Cubango Okavango	Angola, Botswana, Namibia	OKACOM Gender Strategy 2015 revised 2018
Limpopo	Botswana, Mozambique, South Africa, Zimbabwe	x
Etosha-Cuvelai	Angola, Namibia	x
Ruvuma	Malawi, Mozambique, Tanzania	x
Nile	Burundi, DR Congo, Tanzania	Nile Basin Initiative Gender Mainstreaming Policy and Strategy
Save	Mozambique, Zimbabwe	x
Kunene	Angola, Namibia	x
Incomati	Mozambique, South Africa, Eswatini	x
Pungwe	Mozambique, Zimbabwe	x
Maputo	Mozambique, South Africa, Eswatini	x
Buzi	Mozambique, Zimbabwe	x
Umbeluzi	Mozambique, Eswatini	x

SADC Gender Mainstreaming Action Plan for the Water Sector

The SADC Gender Action Plan for the Water Sector draws its legitimacy from the SADC Regional Strategic Action Plan IV (RSAP IV) 2016 – 2020, Programme 3 Gender Mainstreaming, Youth and Stakeholder Engagement, whose objective is to promote gender mainstreaming, youth involvement and stakeholder engagement in the water sector. The Gender Action Plan (GAP) is a direct response to priority intervention P3.1 Gender Mainstreaming in the Water Sector, which consists of five main activities. The GAP has adopted and operationalized four of the priority intervention activities (SADC 2018a). The specific objectives are to:

- ❖ Enhance knowledge on gender mainstreaming and sharing of experiences;
- ❖ Strengthen the application of mainstreaming gender tools into related sectoral institutions, programmes and projects; and,
- ❖ Support the institutionalisation of gender practices into the water sector.

This publication speaks to all of these objectives particularly 2.1.2 of RSAP IV which states the need to document success stories to be used to share experiences.

2.2 National Commitments on Gender and Water

SADC Member States have made considerable progress in the local adaptation of the SADC Protocol on Gender and Development, and in developing relevant policy frameworks to support gender equality across all sectors (SADC, SARDC 2016a). Most have developed and strengthened national Gender Machineries to direct the implementation of the SADC Protocol on Gender and Development (SADC, 2016). Further, the water and sanitation policies of most of the states commit to:

- Ensuring gender and social equity in accessing water resources;
- Empowering women to participate fully in issues and decisions relating to sustainable development and management of water resources;
- Reducing gender inequalities and enhancing participation of all gender groups in socio-economic development;
- Taking the role of women into special account in the promotion of community-based social development;
- Examining gender implications at all stages of management of water resources; and
- Ensuring active and effective participation of women and men in rural water supply programmes.

However, there are still gaps between the policy framework and its implementation among the countries.

2.3 Strategies of River Basin Organizations

2.3.1 ORASECOM Gender Mainstreaming Strategy

The Orange-Senqu River Basin Commission (ORASECOM) developed a gender mainstreaming strategy and action plan to support and encourage the participation of both women and men in the implementation of projects and activities of the ORASECOM IWRM Plan.

The strategy developed in 2014 was reviewed and approved by ministers in 2018, and provides guidance to the Member States on the implementation of a gender-responsive IWRM plan. It has three objectives to:

- Promote the meaningful consideration of gender in the management of water resources so as to enhance the sustainability and effectiveness of the IWRM plan; promoting the equitable participation of women and men in the planning, implementation and monitoring of activities, projects and programmes within ORASECOM; and
- Promote the equitable participation of women and men in the planning, implementation and monitoring of activities, projects and programmes within ORASECOM; and
- Enhance the understanding of gender inequality in water resources management within the basin and ensure that ORASECOM activities do not perpetuate those inequalities.

The overall objective of the ORASECOM Gender Mainstreaming Strategy is to support gender equity in the development and management of water resources in the Orange-Senqu River Basin, which comprises Botswana, Lesotho, Namibia and South Africa. In order to create an enabling environment for implementation of the gender mainstreaming strategy, the objective is to be achieved for example through securing understanding and commitment from high-level policymakers in the riparian states. The goal of this intervention is to ensure that high-level policymakers become the gender champions within the various countries to advocate and promote the implementation of a gender-responsive IWRM Plan.

According to the ORASECOM gender mainstreaming strategy reviewed in 2018, having high-level policymakers as gender champions assists in catalysing the renewed commitment and political will within the ORASECOM structures and can leverage resources for implementation at the national and commission levels (ORASECOM 2018). This strategic intervention is slowly being achieved as noted for example, by the Gender Special Session at the 8th SADC River Basin Organizations Workshop held in June 2018. The Special Session was attended by Gender Focal Points in the Ministries of Water and the Gender Machineries from the ministries responsible for gender from the SADC Member States. The officials highlighted the need to address imbalances within the various basins and between Member States, and imbalances between societal strata, in order to sustain a shared prosperity and ensure that targeted investments move the basins towards greater equity.

One of the shortcomings of the gender strategy is that it does not take into account the involvement of communities on the ground. In its methodology, the strategy highlights that consultations were made with water departments, gender machineries, non-governmental organizations and academic institutions. Communities, who are the major users and managers of water, are referred to in the strategy mainly as beneficiaries and not as part of the stakeholders who developed the project. The strategy notes the importance of active community participation that enables women and men, to voice their needs and opinions as well as to influence the agenda and priorities. Plans are in place to action the strategy.

Box 2.1 Gender mainstreaming at SADC multi-stakeholder dialogues

Considering that gender mainstreaming is a priority and a critical crosscutting issue required for achieving SADC goals and objectives, special sessions on gender have been part of the SADC Multi Stakeholders Water Dialogues since 2012. Speaking during the SADC Gender Special Session at the 8th SADC River Basin Organizations (RBOs) Workshop in Namibia in 2018, Dr Joseph Pitso, Head of the SADC Gender Unit, reported that Gender Mainstreaming is implemented by ensuring that the values and principles that foster gender equality and equity are systematically infused and entrenched in all aspects of SADC organizational culture such as policies, programmes, projects, rules, leadership and management styles, staff recruitment procedures, appointments and promotions, terms and conditions of employment, disciplinary measures, staff development and conflict resolution strategies and processes. The SADC Gender Unit works with all directorates through Gender Focal Points.

The main objective of the Gender Special Session at the 8th SADC RBOs Workshop was to reflect on the theme "Securing Strategic Investments to realize the benefits of transboundary water cooperation" from a gender perspective. The need to address imbalances within the Basin and between Member States was underscored, as well as the imbalances between societal strata, in order to sustain a shared prosperity and ensure that targeted investments move the basin towards greater equity. The Special Session was attended by GFPs from the Ministries of Water and Gender Machinery from the ministries responsible for gender in the SADC Member States.

Christopher Munikasu, Chief Development Planner in Water Affairs in the Ministry of Agriculture, Water and Forestry of Namibia embraced the tangible benefits in mainstreaming gender and urged specialists to plan as one to take the region to greater heights in order to respond effectively and efficiently to the mandates of mainstreaming gender in water resources management.

Proceedings for the 8th SADC Water Dialogue, Windhoek, Namibia, May 2018

2.3.2 OKACOM Gender Mainstreaming Strategy

In its synthesis report of the Cubango-Okavango River Basin Water Audit, the Permanent Okavango River Basin Water Commission (OKACOM) comprising Angola, Botswana and Namibia as riparian states, noted that the water sector is still male-dominated with limited participation of women, youth and vulnerable groups in the decision-making process (OKACOM 2014).

The report acknowledged that there was no clear indication of integration of gender issues in water resources management both at national and basin level. In this regard, it was recommended that OKACOM should strive to mainstream gender issues in planning for the basin. This saw the development of the OKACOM gender mainstreaming strategy in 2015 that provides a framework to support integration of gender considerations in all OKACOM programmes, projects and activities. The objectives of the strategy are as follows:

- Equitable participation of women and men in the planning, implementation and monitoring of activities, projects and programmes within OKACOM structures; and,
- Meaningful consideration of gender in management of the Cubango-Okavango River Basin's water so as to promote and strengthen the integrated management, use and development of the basin's resources.

The strategy considers gender parity by recognizing the important roles that women play in the management of water resources in the Cubango-Okavango River Basin, contributing to the development of the region.

The strategy recognizes that lack of consultation with women and men on their needs could unintentionally result in increased burdens for the different groups. In addition, the strategy notes that for a gender strategy to be successful at grassroots level, it is necessary to investigate the needs of communities, and especially gender issues that disproportionately affect rural communities in the basin. In this regard, the strategy makes a strong initiative to empower women for greater and more effective participation in water use and management through supporting the full participation of both men and women in order to strengthen management, distribution and monitoring of water resources.

Despite having the strategy in place, OKACOM has not made progress in implementing gender mainstreaming due to structural limitations of the strategy as well as the absence of a clear implementation plan. In order to address these challenges, OKACOM commissioned the revision of its Gender Mainstreaming Strategy and the development of a comprehensive Implementation Plan with an aim of empowering the RBO to strengthen its gender mainstreaming efforts in line with the common and shared vision of the Basin (OKACOM 2018).

2.3.3 LIMCOM Gender Mainstreaming

The Limpopo River Basin riparian states consider gender mainstreaming as a key strategy for the sustainable management of transboundary water resources. The post-colonial era in the basin has seen more women occupying key decision-making positions that traditionally have been dominated by men. In the four riparian states of Botswana, Mozambique, South Africa and Zimbabwe have put in place appropriate gender machineries, mainly in government structures, to incorporate the gender interests of the society (LIMCOM and others 2017).

2.3.4 ZAMCOM Gender Mainstreaming Strategy and Action Plan

The Zambezi Watercourse Commission envisages a future characterized by equitable and sustainable utilization of water for social and environmental justice, regional integration

and economic benefit for present and future generations (ZAMCOM 2018a). The Commission notes that equity cannot be realized without understanding and addressing the unequal power relations and the different roles, responsibilities, capabilities and needs of women, men, girls, boys and other vulnerable groups in the Basin.

To this end, ZAMCOM developed a draft Gender Strategy in 2015 and later revised this in 2018 to incorporate the limitations noted in the 2015 draft. An implementation plan was also developed which clearly outlines responsibilities and action to be taken. One of the gaps noted in the draft Gender Strategy of 2015 was limited consultations with Basin stakeholders in the formulation of the strategy and inadequate reference to key ZAMCOM strategic documents and ongoing programme of work (ZAMCOM 2018a). The revised Gender Mainstreaming Strategy and Implementation Plan expresses ZAMCOM's commitment to promoting the goal of gender equality in the planning, development, management and utilisation of the Basin's resources.

To accomplish this goal, the riparian countries, ZAMCOM organs, and affiliated partners intend to mainstream gender into their operations. This will include systematically analysing and addressing the differentiated impacts of policies, processes, programmes and projects on women and men, and in particular, vulnerable groups in the Basin. The document outlines the strategic direction for the Organization and will serve as a gender mainstreaming reference document for ZAMCOM organs, the riparian countries and partners.

The objectives are to:

- Institutionalise gender mainstreaming in ZAMCOM through the creation of an enabling policy and organizational framework;
- Build and strengthen capacity to effectively mainstream gender in ZAMCOM through targeted, periodic education and training across all ZAMCOM organs;
- Strengthen gender equity in the establishment and operations of the National Stakeholders' Coordination Committees (NASCs) and the decentralized basin management structures in the riparian countries, the National Stakeholders' Coordination Committee;
- Integrate a gendered approach in programming and generate evidence on the merits of the approach; and
- Develop and implement a gender-responsive monitoring and evaluation system which enables effective tracking of gender responsiveness of policies, processes, programmes, projects and related outputs and outcomes.

The strategy acknowledges the need to strengthen the participation of women in water resources management by undertaking assessments of the implications for women and men of any planned action, including legislation, policies and programmes (ZAMCOM 2018a).

The strategy indicates the need to identify key barriers hindering the participation of women, men, youth, and people living with disability. The strategy further recognizes the need for research and information-sharing as a strategic intervention that will guide clear implementation geared towards eliminating gender inequalities in policies and processes at regional, national and sub-national levels (ZAMCOM 2018a). According to the strategy, the study reports will be placed in the Zambezi Water Resources Information System (ZAMWIS) knowledge portal and inform investment options for the various projects in the riparian countries that can be of benefit to both women and men.

2.4 Gender Mainstreaming at River Basin Forums

In line with the promotion of gender mainstreaming at different fora, RBOs workshops are incorporating gender sessions as part of their programmes. The SARDC Team interviewed some of the Gender Focal Points during the Zambezi Basin-Wide Forum held in October

2018. The Gender Focal Points (GFPs) acknowledged the importance of mainstreaming gender in transboundary water management, and reported that institutional frameworks are in place to support gender mainstreaming.

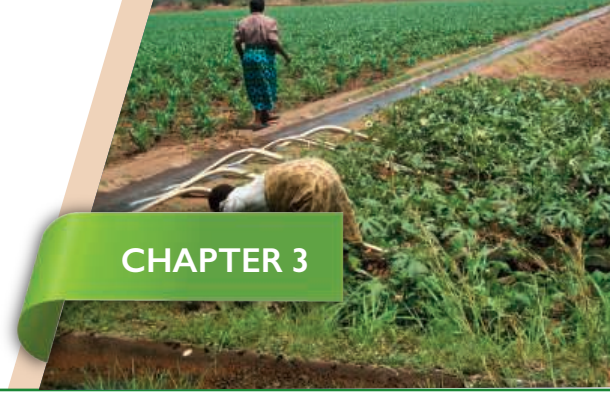
Regarding the inclusion of Gender Focal Points in RBOs structures such as ZAMTEC and NASCs, GFPs are part of the structures in some riparian states, such as Malawi, Namibia, Angola and Botswana, as NASC members. They noted some benefits derived from this which included improved livelihoods, better education for children, improved access to water supply and sanitation.

GFPs however, mentioned that there is still a gap in availability of gender-disaggregated data and that governments should put more emphasis on that, especially in country annual surveys. The need for capacity building in analyzing gender disaggregated data was underscored. Some GFPs noted the need for continued capacity building of the GFPs as some do not have expertise in the area. Hence effective participation in decision-making is sometimes lacking.

2.5 Conclusion

The major River Basin Organizations in the SADC region now have strategies for mainstreaming gender and some have action plans. Those that still do not have action plans are in the process of developing or are planning to develop similar frameworks. Representation in decision-making positions at national, basin and regional levels is not near the 50:50 gender parity mark as stipulated in the revised SADC Protocol on Gender and Development. The professional staff members of these organizations are primarily from technical or physical science backgrounds, with few showing an interest in gender issues. Efforts are being made to capacitate the GFPs as well as ensuring that established RBOs use their strategic position in the region to secure joint initiatives that deliver benefits of transboundary cooperation.

Evidence-Based Gender Mainstreaming in Transboundary Water Management



CHAPTER 3

3.0 Introduction

The need to involve both men and women in the management of transboundary water resources is placed high on the agenda of southern Africa. This is evidenced by the various policies and targets that have been put in place to support the advancement of women in the region (LIMCOM and others 2017). SADC Member States regard gender mainstreaming as a key strategy to promote sustainable development through integrating the different views, roles and responsibilities of men and women in water resources management.

The participation of men and women empowers the local communities with the necessary tools to take care of their own welfare by ensuring that their voices are heard, and that their interests are taken into consideration (SADC, SARDC 2017). The research and practical experience from many gender networks in southern Africa has demonstrated that effective, efficient and equitable water resources management is more likely to be achieved when men and women are involved (SADC, SARDC undated).

This chapter presents evidence of initiatives in transboundary water management that have been implemented successfully through the active involvement of both men and women. The chapter provides qualitative and quantitative data on the benefits of mainstreaming gender in water resources management and related disciplines including food security, agriculture and disaster management, and the costs of not doing so. The examples presented are drawn from different parts of the region, most are country-specific and at micro level.

3.1 Benefits of Gender Mainstreaming in Southern Africa

Assessments of who owns what, who has access, who decides, who is responsible, who benefits most and who loses, were conducted in the several interventions. This helped to understand the socio-economic and environmental impact of involving both men and women in Integrated Water Resources Management (IWRM), with key lessons for Transboundary Water Management (TWM) where gender mainstreaming is still in infancy.

3.1.1 When women lead

The benefits of gender mainstreaming are demonstrated in the pilot projects for strengthening IWRM in transboundary river basins in southern Africa, thus providing lessons for gender mainstreaming in TWM.

Results of the Bokspits Pilot Project implemented in Botswana show that women are able to take leadership positions as women participated in the Village Development Committees, representing about 89 percent of the membership ratio, with only 11 percent being men (SADC 2014a). As a result, the community had an opportunity to map and audit their own water resources, identify problem areas and propose possible intervention measures.

This process enabled the community members to gain deeper insights and knowledge into how to better manage their local water resources (ORASECOM 2015). The planning process illustrated what can be termed "learning by doing" as an effective approach to incorporating multi-sectoral participation in IWRM at local level (ORASECOM 2014).

The implementation of another IWRM project in Ralints'i-Hermon Communities in the Mafeteng District located in the southern lowlands of Lesotho in the Orange-Senqu

"Learning by doing" has proved an effective method of involving women in community development processes and the management of resources.

River Basin further demonstrates the benefits of gender mainstreaming. The implementation strategy of the project was to effectively involve all stakeholders at all levels including men and women in the management of local water resources through adoption of IWRM during planning, design and implementation processes (SADC 2014b). This also aligns with the Namibia Gender Policy 2010-2020 which promotes an increase in the proportion of women involved as decision-makers, planners, managers, scientists and technical advisors, particularly at grassroots level.

In Malawi the active participation of men and women in the management of the Kaziputa irrigation scheme in Ntcheu district in the Zambezi River Basin provides insights into the benefits of gender mainstreaming. The data from site visits show that the establishment of the irrigation scheme was guided by the Malawi Growth and Development Strategy which calls for mainstreaming of gender in all sectors of development, particularly in community-based development projects (Kaziputa Site Visit, October 2018). In the Kaziputa Irrigation Scheme, women constitute the majority of beneficiaries. Of the 75 members in the scheme, 47 are women, while 28 are men (Kaziputa Site Visit, October 2018).

Thus women in the scheme are involved mainly in farming activities as they form the majority of the agricultural community. From the focus group discussions, the community asserted that having both women and men taking part in the irrigation scheme has improved their livelihoods as it is being managed by women who have ensured its sustainability over the years due to discipline in managing funds for the maintenance of the project. For example, women without spouses stated that they are now able to send their children to school, buy livestock and meet other needs using the income they get from farming in the scheme (Kaziputa Site Visit, October 2018).

