

Integration of gender considerations into Tanzania's climate and water policies

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ABSTRACT

Integrating gender considerations into national policies such as climate and water policies is a critical step toward achieving gender equality, resilient systems, sustainable water access and management of climate change. In Tanzania, just like in many developing countries, women play a vital role in water management and could be more vulnerable to climate change impacts than their male counterparts. While there are few attempts in existing literature to examine the integration of gender considerations into water and climate policies, analyzing policies' formulation process has not been given attention. Thus, this study analyzed the extent and effectiveness of gender integration in climate change and water sector policies in Tanzania. The study shows that there is a substantial acknowledgment of gender issues in the reviewed policy documents but there exist considerable gaps in terms of integrating gender issues in the documents and during formulation processes.

Key words: Climate change, Nexus, Policy, Water, Women

HIGHLIGHTS

- Gender integration in policies accelerates gender equality, sustainable water access and management, and a resilient climate.
- Gender integration starts from policy design and implementation, to monitoring and evaluation.
- Structural gaps affect gender integration across policies in Tanzania.
- There are gaps in gender integration during the policy formulation process.

1. INTRODUCTION

The impacts of climate change pose huge challenges to the world in the 21st century, particularly the developing countries in Africa. Many African countries, including Tanzania, are more vulnerable to the impacts of climate change and variability, due to dependence on rainfed agriculture, ecosystem services and poverty (European Union, 2011; Durodola & Mourad, 2020a, 2020b). Climate change has major impacts on water resources through extreme events such as droughts and floods which result in pollution of freshwater resources and water scarcity in some parts of the world.

Water access, management and use between men and women is unequal due to different gendered roles, and men and women's relationship to water is diverse. Women especially in rural areas are solely responsible for domestic work in most societies such as collecting water for household activities, subsistence agriculture, sanitation and hygiene (WEDO, 2003). On the contrary, men in most societies control land, finances, industry and

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government, hence men are inclined more to control water access (Crow & Sultana, 2002). Additionally, climate change threatens to intensify the inequalities between men and women's relationship to water, as reported by the Food and Agriculture Organization (FAO) (FAO, 2011). While climate change affects all people, women are disproportionately affected compared to their male counterparts (Hannah, 2007). Economic, social and political barriers have been identified to be restraining women's coping capacity with climate change impacts. These barriers result into unequal access of women to resources and decision-making processes.

The United Nations (UN) General Assembly through Resolution 64/292 explicitly recognized the human right to water and sanitation. It is thus undeniable that water and gender roles are interlinked. The UN states that 'water management fosters gender equality' (UN-Water, 2019). Water, climate and gender nexus is well known in the global sphere. UN-Water (2019) states that water is the main element through which humans feel climate change. The third Dublin principle states that 'women play a central part in the provision, management and safeguarding of water' (ICWE, 1992).

Different studies have also identified gendered needs and health effects related to water and climate change, even though the studies have not yielded widespread action (Bisung & Elliott, 2017). According to FAO (2016), climate change has a major impact on water availability. Through impacts like intensified water scarcity, desertification, water-borne diseases and increased floods, women's access to water is usually compromised compared to their male counterparts; hence, women could be more affected by climate change effects on water.

To achieve national development goals and gender equality, it is crucial to integrate gender in policy design, implementation, monitoring and evaluation (M&E) (AfDB, 2013). On the international front, all actors in government parastatals and non-government organizations are called to mainstream gender in their policies and strategies, as an important step toward achieving gender equality. As a result of the UN Sustainable Development Goals' (SDGs) call for gender equality (SDG 5) and empowerment across different sectors including agriculture and water, gender has been incorporated as part of many agendas for different countries including the sub-Saharan African countries. However, gender integration entails designing new policies or modifying the existing policies, which calls for extra resources from the government. This can form an obstacle to its full implementation (UN Women, 2015). In addition, at the grassroots level, gender mainstreaming has not been well addressed (Ampaire *et al.*, 2016; Acosta *et al.*, 2018). Different studies by Gumucio & Rueda (2015) and Ampaire *et al.* (2016) on the level of gender integration across policies and budgets of different countries have shown structural gaps and challenges. Hence, the policies do not meet the end objectives of ensuring gender equality in climate change adaptation and water access.