Evidence gathered from the site visit further indicates that women in Kaziputa are taking a leading role in the management and maintenance of the irrigation equipment, and the irrigation scheme committee is chaired by a woman. The maintenance of the irrigation scheme is made possible through the groups formed by women where monthly subscriptions are made. This enables the women to purchase inputs such as cement and pit sand to patch up the cracks that may appear along the canal. Women in the scheme developed a water scheduling programme for sharing available water during times when water levels are low in the river (Kaziputa Site Visit, October 2018). The women in the scheme ensure that there is a balance between the amount of water for irrigation and for the sustenance of ecosystem health downstream.

3.1.2. Positive results of collective participation

In Tanzania, the Wachagga community are known to have developed a sound management system that ensures the sharing of responsibilities and benefits from the water available in the area. The water from the springs and rivers that flow down the slopes of Mount Kilimanjaro is conveyed to the homesteads and farms by use of channels/furrows. The construction of these furrows was carried out by the communities themselves (Hirji and others 2002). In order to ensure equitable distribution of water, the community instituted a mechanism for addressing allocation issues, protection and management of the resources as well

as resolving conflicts (Hirji and others 2002). The irrigation activities of the Wachagga shaped their life patterns, including collective action aimed at keeping the furrows in good order (Kissawike 2008).

The participation of men and women in the maintenance and management of the furrow system has strengthened the cohesion of local communities (Kissawike 2008). Gender mainstreaming in the communities of Tanzania is a response to the National Water Policy of 2002 which has formalized the training, participation and involvement of women in water management. The policy stipulates more equal involvement of women in the control of benefits from rural water supply projects, and also that half the members of village water committees should be women.

Table 3.1 Distribution of Water Users by Gender in Mkoji Sub-Catchment, Tanzania

Parameters	Frequency	Percentage %
Domestic		
Men	5	22.7
Women	17	77.3
Livestock Watering		
Men	3	42.9
Women	4	57.1
Irrigation		
Men	78	85.7
Women	13	14.3

Source Lusuva 2009

Similarly, a study carried out in Mkoji Sub Catchment in Usangu Plains, Tanzania shows that both men and women consider water resources management as a responsibility for everyone in the community. The study notes that men and women in collaboration with water committees, formulated by-laws that address the use of irrigation furrows within the villages (Lusuva 2009). The by-laws give some system for rotating water between secondary canals and those who fail to follow the allocation sequence are fined. The maintenance of the irrigation system is undertaken regularly by all members and that those who fail to attend to maintenance work or contribute to the specified amount of money are fined.

However, women have sometimes complained that the law is too harsh and most of the time they are the ones who tend to clean the canals. In addition, men at times break the rules and get more water than women by even sneaking to the canals at late hours, while women, because of culture cannot go out at night by themselves (Lusuva 2009). Table 3.1 shows the distribution of water users by sex in Mkoji Sub Catchment in Usangu Plains.

Using the results presented in the Table 3.1, the study indicates that women dominate in the use of water for domestic purposes (77.3 percent) while only 22.7 percent of men use water for the same purpose. However, in the use of water for irrigation, the proportion of men increases sharply to 85.7 percent with women constituting only 14.3 percent. One of the reasons cited for this is that in traditional Tanzanian societies, women look after the family, hence are responsible for fetching water and providing meals while men give priority to other productive uses of water (Lusuva 2009).

In spite of these differences, both men and women have equal voices in the decision-making processes in village water committees. The study found that there are more women than men in the committees, that 68 percent of the participants were women.

3.1.3 Responsibility for managing quality and quantity and allocation of water

In line with the National Water Policy of Zambia, which stipulates that "There shall be gender equity in accessing water resources and, in particular, women shall be empowered and fully participate in issues and decisions relating to sustainable development of water resources and, specifically, in the use of water" (Government of Zambia 2010), a number of communities have begun to benefit from gender mainstreaming strategies. A gender analysis done in the lower Kafue River Basin indicates that water use in Zambia is strongly determined by the work of women. Some key tasks such as water collection, domestic water-use decisions, irrigation of orchards and fields, and other practices, are a primary responsibility of women (ZAMCOM, SADC, SARDC, 2015).

The findings from research undertaken in two peri-urban areas of Lusaka (Kalikiliki and Chipata) with the objective of establishing the relationship between gender equality, water management and women empowerment, highlights how men and women are involved in the management of water resources. Results obtained show that 98 percent of respondents in Kalikiliki and 70 percent in Chipata compounds acknowledged that women are active participants in water resources management. In terms of decision-making, the study shows that 12 percent in Kalikiliki and 10 percent of women in Chipata were engaged in decision-making processes (Kasongamulilo 2013). In addition, 91 respondents in Kalikiliki indicated that there was a significant improvement in the management of water since women were incorporated in the management of water points.

As illustrated in Figure 3.1, the Kalikiliki residents generally felt that it is beneficial to have women integrated in the water management system. About 73 percent of the respondents in Kalikiliki attributed cleanliness of the water points to the presence of women in the management since they are regarded as the custodians of hygiene practices. In addition, 43 percent further stated that women are peace makers and hence they manage conflicts better than men.

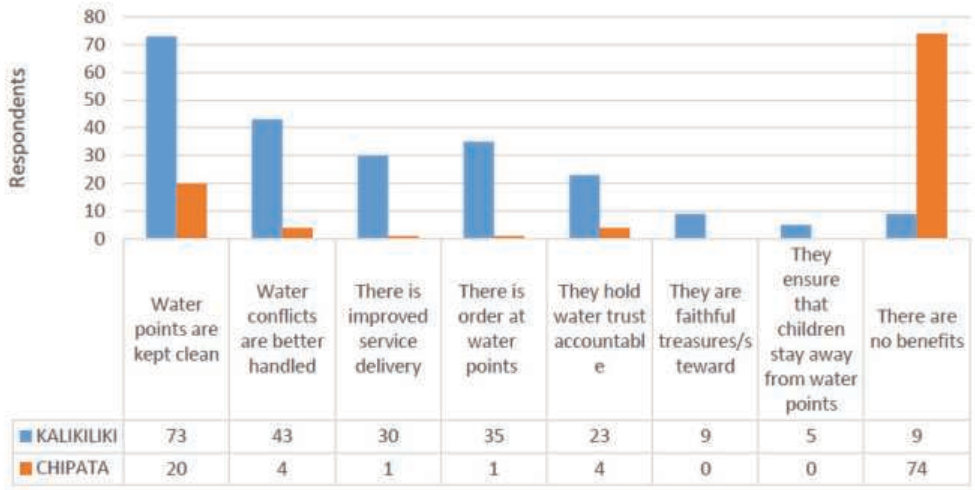
About 30 percent of the respondents acknowledged women for their commitment to good service delivery while 35 percent mentioned that women are systematic and orderly (Kasongamulilo 2013).

A similar case is the result of the Intra-household gender surveys on the Botswana side of the Stampriet Transboundary Aquifer undertaken in 2017. See Figure 3.2 - 3.7.

Women are mainly responsible for managing water in the household and quickly notice changes in the water quality and availability.

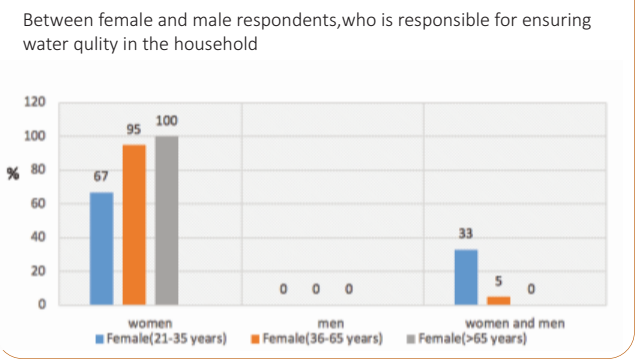
Response from majority of both women and men in Figure 3.2 and 3.3 indicate that women are responsible for water quality. As women spend most of their time using water in the home, in the field, and in other commercial uses, they quickly notice the change in colour or smell which may indicate a change in the quality of the water. Of the women respondents (Figure 3.2), 100 percent of those above 65 years indicated that water quality is women's responsibility. The same response came from the men aged above 65 years in Figure 3.3 .

Figure 3.1 Benefits of Involving Women in Water Resource Management



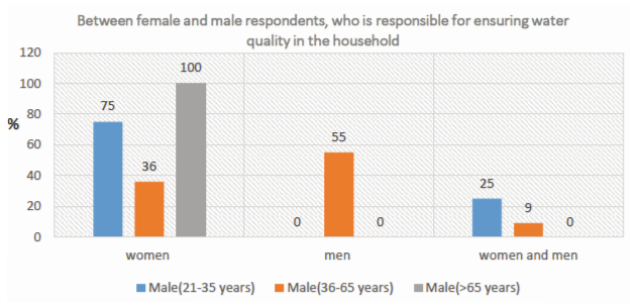
Source Kasongamulilo 2013

Figure 3.2 Female Respondents for Water Quality



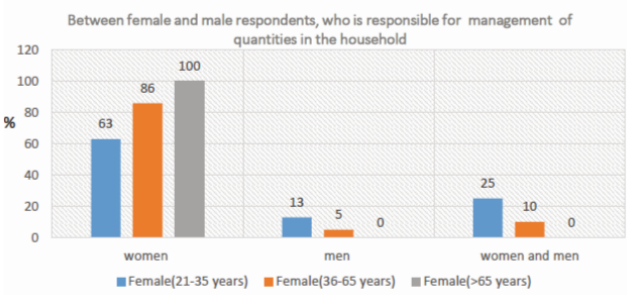
Source SDC-UNESCO GGRETA Project 2017

Figure 3.3 Male Respondents for Water Quality



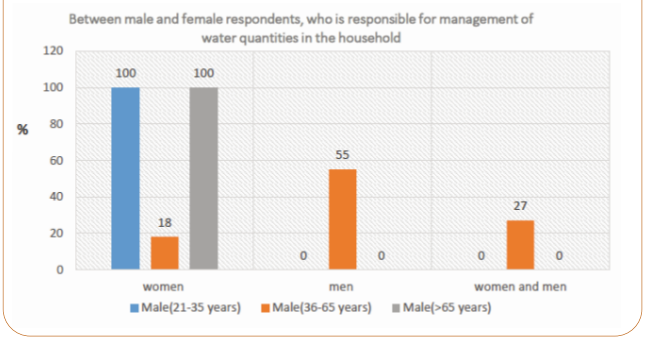
Source SDC-UNESCO GGRETA Project 2017

Figure 3.4 Female Respondents for Water Quantity Management



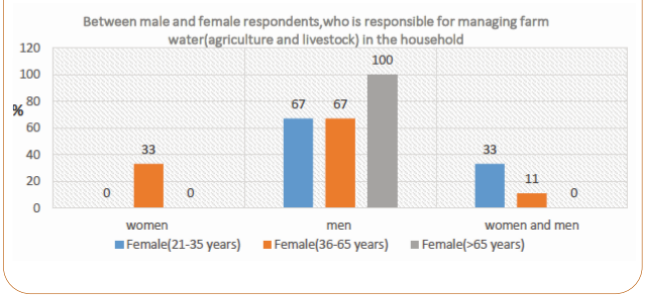
Source SDC-UNESCO GGRETA Project 2017

Figure 3.5 Male Respondents for Water Quantity Management



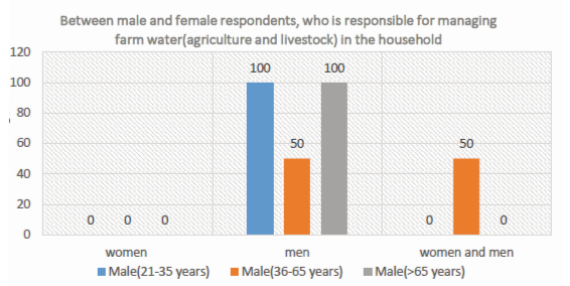
Source SDC-UNESCO GGRETA Project 2017

Figure 3.6 Female Respondents for Farm Water Management



Source SDC-UNESCO GGRETA Project 2017

Figure 3.7 Male Respondents for Farm Water Management



Source SDC-UNESCO GGRETA Project 2017

In the same way and for the same reasons mentioned in quality, the majority of both female and male respondents (Figure 3.4 and 3.5) indicated that women are responsible for water quantity. As users of water, women quickly notice the change in level of water in wells, springs and rivers and quickly come up with solutions. The responsibility differs when it comes to making decisions for agriculture (water for crops and livestock).

As illustrated in Figure 3.6 and 3.7, decision-making for water allocation and use for agriculture and livestock purposes is broadly men's responsibility with the exception of backyard gardens and fields for crop cultivation. The majority of both male and female respondents indicated that the responsibility is for men (100 percent for those male and female 65 years and above and 67 percent for female respondents between the age of 36 and 65 years. This indicates that cultural norms still determine decision-making concerning livestock and commercial crops to a large extent.

Figure 3.7 however, indicates a slight change of cultural beliefs where 11 percent male and 50 percent female felt that decisions for livestock are for both men and women. This may indicate a slight change in mindset towards gender mainstreaming in response to Botswana's gender mainstreaming policy which provides for equal access to resources regardless of sex.

3.1.4 Gender mainstreaming in fisheries

Apart from agriculture, the involvement of men and women in other sectors such as fisheries has brought significant benefits to communities in southern Africa. Since as far back as 1996, women in some countries such as Botswana were considered as accomplished fishers who contributed to the provision of food and incomes in the region (SADC, SARDC et al 1996). A socio-economic survey undertaken in the Okavango Delta of Botswana shows that basket-fishing is an important component of diversified livelihood strategy for fishing communities in Ngamiland, and that women actively participate in fishing activities. The survey indicates that 94 percent of the women construct the fishing baskets themselves while a few get assistance from other household members. In addition, different age groups of women and girls participate both within and across fishing seasons and location.

Due to the nature of the gear used, basket fishers exploit mainly small-sized species (Ngwenya et al 2012). However, based on the challenges that women still face, the need for innovative co-management and locally based structures which recognize the diversity of interests and interest groups remains critical (Ngwenya et al 2012).

In Zambia, recent studies show that fish processing has now been introduced to women, an area which was dominated by men and this has contributed to increased incomes for households (ZAMCOM 2018b). During training led by the Ministry of Fisheries and Livestock, the University of Zambia and the World Fish Centre in 2017, a woman trader in Senanga District noted that men have started to embrace the benefits of gender mainstreaming (ZAMCOM 2018b):

> *Men's attitudes have changed. Most of those we work with now treat us as equal partners. Some men have put aside their egos and ask us on certain technologies that they don't understand better.*

3.1.5 Improved decision-making through capacitating women

Apart from participating in workshops and other training, women are now enrolling in strategic courses on water resources management to enhance their knowledge. Table 3.2 shows the percentage of women who were receiving training for Integrated Water Resources Management from the University of Zambia in 2018. As illustrated, women studying for a post-graduate degree in IWRM stands at 36 percent while those studying for Masters level is 21 percent of the total class. The percentage of women studying for PhD level stands at 25 percent. The ratios for other countries in the SADC region are similar. Although these figures show a gradual change in terms of female students who are taking part in IWRM courses, it also indicates that women are now pursuing courses that were in the past considered as a domain for men. This trend has improved decision-making in male-dominated fields such as hydrology.

We need men to stand up and say: I support my wife, I support my sister, I support my daughter in IWRM courses. Florence Simumba, Gender Focal Point in Zambia

In South Africa, women are regarded as water ambassadors or change management agents. As a result of this understanding, a programme known as "Adopt a River" was developed where women were given an opportunity to identify dirty rivers in their surrounding en-

vironment, clean them and raise awareness against pollution of water by communities. In the end, women received a stipend to eradicate poverty (Interview Guide from Member States 2018).

In addition, due to the ongoing efforts to mainstream gender in transboundary water management and other related sectors, women are now actively involved in key decision-making structures in South Africa, particularly within national Task Teams. As illustrated in Table 3.3, women are now occupying influential positions in Task Teams as the whole legal team is led by women while the communications team has both men and women. This represents a departure from what the situation was in the past where men used to occupy most of the key decision-making positions.

Table 3.2 Percentage of Women Receiving Training in Integrated Water Resources Management in Zambia

Period 2018								
Post Graduate Degree			MSc			PhD		
Women	Total	%	Women	Total	%	Women	Total	%
4	11	36%	7	34	21%	16	64	25%

Source IWRM Training Centre, University of Zambia, and Data for 2018, extracted from Member States' Interview Guides

Table 3.3 Representation of Men and Women in Task Teams for South Africa

Task Team	Number of Men and Women
Technical Task Team	2 male engineers
Finance Task Team	2 male finance officials
Legal Task Team	2 female legal officials
Communications Task Team	1 male and 1 female

Source Adapted from Tagutanazvo and others 2014

3.1.6 Responsibility for decision-making in livestock rearing

In another case a study of the Mutale Water Users Association (WUA) situated in the Limpopo Province of South Africa, men and women are engaged in productive roles such as commercial farming and livestock rearing. These roles were initially regarded as the domain for men only (Elias 2015). Most members of the Mutale WUA are smallscale farmers who earn their livelihood from the sale of agricultural produce, as these farmers are part of an association which deals with agricultural activities. The study reveals that although most of them are men, there is a growing number of female members. However, the women tend to have limited access to the decision-making role in the WUA (Elias 2015). The study further illustrates that the low confidence levels of women and some cultural practices are impeding factors hindering decision-making roles for women in the WUA (Elias 2015).

A similar trend is observed in the intra-household gender surveys carried out in 2017 in the Stampriet Transboundary Aquifer, Botswana. As illustrated in Figure 3.6 and 3.7, both women and men said that responsibility for decision-making on livestock is for men.

The graphs also show some changes in this perception, though not significant, where 11 percent of the male respondents and 50 percent of the female respondents felt that responsibility for livestock is for both men and women. This is a departure from the traditional culture. Involvement of women in livestock rearing has seen livelihoods improving as the proceeds from the sale of livestock are used for school fees and supply of basic needs.

3.1.7 Benefits of inclusive responsibility in operations and maintenance of water systems

Feedback from representatives of SADC Member States in Mozambique indicates that, while women used to have challenges in accessing resources, the situation has changed as

a result of the inclusion and integration of women and men in development programmes and projects through local associations and water resource management committees. As a result of gender mainstreaming, cases of success stories in the management, sustainability and transparency in utilisation of funds have been achieved due to the added value of women in development (Member State Interview Guide 2018).

Gender mainstreaming in Mozambique is being facilitated by the goals in the law of local bodies and in the National Plan for the Advancement of Women, which establishes that there must be at least 30 percent of women involvement in development programmes and projects (Member State Interview Guide 2018). In terms of rural water supply, mainly in the construction of dispersed fountains or wells, both men and women are actively involved in planning and implementation of such projects, including in the monitoring and management of such sources after construction (Member State Interview Guide 2018).

In Zimbabwe, gender mainstreaming in water resources management has helped to transform lives in many communities in the country. For example, in the Munzvire Village in Chipinge, the inclusion of gender mainstreaming as an integral part of the transformation process has not just improved people's livelihoods but has led to a significant shift where the communities used to be recipients of development to one where they are now part of it (Katsi 2003).

When the Rural District Council received financial resources from UNICEF to rehabilitate the water supply system, women were recognized as the key beneficiaries of the training in water systems operations and maintenance (Katsi 2003). The study shows that during the first days of training in the male-headed households, the husbands felt threatened and disapproved their wives' involvement in the project meetings. However, after attending awareness-raising workshops on gender, men began to accept and realize that their wives were equally important agents of change (Katsi 2003).

To demonstrate the new knowledge gained, men in Manzvire started to carry out other household tasks while their wives were attending related community meetings and training. The men ensured that the children, gardens and the family's domestic animals, among other female-perceived tasks, were well looked after. In addition, women in the community were supposed to wear their traditional dresses at all times but this norm changed as they were now allowed to freely go to work in work suits and overalls during the construction of latrines and while repairing boreholes. As a result of gender mainstreaming, the planning and selection of appropriate technology and sites for new water points as well as upgrading and rehabilitation of existing systems, have since improved, mainly due to the participation of both women and men in the area (Katsi 2003).

Similarly, the community involvement in the management of the Chipendeke Micro Hydro and Irrigation Scheme in the Save Catchment in Zimbabwe is perhaps one of the success stories that demonstrate the benefits of gender mainstreaming in transboundary water management. Findings from the site visit carried out in September 2018 show that the Chipendeke community has benefited from embracing gender mainstreaming as a key component for development.

The introduction of the Micro-hydro and Irrigation Scheme project brought about an improvement in livelihoods as the community now has access to electricity and can afford to grow crops all year round, thus boosting food security (Chipendeke Site Visit, October 2018). During the planning stage of the Chipendeke Micro-hydro and Irrigation Scheme, the vision was to have an inclusive scheme with women, men and youth all benefiting and this was realized. Both men and women were trained in irrigation farming systems within the area in order to capitalize on this project and make use of the river.

The farmers, both women and men, reported that men dominated farming activities in Chipendeke prior to the introduction of the scheme. Men stood as the sole managers regarding issues relating to the river and use of land.

While the Communal Lands Act Chapter 20:04 of 1982 last amended in 2002 was silent on gender issues, the Land Commission Act Chapter 20:29 of 2017 states that one of the functions of the Land Commission is to ensure the "equitable access to and holding and occupation of agricultural land, in particular, the elimination of all forms of unfair discrimination, particularly gender discrimination."

This has influenced collaboration between men and women as well as young people in the area to pioneer developmental projects pertaining to agriculture. Now people derive profits from agriculture across all groups and women are able to establish other smallscale income-generating projects to increase their gains and are now able to meet other financial needs within their households.

The Irrigation Management Committee set to oversee the distribution and use of the resources (Water and Electricity) is comprised of both men and women. The committee consists of seven members of which four are men and three are women, and the vice chairperson is a woman. Information from focus group discussions and interviews show that voices of women are being heard when it comes to participation in policy making and execution of decisions within the committee. Women and men in the committee collectively decide how to balance the water for irrigation and for Micro-hydro electricity generation during the dry period when there is limited flow of water in the river. So far, 39 households have an electricity connection as do the clinic, the primary school and the business centre.

The senior teacher at Chipendeke Primary School explained that students are now performing very well in most of the examination questions related to electricity and other energy sources. The pass rate has increased from 20 to 40 percent with the ratio of girls to boys getting closer (45 and 55 in favour of boys compared to the previous ratios of 30 to 70 percent before electricity). Enrolment at the school has improved as information about the school is now available on the internet.

In addition, the introduction of electricity at Chipendeke Health Clinic means that women can deliver babies at night and this has significantly reduced neo-natal deaths in the community. Medication that requires refrigeration is now available at the clinic due to the availability of electricity (Chipendeke Site Visit, October 2018).

The management of the Guyu-Chelesa Irrigation Scheme in the Limpopo Basin is another case study that provides insights into the successes of gender mainstreaming in southern Africa. The Guyu-Chelesa Irrigation Scheme is located in Gwanda, in the Matabeleland South Province of Zimbabwe. A study undertaken in the Irrigation Scheme shows that, of 150 plot-holders in the allocation register, 105 are women while 45 are men. The study found out that there are more women who are practising irrigation farming in the scheme and the average representation is 67 women in every 100 water users (Tagutanazvo and others 2014).

The results indicate that the area is female-dominated, a transformation that has seen the involvement of women as water users and to a certain extent as managers. When looking at the membership in the various committees set up in the scheme, the representation of women varies by institution and level of decision-making, as illustrated in Table 3.4.

As shown in Table 3.4, women comprise the majority of the committee members (12 out of 22) and could be said on that basis, to be well represented in management, even in the highest committee, where the chairperson is a woman. The high representation of women has witnessed improvements in the production of the yields and the constructive use of the proceeds from the farms, which included availing school fees for children.

Table 3.4 Representation of Women in Management Committees in Guyu-Chelesa Irrigation Scheme

Name of Committee	Number of Women	Number of Men	Total Membership
Irrigation Management Committee	4	3	7
Cropping Committee	4	1	5
Advisory Committee	1	3	4
Disciplinary Committee	1	3	4
Marketing Committee	2	-	2
Total	**12**	**10**	**22**

Source Adapted from Tagutanazvo and others 2014

3.1.8 Gender mainstreaming in groundwater management

The benefits of gender mainstreaming are not limited to surface water but this extends to the management of transboundary water aquifers in the region. For example, the Limpopo River Basin possesses transboundary aquifers such as the Tuli Karoo Basin shared by South Africa, Zimbabwe and Botswana, all of which continue to require good stakeholder engagement through involvement of men and women as well as enforcing the existing legislation (LIMCOM and others 2017).

The most intriguing evidence of gender mainstreaming is how three countries in southern Africa (Botswana, Namibia and South Africa) are managing the Stampriet Transboundary Aquifer System (STAS). The STAS is 86,647 sq km in extent and falls within the Orange-Senqu Basin, cutting across three regions: Central Namibia into Western Botswana and South Africa's Northern Cape Province (Dipholo and Gumede, 2013). In order to effectively manage this resource, Botswana, Namibia and South Africa established a multi-country cooperation technical team under the auspices of the Orange-Senqu Basin Commission. The establishment of the technical team provided the riparian countries with a formal structure in which Aquifer States would interact over the issues relating to the long term use and management of the water resources (UNESCO, 2016).

The technical team provides science-based, gender and aquifer-specific data used to substantiate gender mainstreaming of national water policies and implement gender-transformative national and regional actions (UNESCO, 2018). The technical team consists of multi-disciplinary national teams from Botswana, Namibia and South Africa, each with its own national co-ordinator, supervised by a regional project coordinator as shown in Figure 4.7 in the next chapter.

The establishment of the STAS gender-mainstreamed technical team created a means by which the voices of women are brought into the transboundary water governance system for the aquifer.

3.2 Effective Practices from Outside the SADC Region

Some initiatives in East Africa provide good practices and lessons for southern Africa. Box 3.1 demonstrates the benefits of gender mainstreaming in the fishing industry in Rwanda, something that could be scaled-up in the SADC region.

Box 3.1 Women's fishing co-operative builds empowerment and equality in Rwanda

The participation of women in the fishing business particularly on Lake Kivu in Rwanda is one of the many examples of how gender mainstreaming has transformed community livelihoods in East Africa.

In the past, women were kept from fishing due to the associated intense physical work and the danger that comes with fishing on Lake Kivu, coupled with reinforcements from traditional gender roles, thus forcing women to do only backyard farming. However, the situation is significantly changing as women now form an essential part of the national market for fish in Lake Kivu.

Besides participating in fishing on the lake at night, women gather along the shores in the morning to buy the fish from their female counterparts and either take the fish to their homes or sell to cooperatives. At the cooperatives, other women manage the drying of fish and they transport fish across the country, in buckets and sacks, and also sell to urban markets around the country.

As a result, the fish economy has created opportunities for women to form collectives and income. One of the female beneficiaries, Bonifrida Mukabideri who is also a founding member of Project Pêche Fishing Cooperative in Kibuye, said that a lot of women have used the cooperatives to improve their livelihoods:

I am very proud to be a part of the cooperative. Now a woman can say: I can build a house by myself. I can look after my family properly. And even if my husband dies, I can still be able to take good care of the children.

Women are also involved in drying of sambaza fish. Dozens of women at the cooperative arrange fish to allow the sun to dry all the fish evenly. The dry sambaza fish are sold for a higher price than fresh ones and in Eastern Rwanda, they form a central part of the edible economy and almost every dish in the restaurants along the banks of Lake Kivu incorporates sambaza.

Another female beneficiary, whose life has greatly transformed as a result of fishing is Roselyn Nyirarvshisha from the Rwandan capital of Kigali. The woman used to support her two children through taking up odd jobs but life has changed for her since she started venturing into the fishing business and she is now the top seller among other women in the co-operative.

Spending a night on the boat with men was just not considered suitable for women in the past. The situation has indeed changed as summed up by Albert Ngeze, a 57-year-old former fisherman and now one of the oldest boat builders on Lake Kivu:

When I was young, and before the genocide, it was impossible to see women fishing. But today we are happy for women to join us on the water. I think only a small percentage of men do not understand that. I think (in) this century, everyone must understand gender mainstreaming.

Source Sims, S., Pickett, H. and Prat, C. 2018. Women's Fishing Cooperative Builds More Empowerment and Equality, African Great Lakes Reporting Fellows with the International Women's Media Foundation

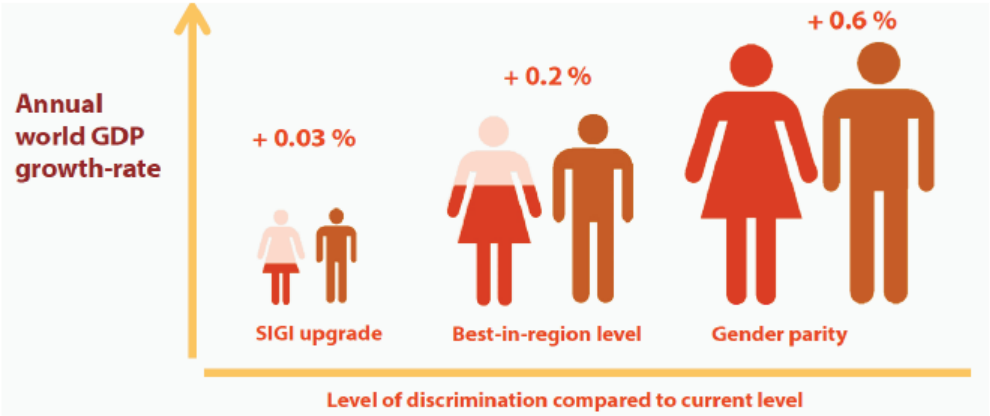
3.3 Regional and Global Costs of not Mainstreaming Gender

Restricted women's access to water resources has substantial negative consequences on Gross Domestic Product (GDP) by reducing production factor accumulation and their productivity. Given a similar distribution of innate abilities between women and men, constraints on women's access to water resources distort the economy by artificially reducing the pool of talent from which employers can draw. This reduces the average productivity of the production factor (Ferrant and Kolev, 2016).

Gender-based discrimination in social institutions costs up to US$12 trillion for the global economy. For southern Africa the cost is about US$340 billion (Ferrant and Kolev, 2016). Gradually reducing discrimination in social institutions could lead to an annual average increase in the world GDP growth rate from 0.03 to 0.6 percent by 2030, as demonstrated in Figure 3.8 (Ferrant and Kolev, 2016).

In other words, the world GDP per capita in 2030 is estimated at US$8,378 without a reduction in gender-based discrimination in social institutions, compared to US$9,142 if discriminatory social institutions were eradicated. This is an impressive gain of US$764 per capita (Ferrant and Kolev, 2016).

Figure 3.8 Annual Increase of Global GDP Growth Rate under Three Scenarios



Source Ferrant and Kolev 2016
*Using as a benchmark a world with no change in levels of gender-based discrimination in social institutions 2015-2030

Box 3.2 Levels of gender-based discrimination in social institutions: 2030 Scenarios

SIGI – Social Institutions and Gender Index measures discriminatory social institutions (formal and informal laws, social norms and practices that restrict women's rights and opportunities) in 160 countries, and classifies the result into five groups, from very low levels to very high (OECD, 2014). The Figure shows the following indicators:

1. Upgrade in the SIGI classification: Decrease in a country's level of gender-based discrimination in social institutions to attain a lower group along the SIGI classification in 2030;
2. Best-in-region: Decrease in a country's level of gender-based discrimination in social institutions to reach the regional best performer level in 2030;
3. Gender parity: Eradication of gender-based discrimination in social institutions by 2030.

Another research establishes that achieving equality in economic opportunities between women and men could spur US$28 trillion in world GDP growth by 2025 (MGI 2018).
The State of Food and Agriculture 2010-2011 also estimates that giving women equal access to productive resources and rural employment with men could increase yields on their farms by 20-30 percent. Production gains of this magnitude could reduce the number of hungry people in the world by 12-17 percent, which means 100 million to 150 million people. Most of the world's 1.2 billion poor people, two-thirds of whom are women, live in water-scarce countries and do not have access to safe and reliable supplies of water (FAO 2012).

At regional level estimates of the value of unpaid care work in a cross-section of southern African countries range between 7 and 63 percent of GDP, depending on the country and methodology used (Braunstein 2014). Indeed, a part of economic growth pursuant to an increase in female labour force participation can be attributed to the transfer of women's work from the non-market to the market sector.

At national level, if women in Zambia enjoyed the same level of capital investment in agricultural inputs (including land) as men, output could increase by up to 15 percent (Braunstein 2014). The same report records that in Tanzania, reducing the time burdens of women in smallholder coffee and banana grower households would increase the household's cash income by 10 percent, labour productivity by 15 percent, and capital productivity by 44 percent.

3.4 Views from SADC Gender Focal Points

River Basins Organizations (RBOs) and Shared Water Institutions can play a major role in facilitating gender mainstreaming in transboundary water management in SADC. The RBO workshops are already incorporating gender sessions as part of the programme.

The SARDC research team interviewed some of the Gender Focal Points (GFPs) during the Zambezi Basin-Wide Forum held in October 2018, and the GFPs reported that institutional frameworks are in place to support gender mainstreaming. Regarding the inclusion of Gender Focal Points in the structures of RBOs, such as ZAMTEC and the NASCs, GFPs are part of the structures in some riparian states, including Angola, Botswana, Malawi and Namibia, especially as NASC members.

The Gender Focal Points noted some benefits derived from mainstreaming gender, including improved livelihoods, better education for children, improved access to water supply and sanitation. GFPs noted that there is still a gap in availability of gender disaggregated data and that governments should put more emphasis on that especially in annual country surveys. The need for capacity building in analyzing gender disaggregated data was underscored. Some GFPs stressed the need for continued capacity-building of the GFPs as some of those appointed lack experience or expertise in the area. Hence effective participation in decision-making is sometimes lacking.

Box 3.3 Excerpts of interviews with SADC Gender Focal Points

"If both women and men are involved in the planning and implementation of projects, sustainability is guaranteed. Evidence from projects in Malawi which had involvement of both women and men are still operational as women are willing to continue paying any subscriptions required, as well as willing to carry out their duties diligently including volunteering some activities to keep the project running."

Oswald Mwamsamali, Chief Water Resources Officer, Malawi GFP

"In case of boreholes the benefit is that a lot of time is saved for other productive activities in the home or elsewhere which would have been spent in fetching water."

"Section 11 of the Gender Equality Act of 2013 advocates for a 40/60 ratio of women and men or vice versa in all institutions/committees managing water resources. For example, Water Point Committees and Water Users Associations such as the Shire Basin observe this requirement."

Malawi GFP

"Most of the projects where women are involved and active have yielded good results. They fully observe the rules and regulations of managing natural resources. There is, however, need for financial support as most women do not have access to financial services."

Tumaini Mwamuyala, Tanzania GFP

"Women have improved in occupying jobs that were once male-dominated such as hydrologist or civil engineer. In Tanzania, the Ministry of Water Affairs is dominated by women with senior jobs. Out of the 12 staff members, nine are women. The predominance of women is seen in most Water Users Associations in the country as well. This has seen improvement of results compared to previous years where men dominated."

"Men have started to embrace women voices in decision-making compared to previous years where women culturally were not supposed to be heard. This is very encouraging."

Tumaini Mwamuyala, Tanzania GFP

"Some women now own boreholes. It was unheard of in the past. Women are now chairing Village Development Committees. However, in Water Users Associations, men still dominate as the main use of water is for livestock watering which is still male-dominated in Botswana."

Saniso Sakuringwa, Principal Biologist, Department of Water Affairs, Botswana GFP

"Both men and women are being involved in the building of dams, which was not the case in the past. We have noted that women work faster than men, are committed and are less corrupt. As a result, a significant improvement in projects is observed."

"In terms of maintenance, as major users they report quickly and come together to find a solution to the problem. Men usually procrastinate."

Florence Simumba, Zambia GFP

CHAPTER 4

Case Studies on Evidence Based Gender Mainstreaming

This chapter provides Case Studies from the SADC region demonstrating the benefits of gender mainstreaming in transboundary water management, and the costs of not involving women in management and decision-making. In terms of benefits, the case studies highlight the socio-economic and environmental benefits to the society. In terms of losses, the assessment considers the consequences if gender roles and relations are not considered, as well as unintended consequences of transboundary water management interventions.

To compile these case studies, different methods of data collection were used to gather both primary and secondary data on the impacts of gender mainstreaming in transboundary water management in the SADC region. Primary data collection methods included semi-structured interviews with key informants, mainly SADC Gender Focal Points, government officials, water and gender experts, as well as water users at local level.