Over the years, the Tanzanian government has made efforts in developing gender-responsive policies and strategies to achieve equality as per the 1995 Beijing Platform for Action (MCDGC, 2012). Tanzania National Water Policy of 2002 has a clear statement about gender and calls for recognition of women's role in the management of rural water supply and sanitation. Lusuva (2009) claims that despite the new Tanzania water policy commitments to gender equality in water resources and the recognition that gender issues are relevant across the entire range of development areas and actions, gender issues are often neglected.

Studies conducted in East Africa by Acosta *et al.* (2016) and Ampaire *et al.* (2016) found that there are still gaps in gender integration on climate change policies and strategies within East African countries including Tanzania. Moreover, a study in Nigeria confirms that some climate change and agriculture policies in the country are still gender-blind and linked with poor implementation; hence, the progress toward gender equality is impeded (Ogunlela & Mukhtar, 2009). Therefore, this study expands beyond existing literature by analyzing the policy formulation process as a crucial step for gender integration in policies and strategies. Several gender constraints have been identified in policies, but policy solutions are not aligned with these issues. To close the gender inequality gaps, gender advocates have called for specific policy provisions that eliminate gender inequalities.

This study aims to assess the extent of gender integration in climate change and water sector policies in Tanzania. The objectives are to: (1) assess the extent of gender integration in climate change and water sector policies in Tanzania, (2) analyze the effectiveness of gender integration in climate change and water sector policies and (3) explore the climate change and water policy formulation process in Tanzania. The study attempts to answer the following questions:

1. How effective are the existing climate change and water policies and strategies in integrating gender?
2. What are the main factors in the climate change and water sector policy formulation process in Tanzania?

2. LITERATURE REVIEW

2.1. Gender issues

2.1.1. Gender

Gender refers to the different roles, rights, responsibilities, attitudes, values of men and women that are socially constructed and the relations between them in a given environment (UNDP, 2007). Gender is generally associated with unequal power and access to choices and resources. The different positions of women and men are influenced by historical, religious, economic, political and cultural realities. These relations and responsibilities can and do change over time (UNESCO, 2003).

2.1.2. Gender equality

Gender equality means that women and men have equal conditions for realizing their full human rights and for contributing to, and benefiting from, economic, social, cultural and political development (UNESCO, 2003). Gender equality is therefore the equal valuing by society of the similarities and the differences between men and women, and the roles they play (UNESCO, 2003). It is based on women and men being full partners in their homes, their communities and their societies (Canadian Women's Health Network, 1998).

2.1.3. Gender integration/mainstreaming

Gender mainstreaming is a process of integrating gender concerns to achieve gender equality and enhance the purpose of development agendas (UNESCO, 2003). In addition, gender mainstreaming is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels (i.e., global, national, institutional, community and household). It is a strategy for making women as well as men's concerns and experiences an integral dimension of the design, implementation and M&E of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality by transforming the mainstream as described by United Nations Economic and Social Council (1997).

2.1.4. Gender-blind policies

Gender-blind policies are based on information derived from men's activities and/or assume that those affected by the policy have the same (male) needs and interests (UNDP, 2007). They are policies that take no notice of the different roles, responsibilities, capabilities, needs and priorities of women and men.

2.2. Water, climate change and gender nexus

The Paris Agreement calls for wise water management. The UN-Water Conference in 1977 recognized the importance of bringing everyone on board in managing water resources, while this was further reinforced by the International Conference on Water and Environment in Dublin in 1992. The third Dublin principle states that 'Women play a central part in the provision, management and safeguarding of water.' However, this very

important role of women is hardly reflected in the institutional arrangements for the development and management of water resources. Women's participation in decision-making processes is limited generally. Men's and women's participation in water management activities is more effective when both are involved in decision-making. Gender inequality that reduces women's access to water resources increases their burden of climate change-induced consequences such as water access shortages (UN WomenWatch, 2009).

The three UN SDGs for Gender Equality (SDG 5), Clean Water and Sanitation (SDG 6), and Climate Action (SDG 13) are intertwined with proper and good water management. Recognizing the linkage between these goals allows for successful goal implementation. It is worth noting that gender equality and gender-responsive activities are identified as components of the Paris Agreement.

Sultana (2018) argues that the relationships among climate change, water and gender are emphasized through two dramatic transformations including socioecological transformations (linked to climate change) and historical patriarchal societies (having gendered power structures challenges). Gender inequalities in access to control and use of water, and land ownership are magnified by climate change (Sultana, 2018). Changes in water quality, quantity, availability and access induced by changes in weather patterns causing events such as droughts, floods, increased salinity and rise in sea level aggravate gendered differentiated roles in collecting water on a daily basis. It is therefore very important to study the different ways water affects gender within the framework of climate change.