Secondary data was collected from literature on gender and water. In addition, three case studies from other transboundary river basins in SADC were identified to provide a relevant demonstration of how gender mainstreaming improved the planning, implementation, and decision-making processes in transboundary water management interventions. The selection of sites was informed by the literature review and consultations, and consist of at least one site from the Zambezi, the Orange Senqu, and the Save river basins.

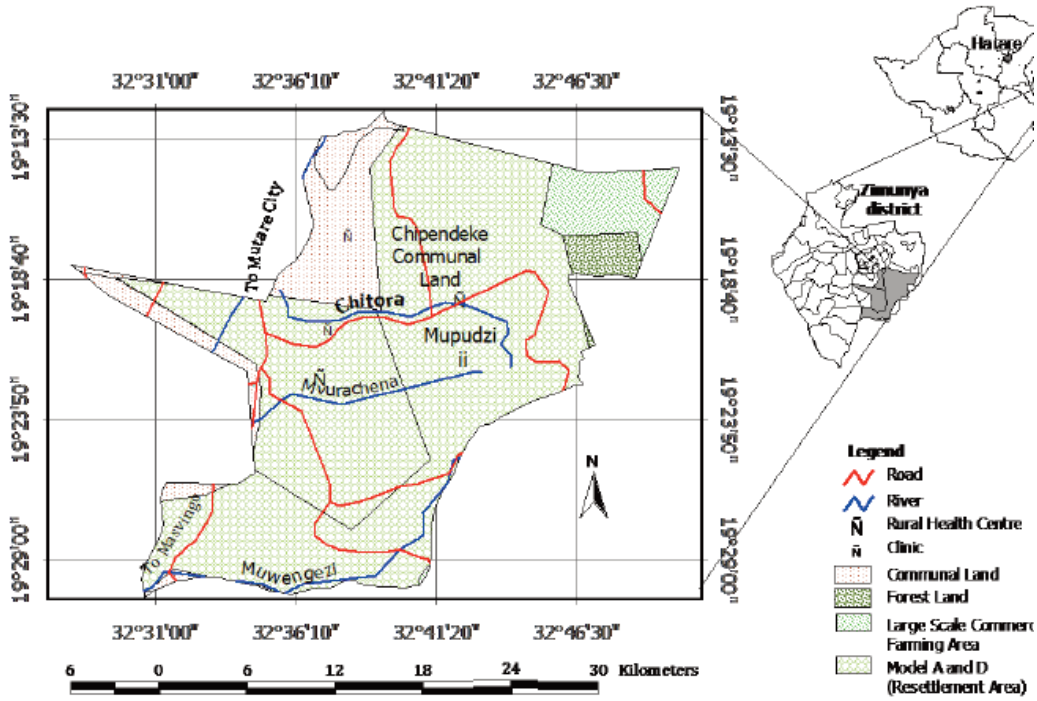
Six case studies are presented in this chapter. Site visits were carried out in three of them – Chipendeke Micro-Hydro and Irrigation Scheme; Kaziputa Irrigation Scheme; and, Mariental IWRM Pilot projects and Stampriet Transboundary Aquifer System on the Namibian side.

Case Study 1
Chipendeke Micro-Hydro and Irrigation Scheme

The Chipendeke Micro-Hydro and Irrigation Scheme is located in Zimunya district, Manicaland province of Zimbabwe, and is located about 65km outside Mutare in the eastern part of the country. The irrigation and the micro-hydro scheme derive water from the Chitora River, a tributary for Mpudzi River, which discharges its water into Save River, shared between Zimbabwe in the upper course and Mozambique in the lower course, discharging water into the Indian Ocean. Thus Chitora is a tributary of a transboundary river.

The Micro-Hydro Scheme started operating in 2010 and the project received financial support from the European Union while Practical Action was responsible for its implementation. Figure 4.1 provides the physical location of the case study area.

Figure 4.1 Chipendeke Communal Lands



Source Nengomasha 2009

Women and men involvement in the project planning and design

The development and implementation of the Chipendeke Micro-Hydro and Irrigation Scheme was a highly consultative process. The Mutare Rural District Council working together with Practical Action engaged all community groups including women and men in the planning and implementation of the project. According to Engineer Drought Musungo from Mutare Rural District, the community was asked to initiate a community-based plan highlighting challenges and recommendations on how to address the challenges. Socio-economic groups were formed to deliberate on the planning and implementation of the project. Both men and women were given the opportunity to participate freely in making decisions as well as in implementing the projects. By involving both men and women many benefits were realized as will be shown.

Gender representation in the irrigation management committee

The Chipendeke community established an Irrigation Management Committee to oversee the distribution and use of the resources (water and electricity). Representation in the committee accommodates both men and women farmers in the area. The committee consists of seven members of which four are men and three are women. Role allocation has not been limited by gender. The vice chairperson of the committee is a woman, an indication that the community has embraced equality and that women are eager to be involved in the management of the irrigation scheme. Information from the interviewees shows that the voices of women are being heard when it comes to participation in policy-making and decision execution within the committee. Block A of the irrigation scheme consists of 25 farmers, of which 15 are women and 10 are men. Eight of the 25 farmers are youths consisting of five women and three men.

"During the planning stage, the vision was to have an inclusive scheme with women, men and youth all benefiting and this was realized. Both men and women were trained in irrigation farming systems within the area in order to capitalize on this project and make use of the river," says Mawoneke, an irrigation farmer.

Focus group discussions were held with local farmers in the Chipendeke Irrigation Scheme.

Co-operation between men and women farmers

Both female and male farmers reported that men were the sole dominators of the farming activities in Chipendeke prior to the introduction of the irrigation scheme. They stood as the sole managers regarding issues related to the river and use of land. "We did not want women in leadership positions, but now our attitude towards women has changed," said one male farmer.

The introduction of the project has strengthened cooperation between men and women as well as young people in the area to initiate developmental projects pertaining to agriculture. Ideas are considered regardless of gender. For example, either women or men can decide when to clear the canals clogged by weeds, or when to de-silt the canals, and the whole community cooperates. During the focus group discussions, both men and women stressed the need to rehabilitate the main pipe that draws water from the river to the farms to ensure efficient continuity of the project.

Benefits derived from involving both men and women in irrigation farming

Focus group discussions with farmers, both women and men, revealed that before the irrigation scheme was set up, farming was difficult and less profitable as it was bound by seasonal operations. Farming was conducted once a year during the rainy season. The introduction of the Chipendeke Irrigation Scheme brought an improvement in farming activities and general livelihoods to both men and women. Production expanded as farmers could now grow crops all year round and profits are being realized within a period of four month intervals.

Community members now derive profits from agriculture across all groups and women are able to establish small income-generating projects from the profits gained and are able to meet most of the financial needs in the household as well as paying school fees for children.

Priscilla Karumbidza, one of the beneficiaries of the irrigation scheme, narrated other benefits derived from equal involvement of women and men:

- Women have now been accorded portions of farming land to establish their crops;
- Women in Chipendeke can decide on what they want to grow, without influence of men or higher authority over their views and decisions;
- Women have been empowered to manage their own resources as they can now earn, and invest in proceeds from the farms. With the aid of savings facilities provided by banks which women can access, they can now invest for future prospects and support their families;
- Women are actively represented in committees. Thus their views are incorporated in the water resources management at Chipendeke;


Farmers at Chipendeke grow a variety of crops including beans, maize and groundnuts all year round due to irrigation.

- Profits gained from farming have allowed women such as Priscilla to obtain enough resources to purchase a residential stand in urban Mutare and construct a home, send children to school, and access electricity provided by the micro-hydroelectric power project.

Women are key beneficiaries of the Irrigation Scheme.

Grace Tambana, another beneficiary of both the micro-hydro and irrigation scheme added that:

- Within the committee women are now able to advocate for their counterparts to be admitted into the projects as well as air views of those women who benefit indirectly from the project within the community;
- Women in Chipendeke now have access to credit facilities that allow them to receive loans to fund the irrigation farming and other projects; and
- Women are also now bread winners despite the fact that traditionally men are expected to be the sole providers of the family.

Grace is now able to assist her husband in providing for the family.

Mbuya Maoneke – Irrigation Committee Member, expressed similar sentiments that:

- The introduction of the scheme has seen women taking charge and making use of land in the area and men have embraced the idea of giving their wives a chance to use the land and establish their own production; and
- There is a shift from traditional norms in which women were given little or no role in decisions on farming activities or land rights to proper apportionment and sharing of land. This ensures that land is utilized to maximize on production and profits.

The men in the community concurred with what was reported by the women. An interview with Joseph Chishakwe, Block A Chairperson (Irrigation Scheme) echoed the effective participation of both men and women, and benefits derived from that. A summary of excerpts is as follows:

- The inclusion of women in the project has introduced more transparent and honest management of resources, because women are more oriented with a culture of development and saving than their male counterparts who are known for abusing resources in some cases;
- Farming in the area has seen the diet of people improving as they are now able to access a variety of foods throughout the year in surplus;

- The Agriculture Extension Officer, Happiness Amanzi, has helped fellow women in the community to interact and air their views clearly for decision-making; and
- Women are taking leading roles in activities such as de-silting of the dams and weirs in order to ensure a reliable supply of water for electricity generation and the irrigation scheme.

One of the issues raised was the need for the community to effectively manage their activities upstream as this may pose challenges to those living downstream. For example, there have been complaints by farmers in the Irrigation Block B that they are receiving less water due to siltation coming from activities happening in Irrigation Block A. The Agricultural officer acknowledged this as a genuine concern by downstream farmers and stressed the need for communities to treat water as a transboundary resource, indicating that whatever the community does upstream can impact on marine environments as far as the Indian Ocean in Mozambique.

Benefits derived from involving both men and women in the micro-hydro scheme

The Chipendeke Micro-Hydro project has involved women and men right from the planning stage. Both men and women were involved in the construction of the weir, canals and carrying materials required including pipes, rocks, sand and cement. Women are part of the micro-hydro committee and are able to decide how to balance the water for irrigation and for micro-hydro during the dry period when there is limited flow of water in the river. Thirty-nine households have an electricity connection in addition to the clinic, the primary school and the business centre. Each entity is responsible for paying for their household electricity consumption through a prepaid system.

Chipendeke community is capacitated to manage the generation of electricity without external assistance.

Benefits to education

The teacher pupil ratio was high as the Chipendeke Primary School was understaffed due to teachers opting for other schools that had electricity and reliable access to water. It was difficult for teachers to give practical lessons on the subject of energy as there was no electricity in the school and this resulted in the low pass rate in related subjects. In cases where teachers needed to mark books and prepare for lessons after hours, this was difficult to do as there was no electricity to provide lighting. In addition, the school could not offer night schooling.

As a result of the micro-hydro scheme and the involvement of men and women working together, these challenges have been addressed. A focus group discussion with the teachers revealed the following:

- The teacher pupil ratio has decreased as teachers are now attracted to the school.
- The pass rate in energy-related subjects is increasing. Pupils are now able to practically apply knowledge on topics related to electricity. This access ensures that the resource is something the children in the community are familiar with, which they know and interact with on a regular basis. Both girls and boys have the opportunity to visit the micro-hydro scheme and learn how it operates.
- The school pass rate has increased from 20 to 40 percent with the ratio of girls to boys getting closer than before (45 and 55 in favour of boys as opposed to the previous ratios of 30 to 70 percent before electricity).
- Teachers can now work after hours without challenges of lighting, and a night school for adults has been introduced at the school.

- Due to access to electricity in their homes, children can now access media information. Teachers have acknowledged that this is improving the pupils' base of knowledge on issues outside the Chipendeke radius.
- There are more women attending night school now than in the past years, as men have appreciated the importance of education for their wives and now release them to take advantage of the electricity at the school.
- Teachers have gained entrepreneurial ground, thanks to the introduction of electricity in the area. They can now earn extra income by selling refrigerated refreshments to students and fellow staff and community members, thus multiplying the benefits of the projects. Both male and female teachers have started to embark on other income-generating projects such as livestock production. Due to the availability of lighting, keeping poultry is now possible. Other projects include the rearing of guinea fowl, goats or rabbits.

Benefits of electricity in households

Focus group discussion with the micro-hydro beneficiaries indicated that before the Chipendeke Micro-Hydro Scheme, farming rules in the area were in favour of men. This changed when the Chipendeke hydro scheme was introduced as policy and strategy formulation was now informed by both men and women.

Men and women plan together for the management of electricity.

The participation of women and men in this project resulted in an increase in the number of children attending school from Chipendeke. The enrolment at the local primary school has since increased after the project was in place. This is because households headed by women are able to provide resources for children to attain a decent education even up to university level.

The inclusion of women and men has been beneficial as the women introduced the idea of setting aside money for maintenance of the micro-hydro and irrigation equipment

Benefits of electricity to the local clinic

During the planning of the project women expressed their need for lighting at the clinic. Women in labour had to bring candles, torches and kerosene lamps, which were not reliable. Medication storage was a challenge as the clinic had no access to electricity for proper refrigeration of drugs. Their views were considered and the establishment of the project implied that women could now deliver overnight and in cases where stitching is required, the nurses can properly do so with enough lighting. The clinic can now stock drugs that require refrigeration. Rudo Mugabe, a nurse at the Chipendeke Clinic notes that lighting had been a major challenge that affected health service delivery at the clinic. "Electrification of the clinic significantly reduced neo-natal deaths in the community. Health personnel are now able to attend to cases at night," she said.

Access to media

Access to media is another benefit of the introduction of electricity and has also been applauded by the clinic as a means to educate families on healthcare. The micro-hydro scheme has allowed women, men and children to watch television, and access information on devices such as cell-phones. The senior teacher at the school said that due to the accessibility of information about the school on the internet, they are now receiving more visitors. In 2014 the school had visitors from the German Embassy, who later donated money to build a school block.

Key Message

The Chipendeke Micro Hydro and Irrigation Scheme case study provides a unique example of the benefits of mainstreaming gender in Transboundary Water Management. The case study demonstrates how rural communities are taking a lead in managing local resources for the benefit of all involved stakeholders. The case study was selected based on recommendations from the national Gender Focal Point as well as water and gender experts. Participation of all gender groups in the management of the river and use of resources has seen the Chipendeke Community access electricity and engage communities in farming activities that have improved people's livelihoods.

The Chipendeke case also highlights the benefits of adopting the water, food and energy nexus approaches in balancing competing needs in the food security, energy and water sectors which can as well be applied in other areas in the region. For example, when water is low in the river, the community directs water to the irrigation scheme during the day and then channels water to the electricity generation plant in the evening to provide lighting in the homes. Through gender mainstreaming, women in Chipendeke now have access to productive assets such as land and water, something which they could not do in the past.

Case Study 2
Kunene Transboundary Water Supply Project and Chirundu Joint Cross Border Water Supply and Sanitation Project

Mainstreaming gender in transboundary infrastructure development projects such as water supply and sanitation is essential if sustainable development is to be achieved. Research has revealed that feasibility studies of some initiatives of this nature have not considered the views of both men and women in the initial stages and in the implementation of the project. A comparison of the Kunene Transboundary Water Supply Project and the Chirundu Joint Cross Border Water Supply and Sanitation Project could provide an analysis of the cost of not mainstreaming gender in TWM.

The Kunene River extends 325km forming the border between Angola and Namibia and is one of just five perennial rivers in arid Namibia, considered a precious resource by those who live near it. The river has for centuries supported the semi-nomadic Himba people, who are one of Africa's most successful remaining pastoralist peoples (www.internationalrivers.org).

Chirundu is a settlement on the Zambezi River which forms an important international boundary between Zambia and Zimbabwe. Figure 4.2 shows the location of the Kunene and Chirundu transboundary water projects.

The Chirundu settlement consists of two towns on either side of the border. Chirundu town in Zambia has a population of about 15,000 while on the Zimbabwe side there is a resident population of about 4,000 (CRIDF 2016). Chirundu town in Zambia serves as the capital for the larger Chirundu district. Both settlements have a predominantly young and growing population, which is under-served in terms of basic services. About 25 percent of the population lives in informal settlements (CRIDF 2016).

On the Zimbabwe side, Chirundu is largely a wildlife zone in which people and wildlife co-exist. Tourism is a major activity in the border town, which is surrounded by wildlife safari areas and is a popular destination for fishing. There is a high potential for irrigated agriculture, as the area lies in a zone that receives less than 700mm annual rainfall and is prone to periodic hazards, including drought and accompanying high temperatures.

Figure 4.2 Location of the Kunene Transboundary Water Supply Project and the Chirundu Joint Cross Border Water Supply and Sanitation Project

Source Kiggundu 2012 and CRIDF 2016

Cross-border water supply and sanitation

The border towns on the Kunene and Zambezi transboundary rivers face common water supply and sanitation challenges.

Due to its strategic location, Chirundu has experienced high population growth over the years, which is not matched with the delivery of water and sanitation services. Access to reliable and safe water supply and sanitation facilities at the two border towns has emerged as a major challenge that requires urgent action to ensure continued activities at these strategic centres.

For Kunene, the 27-year Angolan civil war had the effect of obstructing development on both sides of the Angola-Namibia border. In particular, the region around the Calueque Dam was the stage for battles between the occupying South African army and the SWAPO guerrilla forces (Kiggundu 2012).

Namibia is arid, water stressed, and dependent on neighbouring countries Angola and South Africa for the water supply for communities living along the banks of transboundary rivers (Kiggundu 2012). The population of Cunene Province in Angola has risen from 990,087 in 2014 (INE 2014) to an estimated 1,121,748 in 2018. The Kunene Region in Namibia, located in the north-western part of the country, has a population of nearly 1 million people.

To address water supply and sanitation challenges, countries sharing the Kunene and the Zambezi Rivers are embarking on the development of cross-border water supply and sanitation infrastructure.

The Zambian and Zimbabwean parts of the border face unreliable connected water supply that cannot meet the needs of the travelling public and the resident population. Women are affected most, being largely responsible for domestic water supply, and there are many challenges and risks as they secure water for household use. These include queuing and drawing water at midnight and in the early hours of the morning. Women with house connections from

medium-cost residential areas reported that on a typical day water would be available for six hours from 11pm to 5am, and only two hours per day in high-density areas (CRIDF 2016).

A large part of the population on the Zambian side of the border relies on communal water points. The CRIDF feasibility study notes that there are nine water kiosks located in the high-density residential area which are managed by water vendors who are female (CRIDF 2016). The water supply and sanitation project is expected to result in significant improvements to the health of Chirundu residents, as well as border patrons, along with time-saving and ecological improvements.

Mainstreaming gender in the Kunene and Chirundu water supply projects

The Kunene feasibility study was rather technical and had little reference to gender issues. Considering that the Himba women perform most of the labour-intensive activities such as milking livestock, hauling water from the river, raising children, carrying firewood and constructing homes, a gender-responsive survey could have captured specific views from both men and women that could have added value to the study. The Himba people reside in the Baynes project site for the Kunene dam construction. Involving both men and women in the feasibility study could have captured the priorities for women which include the need for water pipes in the home as opposed to the stand pipes outside the home.

While information on mainstreaming gender is not available for the Kunene Transboundary Water Supply Project, in carrying out the feasibility study for Chirundu, CRIDF and GIZ consultants considered Gender Equality and Social Inclusion (GESI). Specific focus is made on community development issues that include employment and income-generating opportunities, and water and sanitation needs of women, girls and vulnerable groups. The study also looked at expected changes in the quality of life of women, girls and vulnerable groups, including those living in poverty, as a result of improved water supply and sanitation.

Mainstreaming gender in transboundary water management can address some of the challenges faced, particularly by women, who secure water for household use. Some challenges that can be addressed through mainstreaming gender are shown here, as noted in the feasibility study for the Chirundu Joint Cross Border Water Supply and Sanitation Project:

- **Unreliable water supply** – Unreliable water supply impacts negatively on women who will have to spend long hours in search of water. In cases when water is available at night from water kiosks, women searching for water are exposed to risks such as rape and mugging.
- **Prolonged time spent on water** – Long hours spent in search of water diverts women's attention from other household chores and productive activities. A reliable system provides women with adequate time for the productive activities.
- **Long distances to water points** – Due to lack of adequate water supply, women travel long distances to the nearest water points. The transboundary Zambezi River provides an important water source for those with no access to connected water. Travelling long distances to collect water increases the risks for women.
- **Revenue spent on water supplies** – Buying water for household needs can have a significant impact on communities with lower income. Those engaged in productive activities may abandon their work to search for water, resulting in a reduction in revenue.
- **Exposure to accidents and other risks** – Men and women who rely on the Zambezi River are exposed to risks such as crocodile attacks. The river is the major alternative source of water in times of water deficit in Chirundu.
- **Increased burden of drawing water for sanitation** – Households with flush systems need a constant supply of water. The lack of adequate water supplies in the household creates an additional burden on women to ensure adequate water for all domestic uses including sanitation.

- **Unfavourable sanitation technology** – Choice of sanitation technology should consider gender aspects, for expense design and location of pit latrines. Poor design may lead to contamination of groundwater, odours, and access by flies, resulting in spread of water-borne disease such as typhoid.

Benefits of mainstreaming gender in Chirundu Cross Border Water Supply and Sanitation Project

Taking gender considerations into water supply and sanitation projects can result in many benefits, such as in the Chirundu Cross Border Water Supply and Sanitation Project. The direct socio-economic benefits include the net results of improved livelihoods through health improvements, increased productivity, and improved community resilience to climate change. Indirect effects include a positive impact on tourism in Chirundu due to healthier and more resilient communities and facilities (CRIDF 2016).

Expansion and rehabilitation of the current water supply infrastructure should result in increased quantities of water, thus allowing households without water supply to be connected. This will reduce the burden of fetching water for women, who are depending on unsafe water sources. Increased water supply can result in improved hygiene and a reduction in waterborne diseases. A large share of the Chirundu population comprises people in transit, and availability of sanitary facilities is particularly important for travelling women and girls who have special needs.

Increased water quantities can contribute to productivity, as residents would be able to engage in ventures that they cannot undertake due to inadequate water supplies. Some of the activities that women said could be conducted easily included poultry and gardening, and brick-making for men. At present men are unable to generate revenue from brick-making due to erratic water supplies.

Improvements in infrastructure for water supply production and treatment translate into increased quantity and quality. Higher quantities of water will enable household members to improve cleanliness and hygiene, which results in reduced waterborne diseases.

Improved health will have a positive impact on productivity in whichever occupation one is involved in, as there will be less absenteeism from tasks. Higher quantities of reliable water will enable residents to engage in economic productivity tasks such as backyard gardening, block-making, managing restaurants and hair salons more efficiently. These enterprises assist households to earn incomes that are used for other household requirements.

Time saving is another major benefit of the water supply and sanitation project in Chirundu. This is particularly important for households that draw water from kiosks where time is spent on queuing and waking up at awkward hours. Reliable water supply will result in time savings, as women will be able to draw water at reasonable times and use the time saved for other household and productivity activities.

Women involved in enterprises outside the home are usually disrupted by erratic water supplies as they give priority to fetching water, thereby delaying or abandoning their productive activities. This results in reduced household incomes.

There is recognition that infrastructure development alone will not yield the best results, as noted in the Chirundu Joint Cross Border Water and Sanitation Project. Rather, soft interventions should be integrated with hard components to achieve positive hygiene behaviour change and practices. All these measures must be implemented in the context of climate change resilience, gender equity, justice and environmental sustainability (CRIDF 2016).

The project will create employment among local communities while increasing household incomes if livelihoods are integrated into project design. This will contribute towards improving the quality of life of people from the towns on both sides of the border, and particularly in reducing the burden on women and girls on fetching water.

Key Message

A comparison of the Kunene and Chirundu transboundary water projects was selected as one of the case studies for this report so as to provide an analysis of the benefits of mainstreaming gender in transboundary water management, and the cost of not doing so. One of the key lessons is that projects should consider gender issues in order to meet the needs of all interested stakeholders.

The Chirundu Water Supply and Sanitation Feasibility Report of 2016 and the Socio-economic Baseline Assessment Study for the Chirundu Joint Cross Border Water Supply and Sanitation Project (Zambia/Zimbabwe) of 2018 provide recommendations that can be implemented to ensure full benefits of the project. At project design stage, the studies solicited views of women, for example, their preferred water supply and sanitation technology. For Chirundu, a number of issues were considered which can still be applied when siting future water infrastructure for communities. Some of the issues considered when siting water kiosks include close proximity to bars, markets, bus stations and other congested public places, which may inhibit women from accessing water from them.

While information on mainstreaming gender is not available for the Kunene Transboundary Water Supply Project, the issues of Gender Equality and Social Inclusion (GESI) were considered in the Chirundu Joint Cross Border Water Supply and Sanitation Project.

Expansion and rehabilitation of the current water supply infrastructure in Chirundu should increase the quantities of water available, thus allowing households without water supply to be connected. This will reduce the burden of fetching water for women, who are depending on unsafe water sources, including the Zambezi River. Increased water supply should result in improved hygiene and a reduction in waterborne diseases.

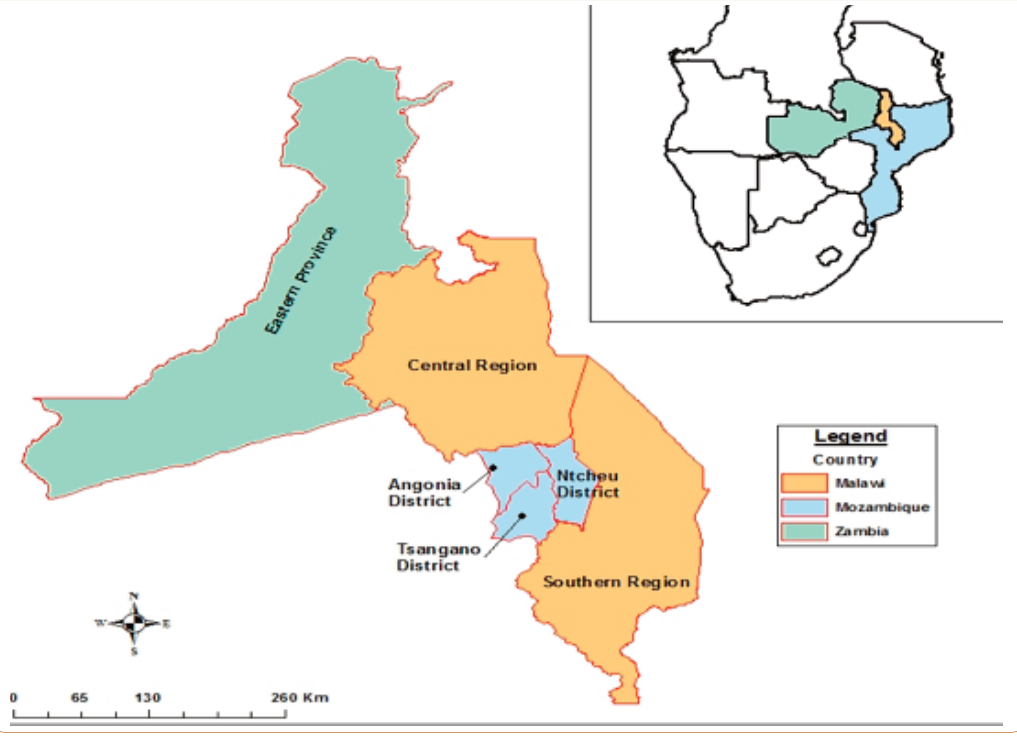
For the Angolan and Namibian towns along the Kunene River, improvements in the infrastructure for water supply production and treatment should result in increased quantity and quality. Higher quantities of water should enable household members to improve cleanliness and hygiene, resulting in reduced incidence of waterborne diseases. Time saving is another major benefit of the water supply and sanitation project in Chirundu. This is particularly important for households that draw water from kiosks where time is spent on queuing and waking up at awkward hours. Reliable water supplies will result in time savings, as women will be able to draw water at reasonable times and use the time saved for other productive activities.

Women involved in enterprises outside the home are usually disrupted by erratic water supplies as they give priority to water thereby delaying or abandoning their productivity activities. This results in reduced household incomes.

Case Study 3
Kaziputa Irrigation Scheme, Ntcheu District, Malawi

The Kaziputa Irrigation Scheme is located in Kandeu Extension Planning Area, Ntcheu district of south-central Malawi. The district has two distinct terrain patterns: the upland area bordering Mozambique in the west and the Shire River Valley with alluvial soils to the east. The irrigation scheme derives its water from the Livulezi River, uphill, through a gravity-fed system that uses canals as water channelling mechanisms to the irrigated plots. Annual precipitation ranges from 600mm to 1200mm. The Livulezi River is a tributary of the Shire River which drains into the Zambezi River. The district thus has transboundary aspects with its proximity to the Mozambique border and as a part of the Zambezi River system. See Map of Ntcheu District in Figure 4.3.

Figure 4.3 Map of Ntcheu District, Malawi



Source Tagutanazvo 2015

Involvement of men and women in planning and designing of the project

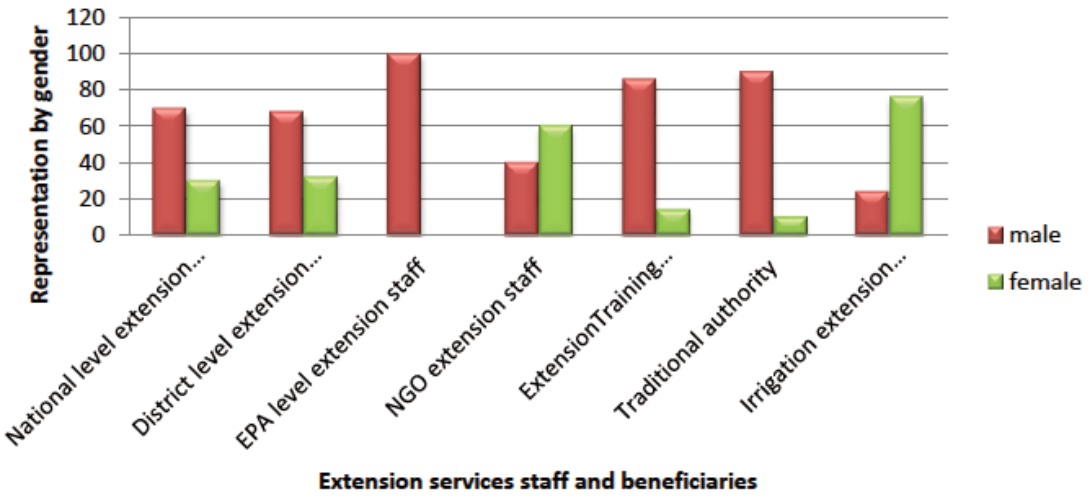
Development projects for rural settlements in Malawi are consultative and involve engaging with communities at grassroots level to ensure the views and suggestions of all beneficiaries and stakeholders are considered. In the Ntcheu district, the development of the Kaziputa Irrigation Scheme was guided by the Malawi Growth and Development Strategy which calls for mainstreaming gender in all sectors of development particularly in community-based development projects.

According to Smart Gwedemula, Ntcheu District Commissioner, men and women are represented in various levels of Agriculture Extension Services. While there are more men than women among extension staff at district level, the situation is different at ward level. Gender proportions of 75 percent women and 25 percent men are reflected at irrigation extension level, as shown in Figure 4.4.

Gwedemula explained that consultation with the community is done through a socio-economic profiling approach which gives a snapshot of the challenges as well as the expected opportunities, taking views from all groups of people that constitute the society. This indicates that men, women and youths are able to independently express their views and the responsible authorities are able to use these views to guide the activities and intended outputs of projects. To ensure the effectiveness of this process, community development assessors carry out a pre-survey to identify issues of development needs that exist in the community. The community also sets up a board of representatives to liaise with the district authorities to assist with planning purposes. These are known as Village Development Committees.

Women have access to productive resources such as land and water through a matrilineal or female line.

Figure 4.4 Summary of Gender Representation in the Extension Services



Source Tagutanazvo 2015

Participation of men and women in agriculture sustains development in Ntcheu District.

To encourage gender balance and participation of more women, these committees have a minimum of 40 percent women. These committees hold meetings with district officials to develop village action planning processes which in turn inform the village-level action plans. A key acknowledgement in this process is that the views of both men and women are presented equally and are included in the decision-making processes. However, the marginalization of women in some communities in the Ntcheu district is still prominent and the rural district council is trying to raise awareness on the importance of allowing women as well as men to make contributions to the development of projects.

Access to resources for women and men

Andrew Mzembe, Senior Irrigation Engineer/ Head of Irrigation Services at Ntcheu District Irrigation Office noted that women in the Kaziputa irrigation scheme are empowered owing partly to their culture of the matrilineal society. This system is beneficial to women as access to productive resources such as land and water is acquired through a matrilineal or female line. Irrigation plots are registered mainly in the woman's name. For instance, Linnet Fumulo explained how land is distributed in the scheme,

> "Land is cleared first and then basins are constructed. The irrigation management team under the guidance of the village head, counts the number of basins and divides by the number of the irrigation members. Land cannot be sold from the scheme but can be rented out… mostly targeting resource-poor women and elderly men."

The land allocation committee comprises of seven women and three men, while the water allocation committee has a ratio of 5:3 in favour of men.

Operation and maintenance of the water resource and the irrigation scheme

Men and women take joint responsibility in ensuring free flow of water from the main river. The abstraction of water is made in such a way that it does not compromise the aquatic ecosystem of the river.

"We ensure that the fish life remains undisturbed as we still need to benefit from the fish as a source of food," says Grace Phiri, one of the committee members who manages the scheme.

Regarding the irrigation project, women are active custodians of the project and take a leading role in the maintenance of the irrigation equipment. The maintenance of the irrigation scheme is made possible through the groups that the women have formed where monthly subscriptions are made. This enables the women to purchase inputs such as cement and pit sand to patch up the cracks that may appear along the canal. Women participate more than men in de-silting sand which may cause impediments to water flow.

Women work as engineers and project planers at Kaziputa Irrigation Scheme.

"We welcome the participation of women in maintaining the canals and flow of water. Since their involvement in the scheme we have not faced major challenges of silting of canals, and clogging of river channels as the women seem to notice quickly and act faster than we do," says William Banda one of the male beneficiaries of the scheme.

The rural district council assists members of the Kaziputa irrigation scheme on project maintenance skills to ensure efficiency. This has led to improved living standards as the community is making profits from the crops they grow.

The rural district council assists members of the Kaziputa irrigation scheme on project maintenance skills to ensure efficiency. This has led to improved living standards as the community is making profits from the crops they grow.

Margaret Asumani, who is an engineer, is involved in all project planning in the Ntcheu Rural District Council. She takes up the role of scheme assessment starting with planning up to the level of implementation and thereafter monitoring and evaluation. She ensures that the process of crop planting and irrigation is done accordingly and that there is equal resource-sharing among community members. Asumani has used her role as a female engineer to encourage other women to manage the scheme properly. She works long hours teaching women how to maintain the canal to avoid blockage and leaks.

Involvement of women and men in the committees

Women are largely involved in the irrigation and management of the river as they form the majority of members in committees as well as the agricultural community. The agricultural community is a 75-member society in which 28 are men and 47 are women. While the chairperson is a man the vice chairperson, treasurer and secretary are women. Women also dominate leadership in the irrigation clubs in which they assist each other to purchase inputs.

Most women in the scheme are therefore able to provide for their families. The study has established that farming has since improved owing to the integration of modern agricultural practices with traditional systems, and the participation of women in the scheme has ensured the sustainability of the irrigation scheme while ensuring the river is not depleted.

Livelihoods improvement

A focus group discussion with the villagers revealed that livelihoods have changed significantly since 2010 when the irrigation scheme was established and this is largely due to the fact that both women and men are equally involved in planning and implementation.

"With the involvement of women in the irrigation scheme food insecurity has since been a thing of the past. Women have more discipline in managing funds for the maintenance of the project, as well as funds from the proceeds of the farms," says Loyiso Baloyi, Irrigation Farmer.

"Water club leadership has given us status in the community," said one of the women. "This does not influence us to fight for power in the home."

"Women came up with a Water Scheduling Programme which ensures farmers access the water equally, especially in periods of low water levels from the river. At the same time they ensure not to channel all the water into the fields. This balance has been effective owing partly to the fact that women are managing this programme. There are less cases of greedy people who want to use all the available resources for themselves. Women have ensured discipline in this area," he adds. In other cases where there is little water in the river, a decision is made to reduce the farming area.

Women voices being heard

The men who were interviewed expressed their satisfaction with how the women are leading in the management of the irrigation scheme and maintenance of the river system. They concurred that all ideas are taken on board whether the idea is from a woman or man. They are also comfortable with letting their wives manage the distribution of profits from the farms as they have seen good results from effective use of the funds.