2.3. Gender dimension in climate change and water policies in Tanzania

Integrating gender concerns within the climate change agenda has been something of a struggle. The mention of the Kyoto protocol did not include gender concerns, and this further explains the Intergovernmental Panel on Climate Change (IPCC), the scientific bedrock of the UNFCCC, the UN Environment Programme (UNEP) and the World Meteorological Organization (WMO) lacking gender dimensions of climate change and focusing more on technical and solutions to climate change (Terry, 2009).

However, the fourth world conference on women in Beijing in 1995 was a climax for gender equality where gender integration was acknowledged and accepted as a way forward to enhance equality between men and women at all levels of society. Different countries in the world have committed themselves to mainstream gender as a cross-cutting issue that is crucial for development (Kennett & Lendvai, 2014; Acosta *et al.*, 2018).

Tanzania, like other countries, recognizes the importance of gender equality from the 1977 constitution of the country, which ensures equality between men and women and supports their full participation in social, economic and political life. The establishment of the Ministry of Community Development, Gender and Children in 1990 paved the way for the development of women and gender development policy in 2000, and its implementation strategy in 2005. The policy aims at facilitating gender integration into all policies, strategies, programs, plans and budgets in Tanzania.

Furthermore, the UN Human Rights Resolution 64/292 to Water and Sanitation in 2010 (Resolution A/RES/64/292 2010) recognized human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realization of all human rights. Concurrently, the General Comment No. 15 adopted by the Committee on Economic, Social and Cultural Rights (2002) on the right to water – Article I.1 states that 'The human right to water is indispensable for leading a life in human dignity, it is a prerequisite for the realization of other human rights.' Comment No. 15 also defined the right to water as the right of everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. In addition, the guidelines of the United Nations Framework Convention on Climate Change (UNFCCC) call for National Adaptation Programmes of Action (NAPA) to involve both men and women at the grassroots level, acknowledging that climate change impacts are gender-specific.

Tanzania is not immune to climate change impacts. Climate change has affected many development sectors including water, agriculture, forestry and human health. The harmful effects of climate change affect women and men differently, thus widening the gender gaps and hindering the adaptation capacity of communities at large. Due to this, Tanzania ratified the UNFCCC (1996), Kyoto Protocol on Climate Change (1997) and the NAPA (2007). Even though the Tanzania National Water Policy in 2002 recognizes the central role of women in water usage and management, [Kabeer \(2010\)](#) argues that policy formulation, planning and implementation in the water sector misunderstood women's needs and/or incorporated women's needs with those of men. [Doss & Kieran \(2015\)](#) claim that gender analysis gives clarity on the gendered differentiated needs, roles and capacities of men and women, and also the opportunities and limitation they encounter.

2.4. Gender policy framework in Tanzania

Tanzania recognizes that realizing gender equality is a necessary step toward attaining sustainable socioeconomic development. The 1977 constitution of the United Republic of Tanzania guarantees equality between men and women, and supports their full participation in social, economic and political life. The Government also formulated the Women and Gender Development Policy (2000) to put more emphasis on the Women in Development Policy (WID) (1992) in line with the Beijing Platform for Action. To ensure effective implementation of the Women and Gender Development Policy, a National Strategy for Gender Development (NSGD) to promote gender equality and equity was formulated.

The aim of this policy is to ensure that gender perspective is mainstreamed into all plans, policies, strategies, programs and budgets. The National Policy on Women Development and Gender places emphasis on gender equality and the development of indicators for measuring gender equality in national initiatives. At the same time, the strategy aims to guide implementing agencies to incorporate gender concerns into their policies, plans, strategies and programmes with a view to implementing commitments at international, regional and national levels. With all these, Tanzania has mainstreamed gender into a number of national development frameworks and ratified international as well as regional gender instruments. Some of these frameworks include the National Development Vision 2025, and the National Strategy for Growth and Reduction of Poverty (NSGRP II) also known as MKUKUTA II. The country is also a party to the Universal Declaration on Human Rights (1948), United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (1979), Beijing Platform for Action (1995), SADC Gender Declaration (1997), Charter on the Rights of Women in Africa (2003), SADC Protocol on Gender and Development of 2008, the Millennium Development Goals (MDGs; 2000) and the SDGs. In agreement to these commitments, the Government of Tanzania established various legal frameworks and institutional arrangements to ensure that gender is mainstreamed into all government activities.