In a few cases some men give resistance to the leadership by women. Evelyn Lipanda, a secretary of the Lithethe Club which is comprised of 4 men and 11 women, indicated that she sometimes faces difficulties when leading men. She reported, "At times when I give instructions to men they do not listen, to solve this I use the constitution to make them comply."

Thus women use the law to control men in cases where legitimacy in leadership is not respected. The disciplinary sub-committee has an equal number of men as to women. This implies that both men and women have an equal status in enforcing rules.

Benefits derived from involvement of women and men in the irrigation scheme

The involvement of women in the agricultural sector of the area has empowered and developed the Kaziputa area. Single women can now send their children to school, buy livestock, and clothes for themselves, as they have improved their livelihood.

As Ntcheu District is along the Mozambique border, the communities across the border in Mozambique have embraced similar practices of managing water resources, with women having the opportunity to lead and benefit from the farms.

Communities on both sides of the border, in Malawi and Mozambique embrace similar practices of managing water resources.

Key Message

The Kaziputa Irrigation Scheme was identified as one of the case studies after undertaking an extensive research on gender and TWM in the region and this was later confirmed by Gender Focal Points. The case study demonstrated that gender mainstreaming is not just a "women" issue but is about giving equal opportunities to both men and women, in which all members of society reap benefits. Although women control productive assets such as land in Kaziputa mainly due to the matrilineal system, men are also benefiting from the scheme due to gender-mainstreaming strategies in place. The study has shown that engaging both men and women at grassroots level ensures that views and suggestions of all beneficiaries and stakeholders are considered, thus contributing to the successful implementation of projects. The study also notes that despite successes, women in some communities are still marginalized in other parts of the region hence the need to continuously raise awareness on the importance of gender mainstreaming in transboundary water management.

Case Study 4

Pilot Project on Up-scaling of Integrated Water Resources Management in Transboundary River Basins in Southern Africa – Mariental, Namibia

Mariental is a small market town located in southern Namibia and is the administrative centre of the Hardap region, 275km southeast of Windhoek. It falls within the Orange Fish River Basin (OFRB), which is within the greater Orange-Senqu River Basin, as shown in Figure 4.5.

The Hardap Dam on the Fish River 22 km northwest of Mariental is the largest reservoir in Namibia, Namibia's first large earth-fill dam, with a water surface of about 25 sq km and a capacity of 320 million cubic metres, providing water for irrigation and making it possible to cultivate fruits, vegetables and other plants. Mariental has an estimated population of 12,480, up from 9,840 in 2001 (Government of Namibia 2011). Mariental is the third most densely populated city in the region. According to the population and housing census (2011), the entire Hardap region had a total population of 79,507 of which 38,935 were women and 40,572 were men (ORASECOM 2015).

Agricultural production contributes significantly to the Mariental economy through the Hardap Irrigation Scheme located near the town. In addition to income from the sale of agricultural produce, associated service industries for value addition contribute significantly to the local economy (SADC Water Division, undated). Mariental is connected to the Trans-Namib railway line from Windhoek to Keetmanshoop.

Impact of Gender Mainstreaming on Pilot Project for Management of Transboundary Water Resources

SADC implemented a pilot project for Integrated Water Resources Management (IWRM) between 2012 and 2015 to address water management challenges in Mariental.

Through "Learning by Doing" and "Participatory Community Planning" approaches, the IWRM objectives of the pilot project were to strengthen capacities of local communities to increase water storage capacities to improve climate resilience; empower local communities and water utilities; improve livelihoods in local communities; and promote equitable and reasonable utilization of water resources.

In line with SADC sector priorities for IWRM, the pilot projects increased the participation of marginalized and vulnerable people in the management and use of water resources, including those who are women, children and disabled. The project emphasized effective and efficient use of water resources for social and economic development and poverty reduction,

Figure 4.5 Orange Fish River Sub-basin

Source SADC, ORASECOM, LIMCOM 2015

and recognized the need for a "basin-wide context" within which coordination amongst regional, national and local level institutions is enhanced. It also recognized use of diverse knowledge systems and practices in order to enhance local communities' resilience to climate change and related impacts such as floods and droughts.

Before the pilot project, there were only 24 tap-stands being shared by all the residents in the informal settlements for over 1,068 households. Women, who are primary water providers at household level, spent long hours queuing to collect water because tap-stands were broken. The women also walked long distances, an average of 3 - 5 kilometres, to collect water from the nearest source.

IWRM Pilot projects

Activities that were implemented under the Mariental IWRM pilot project include:

- rainwater harvesting for six Mariental schools involved in the backyard gardening initiative,
- demonstration of small-scale hydroponics at three Mariental Schools,
- demonstration of water saving dual-flush systems, taps and shower heads,
- fitting newly built houses,
- retrofitting of existing houses and public buildings, and
- awareness of water saving and management campaign.

For rainwater harvesting and gardening components, the project directly benefited learners, their teachers and school authorities. The total number of beneficiary learners at the six targeted schools (Sonop Primary School, Mariental High School, Mariental Primary, Danie Joubert Combined School, Empelheim Junior Secondary and D.D. Guibeb Primary School) was 4,653 at the time of the project implementation. These were targeted for the awareness-raising sessions.

The promotion of water saving in Mariental through installation of certain technologies directly benefited 75 households through reduced costs for water supply.

Indirect beneficiaries are the Mariental community, given the benefits derived from back yard garden initiatives and income earned from agricultural products sold. Increased income for women enabled the purchase of food and other provisions for the household.

The installation of the rainwater harvesting system at schools as an additional water source is of benefit to the schools as they have access to water in times of water scarcity. The pilot project demonstrated the feasibility of adopting a multi-faceted Water Demand Management (WDM) initiative in an arid urban environment. It focused on the promotion of water saving measures at public institutions at the household level coupled with income generation, knowledge transfer and awareness raising.

Benefits of gender mainstreaming in the pilot project

Women and men were participated actively in project planning, implementation, and management. The pilot projects in schools initiated the development of Water Sanitation and Hygiene (WASH) Committees. At one of the schools, Sonnop Primary, the committee has

more women (60%) than men and this has been effective as women are using their experiences to recommend ways of conserving and managing water. The WASH committee has been instrumental in generating awareness about water management at the schools, among teachers and children. Hygiene standards have since improved with a reduction in the number of children affected by waterborne diseases.

Backyard gardens established in schools and in homesteads to ensure the productive use of the water resource provided by the Hardap Dam involved both women and men. These have improved the nutrition for people in the city, particularly children as the backyard gardens are used to provide them with meals at school. In homesteads the gardens serve a nutritional purpose as well as providing income when households sell the produce.

Interviews with Mariental primary and high schools where IWRM projects were established, acknowledged the importance of gender mainstreaming in the projects. Abraham Peters, the Agriculture teacher at Empelheim Junior Secondary School reported that there has been a relative increase in agro-based practices in Mariental owing to the introduction of these irrigation and backyard garden initiatives, which have involved women and men in all aspects.

"Involving women who put an extra mile in whatever they do has changed the situation" says Peters.

It was noted, however, that the sustainability of the projects were often compromised by changes in staff without a proper handover/takeover of the responsibilities for the backyard gardens at schools. Continued capacity-building for staff members could have saved the gardens.

Community involvement in the pilot project

In order to involve the Mariental community in the IWRM project, the municipality and relevant authorities placed a call through media to encourage people to register and participate in the activities. From this exercise they drew a database of men, women and youth who were willing to participate. This initiative resulted in benefits such as good nutrition, remuneration and clean sanitary practices, reported Lianas Mazambane Sivhula, the Local Economic Development Officer.

Regarding the recommendations to facilitate the inclusion and visible participation of women, Lianas proposed the prioritization of projects that women could use to generate income.

The Senior Manager of Economic Development at the municipality advised that one of her continuing roles is to ensure the recognition of women in the management of water resources, noting that women spend more time using water resources and hence need to be able to apply their knowledge in managing the water resources.

"We were trained by the Windhoek Municipality and its key stakeholders. Since then, we took it upon ourselves to show fellow city dwellers that gardening in urban areas is workable and prospective," says Mildred Karumendu, a widow from Mariental town.

The Senior Manager reported that both men and women were trained in aquaponic gardens and most gardens which are still operational in Mariental town are managed by women. Those which were managed by men have since disappeared. She commended the Mariental communities for being gender conscious when it comes to the management of water resource in the area as men and women play a role in management.

Gender Mainstreaming in agriculture in the wider Hardap Region

Farming in the Hardap region is both commercial and subsistence. The majority of the farmers are communal, specializing in small-scale livestock rearing and crop cultivation. Chris Van Lil Dapees plays an advisory role to communal, resettlement, commercial and affirmative action farmers, and he explained that women are being empowered in farming

projects to increase their effective participation in agro-based activities. The capacity building is done through conducting lectures on stock breeding and care, plant care and production, as well as conservation of water used to supply their agricultural activities.

Women and men are trained in resource mobilization and self-reliance. "The involvement of women in these and other projects has brought about significant benefits as women are known for their diligent and perfectionist nature which leads to all project targets being met and accomplished. To this end this has seen most projects, mostly at communal level, thriving in the Hardap region," says Van Lil.

"As plantation agriculture is the heart of Hardap Region, which was once male dominated, it is encouraging to note that women are being involved in the management positions, although ownership is still male dominated. We are grateful that men have come to realize that women are good water managers and are willing to involve them in all management activities," Lisa Mahariro, Mariental Primary.

Key Message

Through discussion with partners and gender and water experts, this case study was selected to assess how gender issues were taken into account in the implementation of SADC Pilot Projects on Up-scaling of Integrated Water Resources Management in Transboundary River Basins. The case study showed that involving both women and men in the IWRM Pilot projects has yielded benefits to the community. The few community members who were interviewed provided evidence of projects which were successful mainly as a result of women being involved in the planning and implementation of the project. In some pilot projects, however, the sustainability of the project was compromised as most schools are no longer benefiting from the backyard gardens as they used to when the project was implemented. Continuous capacity building is therefore necessary to the success of the activities.

In line with SADC IWRM sector priorities, the pilot projects increased the participation of marginalized and vulnerable people including women, children and disabled, in the management and use of water resources. The project emphasized effective and efficient use of water resources for social and economic development and poverty alleviation, and recognized the need for a "basin-wide context" within which coordination among regional, national and local level institutions is enhanced. It also recognized use of diverse knowledge systems and practices in order to enhance local communities' resilience to climate change and related impacts such as floods and droughts.

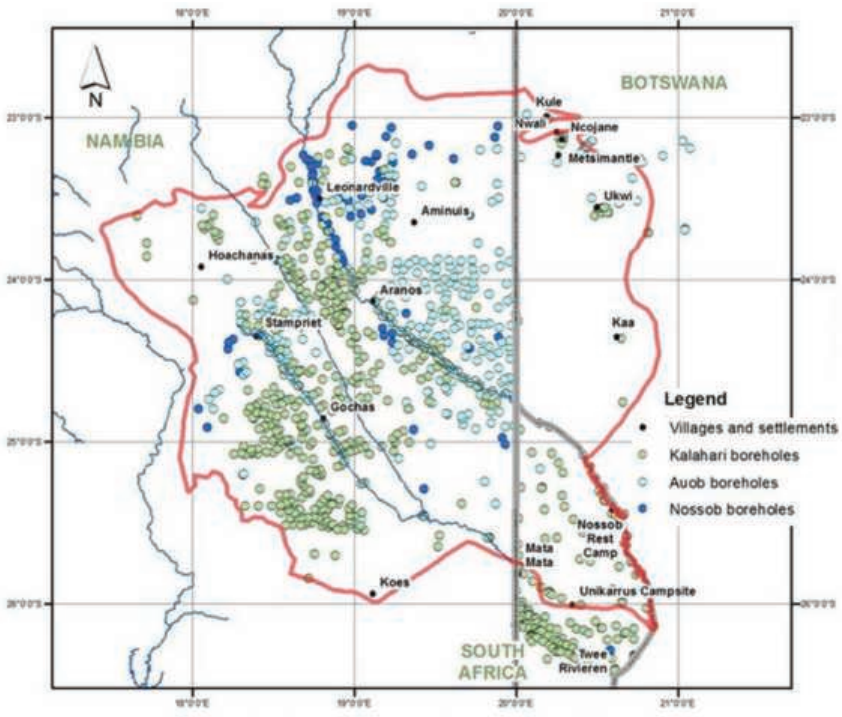
There has been a relative increase in agro-based practices in Mariental as a result of the project activities, owing to the introduction of irrigation and backyard garden initiatives, which have involved both women and men in all aspects.

Case Study 5
Governance of Stampriet Transboundary Aquifer System

Gender mainstreaming is being recognized in transboundary groundwater management, in addition to the management of surface water. Management of the Stampriet Transboundary Aquifer System (STAS) is a good example where gender equality is recognized at the apex of the governance structure.

The STAS is made up of two artesian sandstone aquifers, Auob and Nossob, and the overlying unconfined phreatic Kalahari aquifer units (UNESCO, 2016). It is 86,647 square kilometres, cutting across three regions: Central Namibia into Western Botswana and South Africa's Northern Cape Province (Dipholo and Gumede, 2013). The STAS falls within the Orange River basin (UNESCO, 2016). Figure 4.6 illustrates the STAS area.

Figure 4.6 Geographic Location and General Features of STAS Area



Source UNESCO, 2016

The STAS is largely arid with an annual mean temperature of 19-22^{0}C and mean rainfall ranging from 140 mm/year in the SW to 300 mm/year along the northern and north-eastern border. The ephemeral Auob and Nossob rivers and the surface water pans scattered over the area are the only source of surface water. The only permanent and dependable water resource in the area is groundwater. Groundwater is withdrawn from the Kalahari, Auob and Nossob aquifers, by means of dug wells and boreholes. It is estimated that at least 20 million cubic metres per year is abstracted (UNESCO, 2016).

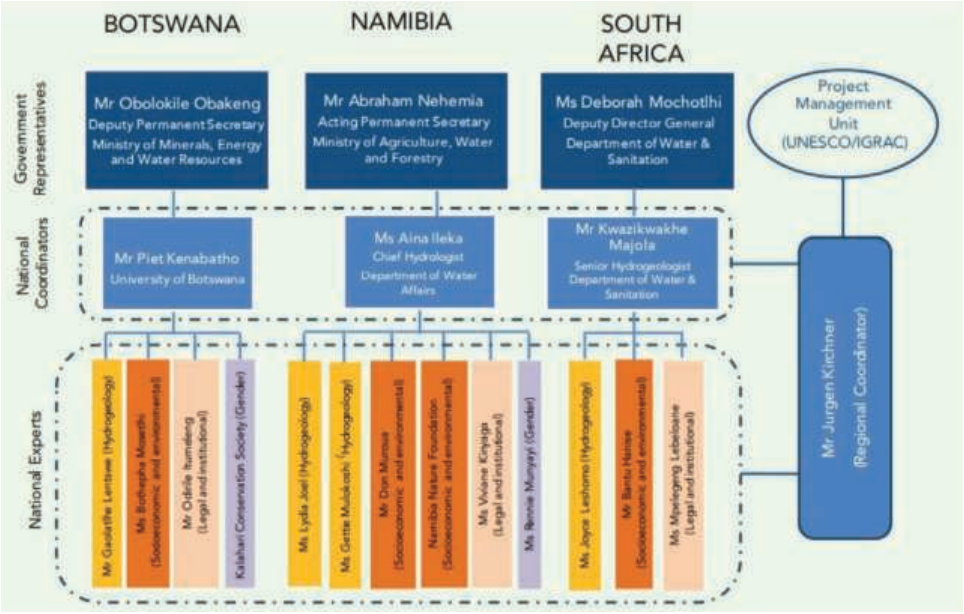
The Namibian sector of the STAS area, covering approximately 73 percent of the land is almost completely in use as agricultural land. The Botswana sector (19%) includes from North to South three distinct Land Use zones: agricultural land (mainly in Ghanzi district), wildlife management area and national park. The South African sector (8%) is used entirely as a national park (UNESCO, 2016). Agriculture is the most important economic sector. There are approximately 1,200 farms in the area (mostly in Namibia), among which a relatively small number (80) of commercial farms has a mixed system of livestock (mainly sheep, but also cattle and other animals) and irrigated crop production (UNESCO, 2016). Fodder (lucerne) is the dominant crop, although some farmers have started switching to horticulture (e.g. melons, tomatoes, grapes, beans).

Ownership of farm lands is predominately private, while some land referred to as communal land is under traditional authority, or is owned by the State (UNESCO, 2015). In Botswana there is a combination of land uses: pastoral, arable and residential. The Kgalagadi Transfrontier Park is solely used for nature preservation and for non-consumptive uses such as recreation (UNESCO, 2016).

Gender Mainstreaming in the Stampriet Transboundary Aquifer

The countries that share the aquifer – Botswana, Namibia, and South Africa – have agreed to establish a joint technical team to manage the Stampriet aquifer under the auspices of the Orange-Senqu River Commission. The establishment of the technical team provided the riparian countries with a formal structure in which Aquifer States would interact over the issues relating to the long-term use and management of the water resources.

Figure 4.7 STAS Multi-Country Cooperation Technical Team



Source UNESCO, 2016

The technical team provides science-based, gender and aquifer-specific data used to substantiate gender mainstreaming of national water policies and implement gender-transformative national and regional actions (UNESCO, 2018). The technical team consists of multi-disciplinary national teams, each with its own national co-ordinator, supervised by a regional project co-ordinator, as shown in Figure 4.7.

Figure 4.8 shows that the ministerial level, which is the highest level of decision-making, involves women as well as men. At the level of national co-ordinators, out of three, one is a woman. At the national experts unit there are seven women and four men. The case of STAS illustrates gender mainstreaming at all levels of decision-making and operational processes, although more women are observable at the lower level of national experts.

The establishment of the STAS gender mainstreamed technical team created a means by which the voices of women are brought into the transboundary water governance system for the aquifer. This suggests that in the STAS both men and women have an opportunity to shape and influence decision-making processes (Sekwele 2017).

"It is very encouraging to note that unlike in the past where women were confined to the household collection of water, now they are being involved in the top management positions in transboundary issues. The woman director in Namibia is part of the STAS committee," says Getty Mulokoshi, a Water Manager in Namibia who is involved in the STAS management.

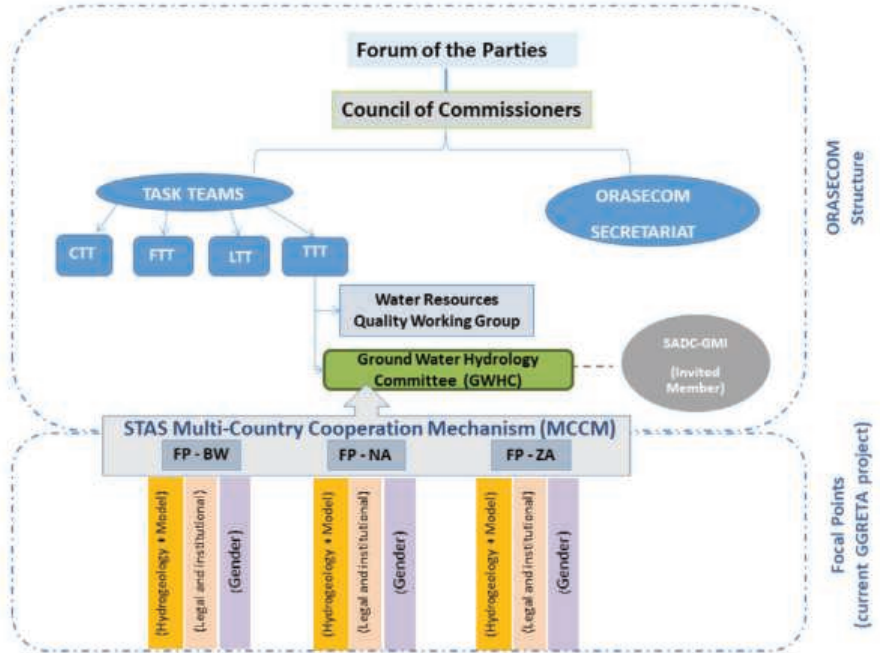
The second phase of the Groundwater Resources Governance in Transboundary Aquifers (GGRETA) project which involves numerical modelling to quantify the water in the aquifer has structures that ensure gender is mainstreamed. Both men and women are and will be trained in modelling.

Discussions are advanced for the STAS to establish a Multi Country Cooperation Mechanism (MCCM) which will be nested under ORASECOM. Some work has already been undertaken, using existing data from the three riparian countries to produce a groundwater conceptual model for the aquifer, as part of the UNESCO's GGRETA project, which started in 2013 and is planned to continue until 2019 (ORASECOM 2018).

Local management of the STAS

For operations at the local level the Settlement Development Committees are guided by the National Development Plan which has explicit gender goals and commitments. The

Figure 4.8 STAS Multi-Country Cooperation Technical Structure



Source *wis.orasecom.org*

Committees are expected to have gender outcomes and gender-sensitive accountability indicators included in monitoring and evaluation frameworks. At the time of the study it was reported that there is a deliberate effort to include women, men, youth and people living with disabilities in planning and decision-making for capital projects.

The capital project identification form has clear gender considerations and indicators. For example, the Stampriet Water and Sewerage reticulation project which started in 2013/2014 financial year reports every year to the National Planning Commission on the number of men, women, youth and people living with disability that would have benefited in terms of employment.

Table 4.1 Women and Men Representation in Local Councils of the STAS Area in Namibia

Settlements	Female Councillors	Male Councillors
Aranos	3	4
Gochas	4	1
Stampriet	3	2

Source UNESCO 2016

Town and village level consultations on WASH services are done by elected councillors. The three local authorities in the study area have more women represented in council (59%) compared to men (41%) as shown in Table 4.1.

Contributions from both women and men in the planning of the projects have promoted good sanitary practices and water management habits within the households that use the groundwater.

Thus it can be implied that women in the three local authorities have a fair opportunity to participate in decision-making processes and have roles in the planning and provision of water and sanitation services for the three local authorities.

Traditionally, women have no direct access to property such as land or cattle in Namibia and Botswana. However, there is evidence that political reforms and legislation have increased women's access to land and livestock in many Namibian communities as women account for 25-30 percent of farmers who acquired farmlands financed under the Affirmative Action Loan Scheme and 37 percent of beneficiaries of livestock purchase loans (UNESCO 2016).

Interviews with the Stampriet Village Council Technician, Brandon Haiputa provided interesting results in terms of wrong perceptions about women. In a recent project, Haiputa highlighted that the contractors came with an infrastructure proposal that required at least

40 percent women. This was a departure from the norm as most projects of such nature would be implemented by male staff alone on the basis of a stereotype that women are not committed to work of such nature. The society has since proved that wrong as the project results showed that women involvement strengthened the results in terms of standards and meeting all the needs related to water access.

A needs assessment was carried out prior to the project. Women contributed to the process and requested clean water piping to be provided first, before changing the sanitation system. This was accepted as a good contribution and the project was executed as requested.

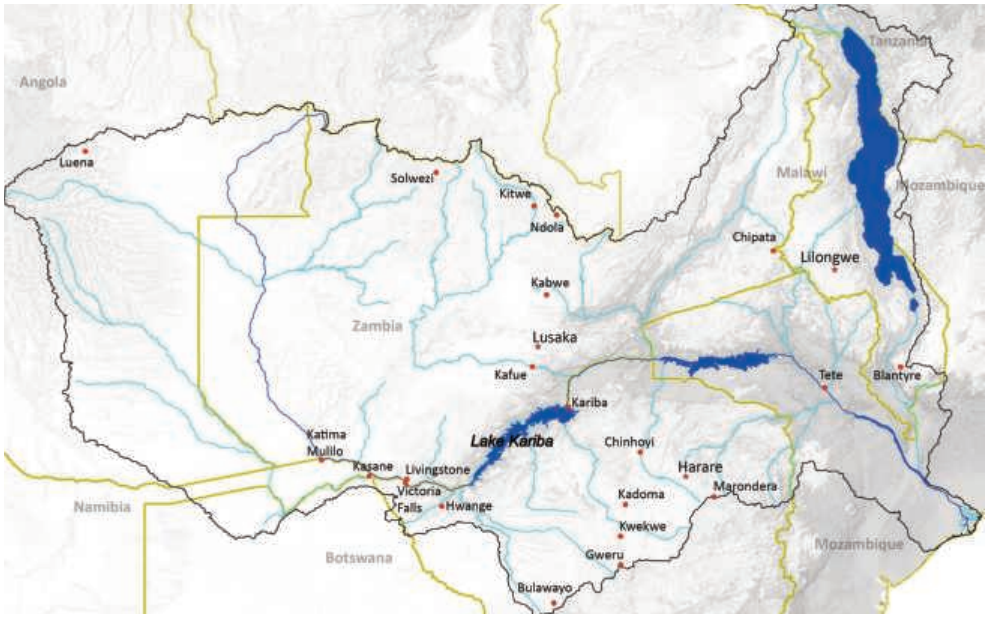
Key Message

The case study on the Governance of Stampriet Transboundary Aquifer System reveals that gender mainstreaming is being recognized not only in surface water, but also in the management of transboundary water aquifers. Through gender mainstreaming, women have demonstrated the ability to make strategic decisions in transboundary water management through involvement at the highest level of decision-making structures such as the STAS multi-country cooperation technical team. The governance of the Stampriet Transboundary Aquifer System is one of the success stories which other countries can replicate through establishing similar structures.

Case Study 6
Fish Farming in Lake Kariba

Lake Kariba is an artificial lake situated in southern Africa and is shared between Zambia and Zimbabwe. The Lake has over the years provided fish resources, which have generated income, food security and nutrition for the local shoreline communities on both countries (Mupindu 2012). The lake also supports the largest tilapia fish farming area in Africa, a commercial fishery that contributes significantly to the economies of Zambia and Zimbabwe (Ndhlovu and others 2017). Figure 4.9 shows the location of Lake Kariba.

Figure 4.9 Location of Lake Kariba



Source SARDC IMERCSA 2015, IN Zambezi Environment Outlook, ZAMCOM, SADC, SARDC, 2015

The role of men and women in hook-and-line fishing

Hook-and-line fishing is practiced on both sides of the lake, and both women and men are involved, according to a study by Mupindu (2012). The study reveals that there are more women involved in hook- and-line fishing compared to other fishing activities such as kapenta rigs and gillnetting. One of the reasons given is that entry requirements for this activity are not restrictive to people who do not have large amounts of money.

On the Zimbabwean side of the lake, a daily permit costs US$5 and this gives the fishers legal authorization to fish. The study further shows that women use hook-and-line whereas most men use mechanized and rather sophisticated hook-and-line which is more expensive (Mupindu 2012). The situation is similar on the Zambian side of the lake where a large number of women are involved in fishing using hook and line.

On the Zambian side, women are not required to have permits for hook-and-line fishing and they prefer this type of fishing because in this way, they avoid the risks associated with going on the lake. In both Zambia and Zimbabwe, women fishers are able to meet household needs from the fishing business.

Cage fish farming

The need to observe cultural beliefs has for generations limited the full participation of women in the fishing business. Mupindu (2012) notes that in the Gache Gache fishing village in Zimbabwe, women were not allowed to get into the lake to fish or to get near to the lakeshore. The traditional leadership believed that if women who got into the lake are menstruating, they would bring a bad omen to the lake and pollute the waters, thus reducing productivity. However, due to increasing efforts by stakeholders to mainstream gender in the fisheries industry, a change of mind-set has taken place as women are now actively participating in cage fish farming in Lake Kariba.

Box 4.1 Gender mainstreaming in fisheries changing the lives of women in Lake Kariba

A thriving and sustainable project for cage fish farming is providing women with a rare opportunity to benefit from fishing activities on Lake Kariba.

Lack of funding and cultural beliefs have hindered women from engaging in viable fish farming, but thanks to the Integrated and Sustainable Fisheries and Aquaculture Production Project, this is now a thing of the past.

The project supported by the European Union is targeting fishing villages in Zimbabwe along the shores of Lake Kariba in Mashonaland West province and has also been introduced in other provinces around the country.

One of the women who was in the first group to benefit is Shungu Vareta of Gache Gache fishing community, located about 100km south of Kariba.

"In the past women were not allowed to harvest fish in the lake because they were considered to be unclean. But because of this project, we are now allowed to place our cages in the lake. We also sew our own fishing nets," said Vareta.

Before the introduction of the project, most women in the area were restricted to the business of selling fish at bus stops and surrounding areas. In June 2015, the group harvested about 7.4 tonnes of fish. The catch was sold to one of the biggest fish companies in Kariba at a price of US$14,000.

The fishing community has been organised into a cooperative and has been assisted to build fish-breeding cages that have been placed in the lake. The members of the cooperative have also installed a solar-powered cold room to store the harvested fish. Most of the co-operative members described the new project as a crossover to the promised land.

"This project has opened our eyes. All along we have been living in poverty yet we have got this wonderful resource on our doorstep. Even if our partners pull out tomorrow, I am confident that we will be able to sustain this venture, and it will enable us to improve our livelihoods as well as send our children not only to school, but to better schools as well," said Mavis Mudenda.

Source:https://www.zimbabwesituation.com/news/zimsit_w_eu-launches-lucrative-fishing-business-for-women/Accessed 11January 2019

Table 4.2 Sample Cooperatives and Membership Composition

Name of Cooperative	Number of Female Members	Number of Male Members
Musambakaruma	1	9
Tichakunda (Machembere)	6	4
Nyanyana	2	9
Mvura Zhinji	1	9

Source Mupindu 2012

Table 4.3 Gender Division of Roles in Fishing Cooperatives on Lake Kariba in Zambia

Roles of Women in Cooperatives	Roles of Men in Cooperatives
Record-keeping	Go out to the lake
Management, especially finance management	Post-harvest drying
Post-harvest drying, attention to detail	Repairs of boats
Monitoring fishing fleet, get reports of breakdown, buying bulbs	
Preparing fishing trips by making sure there is diesel, salt, food for the crew, and that crew is adequate	
Marketing	

Source Mupindu 2012

Projects are being implemented on both sides of the lake with the objective of involving men and women in the fishing sector. In Zambia, there is a planned project involving two groups of 11 women who have had training in fish cage culture. Mupindu (2012) notes that these women will employ men to paddle to and from the cages for ferrying the fish feed. On the Zimbabwe side, a group of 100 beneficiaries from five villages will be involved in the project and 20 of them are women. The project to be implemented in Zimbabwe is expected to involve women in fish processing, packaging and cutting of fillets.

Fishing cooperatives

Mupindu (2012) notes that on the Zimbabwean side, there are some cooperatives which were established with the help of the government as far back as 1980 and these were supported to get fishing gear and permits. Table 4.2 below shows a sample of cooperatives that exist and the composition of membership by sex.

The co-operative members are still biased towards men with the exception of Tichakunda Cooperative which has six women and four men. The gender division of roles remains similar in cooperatives as is the case in privately owned enterprises. Even in cooperatives dominated by women, the gender division of tasks is still the same (Mupindu 2012).

Table 4.3 shows the various gender roles in the cooperatives.

Participation of women in fish marketing

The number of women who are involved in fish marketing on both sides of the lake is more than men. This is due to the fact that fish marketing does not require a lot of capital in order to start buying and selling (Mupindu 2012).

The frame survey carried out on the Zambian side of the lake revealed that women fish-buyers constitute 54.2 percent of the fish buyers while the male buyers represent 45.8 percent. On the Zimbabwe side, the frame survey noted that 52 percent of the fish traders are women (Mupindu 2012).

A study on gender participation in the small-scale tilapia fishery and marketing value chain on Lake Kariba in Zambia shows that fresh fish aggregation is dominated by women although men have a significant share (Syampaku and Mafimisebi 2013). Aggregators buy fresh fish in large quantities from different traders, accumulate it and store it in refrigerated facilities. From the study, women comprised 59 percent of players in this activity, compared to 41 percent of their male counterparts.

The dominance of women in fresh fish aggregation was attributed to support by working spouses for acquiring own shop or renting one from shop owners. Some 18 percent of women aggregators owned refrigeration facilities whereas 82 percent depended on renting.

Table 4.4 Gender Participation in the Smallscale Tilapia Fishery and Marketing Value Chain on Lake Kariba in Zambia

Value Chain Code	% of Men or Women in Activities per Village, Camp or Market		Number of Villages, Camps or Markets	Dominant Gender
	Men	Women		
Fish hunting and capture (deep water)	94	6	30	Men
Fish hunting and capture (shallow water)	32	68	30	Women
Intermediary fish trading	90	10	10	Men
Processing and assembling (smoking)	43	57	30	Women
Assembling and aggregation (fresh fish)	41	59	10	Women
Retailing (smoked fish)	13	87	10	Women
Retailing (fresh fish)	61	39	10	Women

Source Syampaku and Mafimisebi 2013

Table 4.4 shows the gender participation in the small-scale tilapia fishery and marketing value chain on Lake Kariba in Zambia.

Men dominated about 94 percent of deep-water fishing while women accounted for only six percent, as indicated in Table 4.4. However, women constituted 68 percent of participants in shallow-water fishing and men accounted for 32 percent (Syampaku and Mafimisebi 2013). The proportion of men participating in deep-water fishing remains high as women still regard it as life-threatening activity, a risk which most women fishers are not willing to take.

In terms of fish retailing, women dominated in smoked fish comprising 87 percent , while men constituted only 13 percent. High participation of women in this area was attributed to lower losses, owing to the lower degree of perishability experienced in the retailing of smoked fish compared with selling fresh fish. Generally, the efforts that are being put in place to involve women in the fishing business continue to bring rewards as women fishers now have a sustainable source of income.

Although fish marketing presents an opportunity for women to earn income and improve livelihoods, there are challenges that women still encounter in fish marketing. In Siavonga, Zambia, fishers who bring in fish have specific customers and they bring fish to specific women, which makes other women vulnerable to sexual abuse (Mupindu 2012). In addition, the study says that fishers usually come to the harbour during the evening, and that male and female customers have to be at the harbour when they arrive. Sleeping overnight at the harbour has implications for women who have babies and young children, as this subjects them to harbour conditions such as vulnerability to malaria and cold weather.

Another area in which men and women participate is the drying of kapenta fish. Some fishers prefer to have men as dryers especially because when the boats go to islands, the men can do all the post-harvest processes involved in fishery on the island. The time that can be spent on the islands varies and can be up to 23 days per month. In one Zambian fishery, there are 70 male employees involved in kapenta fishing and its post-harvest activities are done on an island for 23 days before the full moon. The long periods of staying away from their families makes both the men and their spouses vulnerable. On the Zimbabwe side, most fish drying is done by women. Women are involved in salting the fish and cleaning up the drying premises (Mupindu 2012).

Table 4.5 Representation by Women in Associations

Position	Zambia KFA	Zimbabwe KFA	Zimbabwe IKPA	Zimbabwe Cooperative Union	Gache Gache Fishers Association	Zambia Kamimbi Village VMC
Chairperson	Male	Male	Male	Male	Male	Male
Vice Chairperson	Male	Male	Male	Female	Male	
Secretary	Female	Male	Male	Male	Male	
Vice Secretary	Male	No vice secretary	No vice secretary	Production Secretary Female	Male	
Treasurer	Vacant	Female	Male	Female	Male	

Source Mupindu 2012

Representation of women in fisheries governance

There are associations which represent the interests of fishers on both sides of the lake. In Zambia, there is a Kapenta Fishers Association (KFA) while in Zimbabwe there is a Kapenta Producers Association (KPA) and the Indigenous Kapenta Producers Association (IKPA). These represent the interest of members especially for issues related to policy.

Table 4.5 shows the representation of men and women in the different associations and village committees in Zambia and Zimbabwe.

As illustrated in Table 4.5, women seem to be marginally represented in the Associations while men hold most of the key decision-making positions. This situation thus calls for more participation of women in key decision-making processes in the fishing sector.

Key Message

This case study on fish farming in Lake Kariba was chosen to investigate how gender mainstreaming has assisted men and women to actively participate in the fisheries sector in the region. From the extensive research undertaken, it is evident that women are now actively participating in the fishing industry, something which they could not do in the past due to cultural barriers. Women in Gache Gache indicated that in the past they were restricted to the fish-selling but things have since changed as a result of increasing efforts to mainstream gender in the fishing industry. In both Zambia and Zimbabwe, women are now participating in fish marketing and they are part of the existing fishing associations in the two riparian countries. One of the key lessons from this study is that gender mainstreaming in transboundary water management can be a tool to address gender inequalities which women still face as a result of cultural norms and practices.