3. METHODOLOGY

In this study, the focus was on the extent of gender integration in water and climate change policies in Tanzania. Furthermore, strategies, plans, guidelines and gender policies were included in the review. The assessment of these documents was conducted based on Tanzania NSGD (2002) for mainstreaming or integrating gender in national policies and strategies in Tanzania.

The Climate Change, Agriculture and Food Security (CCAFS), Latin America and the International Center for Tropical Agriculture (CIAT) and Gender and Policy research group are developed by 'Guidelines for Gender Integration in Agricultural and Climate Change Policies in Latin America' ([Gumucio & Rueda, 2015](#)). According to the guidelines, five steps are vital in integrating gender into policies, ranging from policy formulation stage to implementation stage. The steps are as follows:

Step 1: The diagnosis is the first step in including gender approach to policy documents. It is necessary to have quantitative and qualitative data disaggregated by gender. A formulating team committed to the gender approach must include necessary data that reflect the situation of women and men separately.

Step 2: The policy formulation must involve active participation and consultation of all actors and ensure equal participation of men and women, and the policy objectives and goals should consider the needs and interests of men and women according to the inequalities identified.

Step 3: The policy document must be written in a language that is inclusive and gender-sensitive, utilize the sex-disaggregated data and address the inequalities between men and women. The policy document must also recognize the transversal principles of politics.

Step 4: The policy must define activities, have a gender-inclusive budget and action plan that intend to reduce gender gaps and inequalities.

Step 5: The establishment of indicators and follow up strategies will allow monitoring gender equality goals, in the M&E step. The gender perspective must be present at all stages of the process and in all sections of the policy document.

The content analysis school of thought was adopted to carry out the analysis. This is a research tool used to determine the presence of certain words, themes or concepts within some given qualitative data (Tafur *et al.*, 2015). The study conducted by Damon & Rebecca (2020) found out limited studies on the qualitative content analysis to examine environmental laws or policy contents. Nevertheless, this method has lately been applied in environmental policy themes reports and newspaper articles on policy (Gillet *et al.*, 2014).

The content analysis school of thought approach was selected because it assesses the content of policies with respect to representation or degree to which women's concerns are addressed in policy instruments concerning climate change, agriculture and food security as shown in Table 1. The approach not only focuses on gendered discussions, instead it enhances the ability of policy instruments to comprehensively cover gender considerations. Therefore, it should be noted that this review was only limited to the content analysis of policy documents to determine the extent of gender integration in water and climate change policies, as previously adopted by Tafur *et al.* (2015).

4. RESULTS

4.1. Review of national policy documents

A total of 11 policy documents were reviewed. First, a policy document and a strategy from the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC) were reviewed to understand the guidelines on women and gender development and integration of gender equality in policies, plans, development strategies and actions in all sectors and at all levels in Tanzania.

Table 1 | Guidelines for gender integration in water and climate change policies.

Grade	Level of gender integration
Grade 1	No reference to gender issues
Grade 2	Gender mentioned in overall objectives but absent from subsequent implementation levels
Grade 3	Gender clearly presented as one relevant entry point in relation to the main objective, but an absence of a clear road map leading to the implementation
Grade 4	Gender included in the action plan, but an absence of clear earmarked resources for implementation

Source: Gumucio & Rueda (2015).

From the Ministry of Water, a policy document and its strategy were reviewed. Seven documents from the National Environment Management Council (NEMC) were reviewed. It should be noted that Tanzania currently does not have a national climate change policy but has the National Climate Change Strategy 2012 which provides guidance on gender integration into plans and strategies.

Most documents were downloaded from government websites and a few were obtained through collaboration with government officials from the Ministry of Water, the Ministry of Environment coordinated by the Vice President's Office (VPO) through the Division of Environment (DoE) and the National Environment Management Council (NEMC) and the MoHCDEC. [Table 2](#) gives more details about the policy documents that were reviewed.

Although policies, plans and strategies might not reflect the actual implementation, they represent the government's intent to implement measures. Key policies in water and environment sectors incorporating strategies, guidelines and plans were then scored according to how much they integrated gender as shown in [Table 2](#). Results show that of all policy documents analyzed, 22% scored grade 5, 44% scored grade 3, 22% scored grade 2 and 11% scored grade 1, meaning that gender was not referenced at all as shown in [Figure 1](#).