Findings, Lessons Learnt, Challenges And Opportunities

CHAPTER 5

5.0 Key Findings on Mainstreaming Gender in TWM in SADC

The SADC region has made significant progress in advancing gender equality in Transboundary Water Management, and notable benefits are beginning to emerge. The research results confirm that effective, efficient and equitable water resources management can be achieved if women are involved in the decision-making with men.

The study also confirms that restricting the involvement of women in the management of water resources has substantial negative consequences for GDP by reducing productivity. Given a similar distribution of abilities between women and men, any constraints on the involvement of women distort the economy by artificially reducing the pool of talent. This reduces the average productivity by limiting the availability of human capital. The economy cannot grow and prosper when half of the population are excluded, therefore gender parity is not only a fundamental human right but also a critical economic opportunity.

There is a strong negative relationship between gender-based discrimination in social institutions and income per capita. Gender-based discrimination in social institutions costs southern Africa about US$340 billion, according to an OECD study, and costs the global economy as much as US$12 trillion. Reducing gender discrimination in social institutions could lead to an annual average increase in the GDP growth rate. The global GDP per capita is predicted to reach US$8,378 by the year 2030, but could rise to US$9,142 if this gender-based discrimination is removed, an impressive gain of US$764 per capita. Still at global level, an MGI study on "the power of parity" establishes that achieving equality of economic opportunities for women and men could add US$28 trillion in world GDP growth by 2025.

A UNDP finding underscores these important economic losses and missed opportunities, confirming that gender inequality in the labour market cost Sub-Saharan Africa about US$95 billion annually between 2010 and 2014, peaking at US$105 billion. It can be inferred that the missing full growth potential from water resources development and management in SADC results largely from not using this sizeable portion of its growth reserve who are women.

Research findings note that benefits of gender mainstreaming in Transboundary Water Management are felt mainly at micro level rather than macro level such as the construction of dams and hydropower schemes. Such engineering approaches are still male-dominated, with emphasis on construction, command and control. The local communities that rely directly on the resources are left out – the water users, the women and the marginalized groups. While the benefits of gender mainstreaming are visible at community level where pilot projects are in place, there are still very few benefits of gender mainstreaming that can be seen at transboundary level.

A summary of the key findings of the research are listed below:

Findings on Implementation of Policies and Strategies at Regional Level

- Strategies have been put in place at regional and basin level to promote gender mainstreaming, and SADC has developed a gender strategy and action plan in water resources management which will be implemented soon. The SADC Gender Mainstreaming Action Plan for Transboundary Water Management (2018-2020) was approved by SADC Ministers in 2018.
- The majority of SADC water institutions, including River Basin Organizations (RBOs), have developed or are developing gender mainstreaming strategies and action plans to guide the implementation of programmes and projects.

- Each SADC Member State has a Gender Focal Point, as person who provides a strategic entry point for institutionalising of gender mainstreaming at national level. GFPs provide a link to RBOs and to SADC by participating at Regional multi-stakeholder dialogues and Basin planning processes.

Findings on Evidence of Gender Mainstreaming in IWRM and TWM

- In peri-urban areas such as Kalikiliki and Chipata in Lusaka, there is a significant improvement in the management of water as a result of inclusion of women in the management of water points.
- The inclusion of gender considerations in the project design of IWRM pilot projects recognized the importance of diversity, thus increasing project impact by extending services to the difficult-to-reach sections of the population that include the physically challenged and elderly, the chronically ill, children and women.
- Inclusion of men and women in the training of IWRM pilot projects such as in Mariental, Namibia proved beneficial, as livelihoods improved. Men and women were trained in aquaponic gardens and most gardens which are still operational in Mariental town are being managed by women.
- In Malawi, gender mainstreaming in transboundary water management is evidenced by the involvement of men and women in development projects, for example in active participation of women in the management of the Kaziputa Irrigation Scheme in Ntcheu district in the Zambezi River Basin. The matrilineal society that exists in the district brings benefits to women as access/control of productive resources such as land and water is acquired through matrilineal or female lines. Having both women and men taking part in the decision-making processes of the irrigation scheme has improved livelihoods. For example, women without spouses stated that they are now able to send their children to school, buy livestock and meet other needs using the income they get from farming in the scheme. Women in Kaziputa have demonstrated that they are equally as good as men when it comes to decision-making.
- Apart from agriculture, the involvement of men and women in other sectors such as fisheries has brought significant benefits to communities in southern Africa. A socio-economic survey undertaken in the Okavango Delta, Botswana shows that basket fishing is an important component of diversified livelihood strategy for fishing communities in Ngamiland and women actively participate in fishing activities. In Zambia, recent studies show that fish processing has now been introduced to women, an area which in the past was dominated by men, and this has contributed to increased incomes for households.
- In South Africa, women are regarded as water ambassadors or change management agents. A programme known as "Adopt a River" was developed where women were given an opportunity to identify polluted rivers in their surrounding environment, clean them and raise awareness against pollution of water by communities.
- Feedback from representatives in Mozambique indicates that although women had challenges in accessing resources in the past, the situation has changed in recent times as a result of inclusion and integration of women in development programmes and projects through local associations and water resource management committees. As a result of gender mainstreaming, cases of success stories in the management, sustainability and transparency in the use of funds have been achieved due to the added value of women in development.
- The community involvement in the management of the Chipendeke Micro Hydro and Irrigation Scheme in the Save Catchment in Zimbabwe is one success story that demonstrates the benefits of gender mainstreaming in transboundary water management. The introduction of this project brought an improvement in livelihoods as the community now has access to electricity and can grow crops all year round, thus boosting food security. In addition, this case study clearly shows the benefits of adopting the Water, Food and Energy Nexus approach in balancing competing needs in those sectors. Using this method, when water is low in the river, the community directs water to the irrigation scheme during the day and then channels water to the electricity generation plant in the evening to provide lighting in the homes.

- An inclusive feasibility study for the management of transboundary water infrastructure provides an informed report that guides a gender-responsive initiative. The Chirundu socio-economic study is expected to guide the implementation of a joint cross-border water supply and sanitation project. If women had not been part of the survey their concerns would not have been raised. Previous studies such as the Kunene transboundary water supply project put more emphasis on the technical aspects with little consideration of the socio-economic aspects. As a result the views and needs of women were not captured in the latter study.

  Chirundu has experienced high population growth which is not matched by the delivery of water and sanitation services. Access to reliable and safe water supply and sanitation facilities is a major challenge that requires urgent action. The expansion and rehabilitation of the water supply infrastructure should allow more households to be connected, thus reducing the burden of fetching water for women, providing a safe water supply resulting in improved hygiene and a reduction in waterborne diseases. The direct socio-economic benefits include better livelihoods through health improvements, increased productivity, and the indirect effects include a positive impact on tourism due to healthier and more resilient communities and facilities. A large portion of the Chirundu population comprises people in transit, and availability of sanitary facilities is particularly important for travelling women and girls who have special needs.
- Gender mainstreaming is being recognized not only in surface water but also in transboundary groundwater management. The management of the Stampriet Transboundary Aquifer System is one good example where gender equality is recognized at the apex of the governance structure. The voices of women are heard in decision-making of the transboundary aquifer. The establishment of the STAS gender-mainstreamed technical team created a means by which the voices of women are brought into the transboundary water governance system for the aquifer. At the Water Users Association level, contributions from both women and men in the planning of the project have promoted good sanitary practices and water management habits within the households that use the groundwater.
- Through further engagements with gender experts and partners, it has been observed that a number of other projects, though not specifically in the water sector, can provide lessons on how benefits can be derived in future transboundary water management projects. For example, the Amalima programme builds on the existing communal initiatives in order to sustainably improve household food security and nutrition, while the Feed the Future Livestock Development Programme looks at how women are participating in livestock production, an area that was previously dominated by men.

5.1 Challenges and Improvements in Mainstreaming Gender in TWM

Gender mainstreaming requires changes at all levels within water management institutions – in agenda setting, policy making, planning, implementation and evaluation. Inclusion of women should not be viewed as a challenge but as an improvement for efficiency and quality production. However, despite progress in mainstreaming gender in transboundary water management in the region, challenges continue to be faced.

- Gender mainstreaming has been perceived as a women's issue, and this perception has been the main impediment to acceptance. This is slowly changing so that the gender discourse is being understood as social inclusion involving both men and women, with benefits to all, but requires more interaction and knowledge-sharing to improve understanding of the benefits.
- Gender issues may be addressed by chance or by coincidence, and staff members are not explicitly mandated or briefed to consider social inclusion. The conversion of gender concepts and conceptual frameworks into action has not been addressed in a sustainable manner. A major factor is inadequate capacity to internalize and integrate gender mainstreaming.
- Few projects have undertaken a situation analysis using gender disaggregated data to assess their needs/problems, constraints, interventions and hindrances to benefiting from interventions,

including proposed remedies and costs. There is a lack of clear gender indicators and targets that can provide evidence of mainstreaming gender and the benefits, and little systematic collection of gender disaggregated data.

- Gender Focal Points may not be selected on the basis of knowledge and experience in gender issues, but simply because one is a woman and is expected to stand for "women" issues. The gender component for most GFPs is considered an extra duty which is not part of their assessment of performance. As a result, there may be little understanding of social inclusion and little effort to ensure gender mainstreaming.
- There are fewer women involved in decision-making at all levels of water management. In terms of expertise, there are also fewer women than men in all levels of water management from the senior levels right down to the grassroots level. In the SADC region, most women are at the management level but very few make it to the decision-making levels.
- In terms of education and experience, a higher percentage of men have acquired water management education as compared to women, who have fewer opportunities to pursue this. As fewer women have acquired the necessary training and qualifications required in the water management field, they are incorporated into decision-making at lower management levels, especially at community level.
- Cultural factors can be a major challenge in efforts to mainstream gender in transboundary water management. Different cultures have specific standards and expectations of women, which can contribute to the marginalisation of women particularly in management structures.
- Although the SADC Gender Policy is now in place and gender mainstreaming is a requirement in the development of programmes and projects, the review showed that many projects are yet to incorporate gender aspects in project design and implementation. This gap has to do with the capacity, or lack of capacity, to adequately integrate gender in all aspects of the programme cycle management. It has been a challenge to incorporate gender as an add-on to already structured programmes and projects.

5.2 Opportunities

The study has established that gender mainstreaming in transboundary water management presents opportunities for promoting social inclusion and sustainable development in southern Africa.

- Gender mainstreaming in transboundary water management can advance social inclusion and sustainability of initiatives through the participation of men and women. This study has observed that where men and women are involved in the management of projects, such initiatives are more likely to be incorporated into the society as this promotes inclusive ownership.
- Gender mainstreaming in transboundary water management is an empowering tool for marginalized communities, and notably, men in the communities could see and articulate the benefits of working with women in the management of projects, and supported this approach.
- Mainstreaming gender in transboundary water management provides an opportunity for implementing the water-energy-food and ecosystem nexus projects in southern Africa. For example, communities in the Chipendeke Micro Hydro and Irrigation Scheme have managed to balance competing uses of water for agriculture and electricity generation as well as ensuring ecosystem health downstream. This can be shared elsewhere in the region as an effective practice.
- Gender mainstreaming presents an opportunity to strengthen cooperation and regional integration in southern Africa. Interviews in Malawi revealed that the successful implementation of developmental projects in the Kaziputa Irrigation Scheme has increased co-operation among communities residing in Ntcheu District and those across the border in Mozambique, thus strengthening cooperation in that area.

Conclusions and Recommendations

CHAPTER 6

6.0 Conclusion

This publication has investigated evidence of the benefits of gender mainstreaming in transboundary water management. Research has revealed that the benefits of gender mainstreaming in TWM in southern Africa, particularly at macro level, are yet to be realized. This is a result of more focus on infrastructure development compared to institutional development, as well as focus on technical analysis exclusive of socio-economic analysis. Thus, there is a difference between water management at community level where more progress has been made in developing gendered approaches, and water management at the interstate level, where gender concerns are found to be absent.

Several transboundary basins have well-advanced infrastructure development plans including water storage, water transfer, hydropower generation and navigation. The building of this infrastructure is a vital part of stimulating socio-economic growth in the SADC region, making it more important to include gender dimensions in the management of transboundary basins.

In most cases, the best that could be observed in terms of gender mainstreaming is the involvement of women in the planning and design of projects, and such inclusion resulted in more transparent and inclusive management of resources, as well as sustainability of initiatives. Implementation of many strategies and action plans is yet to take place, such as the RBOs gender strategies and action plans that were concluded in 2018 and some still do not have approved action plans.

The introduction of gender mainstreaming in projects has influenced social inclusion, and the working together of men and women as well as young people in initiating and implementing development projects pertaining to agriculture. For example, through inclusion of women, the Chipendeke community has witnessed a shift from traditional norms in which women were given little or no charge over some farming activities or land rights to proper apportionment and sharing of land. This promotes long term development as land is utilized to maximize on production.

The inclusion of men and women as an integral component of the development agenda in southern Africa has the potential to improve livelihoods and opportunities in a sustainable manner, and has also resulted in a significant shift in some communities which are no longer just the recipients of development but are now active participants in the development discourse. Gender mainstreaming provides benefits which can be classified as practical (ensuring daily survival), productive (income generation), and strategic, that is changing perceptions in the society to gain greater equality between men and women, towards empowerment.

Although a lot still needs to be done, the key role of women as managers of water and guardians of the living environment is slowly being recognized again. Women are now occupying key positions in water resources management institutions at local, national and regional level including in the management of river basin organizations.

6.1 Recommendations

This section contains recommendations which Member States and institutions can implement to advance gender mainstreaming, social inclusion and transboundary water management in the SADC region. The recommendations are categorized under Member States, GFPs, RBOs and those applicable to the SADC Secretariat.

Member States

- Gender mainstreaming should be integrated into all levels of government policy and programmes.
- Gender equality policies should be mandatory in organizations dealing with governments, and gender mainstreaming should be among the requirements for project approval and funding.
- More focus should be put on Gender Disaggregated Data for all national surveys related to gender and water.
- There is need to tap into the extensive knowledge of Gender experts in the region to provide advisory services and benchmarking in projects, including sharing the knowledge of community experts in this regard.
- Many lessons can be derived from the successes of gender mainstreaming in water supply, i.e. Water, Sanitation and Hygiene (WASH) programmes. There is a tendency to see WASH and WRM as incompatible, and in so doing there are missed opportunities in learning from the successes made in WASH.
- It is imperative to carry out a detailed gender analysis during mobilisation of resources to identify varied needs of specific groups of people and design projects accordingly. This includes making adaptations and modifications to infrastructure designs to meet specific socio-economic needs, including social inclusion. Ignoring such measures will result in exclusion of some groups from the mainstream development. One of the fundamental measures is to include a gender specialist in project design to advise on Gender Responsive Budgeting.
- With regard to the provision of water supply and sanitation infrastructure, it is important that future projects do take into account the preferences and perspectives of men and women during the planning and design stages.
- Continuous capacity-building at all levels remains critical to ensure sustainability of projects. A clear post-construction strategy should be in place.

Gender Focal Points

- Selection of GFPs should be based on set criteria including knowledge and experience of gender mainstreaming and related issues of social inclusion.
- Specific skills of GFPs should continue to be built to improve their ability to support and guide the implementation of inclusive gender strategies, while enhancing accountability.
- Performance assessments of GFPs in government ministries should include an assessment of whether the gender targets are met and results achieved.
- A series of capacity development training initiatives can be planned for GFPs and Directors of Water in Member States, particularly those coming from different disciplines.
- GFPs should play a catalytic role in facilitating gender mainstreaming across RBOs organs, programmes and processes.

River Basin Organisations

- There is need to institutionalize and establish formal collaborative mechanisms between RBOs, the Gender Machineries and GFPs in the Basin States to provide technical support on gender mainstreaming.
- Men and women should be motivated to participate in the activities facilitated and organized by the RBOs from technical meetings, to capacity building and networking opportunities.
- Information products that summarize gender strategies and action plans of the RBOs should be developed and disseminated for use by all stakeholders. Wider circulation and guidance of these strategies and action plans will provide a harmonized roadmap for gender mainstreaming in the RBOs and their respective development partners, leading to greater social inclusion.
- There is need to develop and build gender-responsive information management systems with gender-disaggregated data, in partnership with regional and national statistics agencies.
- Gender skills development plans should be defined to ensure sufficient and skilled human resource capacity within the RBOs to support gender responsive actions at all levels.
- Through the GFPs, there is need to identify and collaboratively address local and national level barriers impeding the full participation of men and women participation in the Basin Resources.
- There is need to develop a monitoring and evaluation framework which includes key gender indicators to examine concrete progress on gender-related processes and outputs.
- Periodic gender audits should be conducted within RBOs, drawing inputs from riparian states so as to track progress.
- There should be continuous documentation and sharing of effective practices to promote replication, as most RBOs are starting to implement their action plans.

SADC Secretariat

- SADC is encouraged to develop an online introductory training course on Gender Mainstreaming Policy and Strategy based on social inclusion, which should be compulsory for all staff. Regular meetings of staff responsible for gender mainstreaming at the programme and project level can be conducted with the Gender Unit at the Secretariat in order to continuously review experiences on gender mainstreaming, identify good practices and lessons learned.
- Practical training with project officers is needed for gender mainstreaming, rather than workshop type of training.
- SADC should introduce a policy that requires all initiatives to incorporate gender mainstreaming.
- SADC Strategic Planning and Management can track Gender Responsive Budgeting and investment, and make an analysis of expenditure on gender equality and equity.
- There is need to communicate implementation of Gender Mainstreaming Policy and Strategy as well as existing gender mainstreaming initiatives proactively and sustainably to all by improving the gender content of SADC public statements and by coaching public information and liaison staff about gender mainstreaming. Staff capacity can be built to enable them to communicate gendered messages to the greater public that sends a clear signal and understanding of the connections between gender equality and IWRM.

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This publication marks the first step towards documenting the evidence of ***Mainstreaming Gender in Transboundary Water Management in SADC***. The report highlights the unique experiences of both men and women in management of transboundary water including the decision-making processes. The case studies provided in this report should advance participation in transboundary water management in SADC through shared experience as more communities across boundaries begin to learn from success stories taking place in other communities. This report is also expected to build and strengthen collaboration between policy makers and communities in promoting sustainable utilisation of transboundary water for the benefit of all stakeholders. The evidence contained in this report, and the opportunities, challenges and lessons provided, should inspire stakeholders in southern Africa, and elsewhere in Africa, to get more involved in action to manage their water resources.

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