The Gender Development Policy 2000 highlights the need for mainstreaming gender in all policies, programmes, plans, strategies, budgets and activities to bridge the existing gender gaps at all levels and its strategy the NSGD 2002 calls for the formulation of gender-sensitive policies and programmes.

4.2. Gender integration in water policy documents

4.2.1. National Water Policy 2002 (Score: 3)

The National Water Policy 2002 ([National Water Policy 2002](#)) placed an emphasis on gender discourses all through the document. However, there are gaps observed. From the report, the main objective of NAWAPO 2002 did not reflect on a wider commitment to improving gender equality and also did not explicitly address gender issues associated with water resources management, rural water supply and urban water supply. Due to the role women play in the use, management and protection of water resources, they should be fully involved in the decision-making process. In addition, the goal of NAWAPO 2002 is not disaggregated by gender.

Although the preparation of NAWAPO 2002 is participatory that involves many key stakeholders in water resources, it however does not express the active participation of men and women and the presence of individuals with gendered perspectives in order to ensure that the policy document and its strategy are comprehensive and acceptable. The policy document recognizes the importance of involving both men and women at all stages of water resources management, in both the rural and urban water supply; it also seeks to reduce gender gaps and bring about gender equality, but fails to reflect on the potential structural constraints and their relation to men and women in water sector.

4.2.2. National Water Sector Development Strategy 2006–2015 (Score: 3)

The main goal of the National Water Sector Development Strategy (NWSDS) includes a wider commitment to improving gender equality in the provision of water supply, sewerage and sanitation services. The findings of the NWSDS show that the preparation of the strategy was participatory and involved experts from various departments of the Ministry responsible for Water, Health, Prime Minister's office, Regional Administration and local government. However, it does not show the involvement and / or consultation of gender expertise in the formulation process, though a taskforce was required to address the role of women in the water sector.

The strategy sets gender sensitivity as one of its strategic statements. It also acknowledges the role women play in the water sector, and that there have been a few attempts to mainstream gender aspects in the water sector. Moreover, the strategy expresses a lack of gender-disaggregated data at all levels in the water sector; women are under-represented especially in decision-making levels, and little consultation of both men and women in

Table 2 | Details and sources of policy documents reviewed.

Sector	National policy	Source	Summary	Score
Water	National Water Policy (NAWAPO) (2002)	http://www.tawasanet.or.tz/files/Tanzania%20water%20policy%20-%202002.pdf	Aims to develop a comprehensive framework for sustainable development and management of the nation's water resources.	3
	National Water Sector Development Strategy (NWSDS) (2006–2015)	https://www.maji.go.tz/pages/strategies	A blueprint with appropriate interventions to address the water sector challenges in the process of achieving all the targets narrated in the National Strategy for Growth and Reduction of Poverty by 2010, the MDGs by 2015, and contribute toward achieving the Tanzania Development Vision Targets by 2025.	3
Environment (climate change)	National Climate Change Strategy (NCCS) (2012)	Ministry of Environment	Provides interventions to address climate change adaptation and participate in the global efforts to reduce greenhouse gas emissions in the context of sustainable development.	2
	National Climate Change Communication Strategy (NCCCS) (2012–2017)	Ministry of Environment	Intends to enhance climate change awareness in the society via general knowledge on climate change, adaptation, mitigation, climate change research, gender and financing thematic areas.	3
	National Adaptation Plan of Action (NAPA) (2007)	Ministry of Environment	Aims to identify and promote activities that address urgent and immediate needs for adapting to the adverse impacts of climate change with the focus on the agriculture, water, energy, health and forestry sectors.	3
	National Strategy on Gender and Climate Change (NSGC) (2013)	Ministry of Environment	Recognizes the role of men and women as agents of change if they proportionately participate in climate change adaptation and mitigation measures.	5

	Guidelines for Integrating Climate Change Adaptation into National Sectorial Policies, Plans and Programmes of Tanzania (2012)	Ministry of Environment	Provides practical guidance on how Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Non-State Actors should integrate climate change adaptation into sectoral policies, plans and programmes.	2
	National Guidelines for Mainstreaming Gender into Climate Change related Policies, Plans and Strategies (2012)	Ministry of Environment	Provides a systematic approach to mainstreaming gender into Climate Change Adaptation related plans, policies, strategies, programs and budgets for MDAs, Local Government Authorities (LGAs), Civil Society Organizations (CSOs) and private sector to ensure gender equality in addressing climate change	5
	Climate Change Adaptation Information Toolkit for Farming Communities (CCAIFC) (2013)	Ministry of Environment	Provides guidance on adaptation awareness, planning, management and implementation of climate change adaptation measures for the farming communities	1
Gender	Gender Development Policy (GDP) (2000)	Ministry of Health Community Development Gender Elderly Children (MOHCDGEC)	Aims to ensure that the gender perspective is mainstreamed into all policies, programmes and strategies in all sectors at all levels.	
	National Strategy for Gender Development (NSGD) (2002)	https://www.jamii.go.tz/uploads/publications/en1542104700-Tanzania_-_National_Strategy_for_Gender_Development.pdf	Highlights the major issues of concern to gender equality while exposing the challenges ahead. Also provides guidance on interventions to be made and identifies roles of various actors and stakeholders	
Total	11 documents			

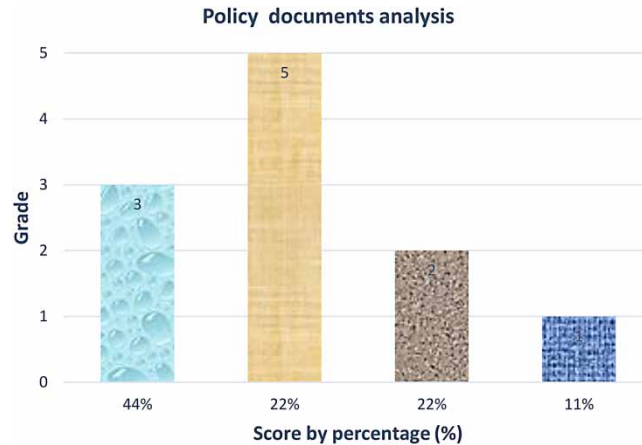


Fig. 1 | Distribution and grade of gender integration in selected 11 policy documents in water and environment ministries in Tanzania.

managing rural water supply projects were carried out. Even though the policy sets strategies and activities to increase gender sensitivity in the M&E plan, it fails to address gender structural barriers. In addition, the gender output indicator does not allow the measuring of results as per activities set and is biased, failing to adequately represent men and women's involvement in decision-making.

4.3. Gender integration in climate change documents

4.3.1. NAPA 2007 (Score: 3)

The review shows that the NAPA 2007 does acknowledge the impact of climate change on women and school children, particularly girls who have to walk long distances to fetch water. However, it does not provide clear actions to address gender constraints, while gender-responsiveness in climate change is not given priority. Furthermore, the development of the NAPA did not acknowledge the consultation of rural men and women at grassroots levels, nor the involvement of gender experts.

4.3.2. National Climate Change Strategy 2012 (Score: 2)

Gender is acknowledged as a cross-cutting issue in the NCCS 2012. The strategy clearly states the gender differential impacts on climate change and recognizes the importance of reducing gender gaps and impacts. It proposes strategies for gender integration in programs and activities. However, there are no implementation plans to address the gender constraints. Moreover, the strategy does not mention the involvement of gender expertise or inputs from women and men at the grassroots levels.

4.3.3. Climate Change Communication Strategy 2012–2017 (Score: 3)

The strategy presents a thematic area that is focused on gender and gives key messages to be disseminated. It acknowledges sharing of gender-sensitive best practices and lessons learnt. However, the strategy lacks roles and responsibilities of key institutions and stakeholders in the implementation of the strategy. It does not include gender output and outcome indicators in the M&E plan of the strategy despite showing the preparatory stage of strategy involving gender experts from the MOHCDGEC.

4.3.4. National Guidelines for Mainstreaming Gender into Climate Change-Related Policies, Plans and Strategies 2012 (Score: 5)

The guidelines refer to gender concerns throughout the document. It highlights the importance of gender mainstreaming into the national climate change adaptation-related policies, strategies, programs and plans to ensure gender equality in sustainable development. The strategy clearly states the differential impacts of climate change between men and women. It gives a clear institutional and implementation framework including guidelines on roles and responsibilities of the fundamental ministries and institutions for gender mainstreaming.

4.3.5. Guidelines for Integrating Climate Change Adaptation into National Sectorial Policies, Plans and Programmes of Tanzania 2012 (Score: 2)

The guidelines refer to gender as a cross-cutting issue to be considered for integration in climate change adaptations. It simply gives guidelines on how gender should be integrated into climate change sectorial policies, plans and programmes. Furthermore, it does not offer any gender-sensitive interventions in integrating climate change adaptation in various sectors despite being prepared in a participatory manner by involving key stakeholders and experts from the Ministry of Community Development Gender and Children.

4.3.6. National Strategy on Gender and Climate Change 2013 (Score: 5)

The document refers to gender throughout the document, elaborates gender analysis in key sectoral areas and gives clear implementation plans and indicators for M&E purposes. In addition, its formulation was in a participatory approach that involves the gender office of the International Union for Conservation of Nature (IUCN).

4.3.7. Climate Change Adaptation Information Toolkit for Farming Communities 2013 (Score: 1)

The national guidelines for mainstreaming gender into climate change-related policies, plans and strategies recognize the gender differential impacts of climate change in the agriculture sector between men and women. The toolkit also acknowledges that the negative impacts of climate change fall disproportionately on men and women. However, the review of the document shows that there is no mention of gender throughout the document. Hence, the toolkit is gender-blind and fails to integrate gender concerns.

5. DISCUSSION

It is evident that culture has had extensive impacts on social and economic life and has influenced the roles of men and women in different sectors including water and environment sectors in Tanzania. The national development vision 2025 states that Tanzania should ensure the achievement of gender equality and the empowerment of women in all socioeconomic and political relations and cultures by the year 2025. The analysis of the gender situation in Tanzania has been conducted by several scholars, and most effort has been channeled into poverty alleviation among women including gender mainstreaming and equal presentation of men and women in decision-making. Women, especially rural women, are deprived of ownership of and access to land and control of natural resources even though they highly depend on natural resources for livelihood (Mikkelsen, 2005). However as opposed to the commitment to gender equality by the Tanzanian government, many articles and clauses in Tanzania's constitution, policies and laws are at odds with the CEDAW. The dominant masculine norms and discriminatory behavior and attitude toward women are still persevering in Tanzanian society and in rural areas among others (JICA, 2016). A study conducted by Lusuva (2009) established that in Mkoji sub-catchment in Tanzania, there are some places that have traditional practices that affect women's participation in water resources management. This resonates with the study conducted by Berkes (Berkes, 1999) who found that traditional knowledge and resources management systems are gendered with differences between women and

men as regards to roles, needs and interest in natural resources. In addition, [Sultana \(2018\)](#) pointed out that the relationships between climate change, water and gender are emphasized by two major shifts, socioecological changes accounted for climate change and the deep rooted male-dominated societies that encounter challenges in gendered power structures. This provides insights that can inform global discussions as well as national policies. [Mhache's \(2014\)](#) findings proved that the policies in Tanzania are insufficiently addressing the issue of gender; hence, there is a need to integrate gender in policies, decision-making bodies and natural resources allocation. Furthermore, the author pointed that policies neglect the gender relationship in the management and usage of natural resources, and indicated that the culture and tribe structure of different communities in Tanzania have an impact on natural resources management.

The findings from the work of [Ampaire *et al.* \(2020\)](#) found that there is disharmony in gender mainstreaming across governance levels. Furthermore, the gender policy review conducted by [Acosta *et al.* \(2016\)](#) in Tanzania highlighted disharmony of the content of policy documents among different policies and strategies, suggesting that the teams that developed the documents never sought to build inclusive strategies and establish common gender plans. These findings are also in line with those obtained by [Gumucio & Rueda \(2015\)](#), which suggested that the integration of gender concerns in climate change policy documents varies across countries in Latin America.

It was noticed that most of the policies, strategies and guideline formulation processes did not express the involvement of gender expertise or the consultation of rural women and men. Even those that showed the involvement of gender expertise such as the NCCCS 2012–2017 and the Guidelines for Integrating Climate Change Adaptation into National Sectorial Policies, Plans and Programmes of Tanzania as directed by the NSGD 2002 did not explicitly address gender issues in defining the problems and shortfalls of inclusion of gender in the stage of policy formulation. This could be attributed to the inadequate capacity for gender mainstreaming at that time, as gender was yet to be understood properly by practitioners and implementers, and more so, few female gender experts were present at that time. This is also in line with findings in the work of [Ampaire *et al.* \(2016\)](#) that noted the lack of local communities' involvement during the design of policies in Uganda.

While gender-differentiated impacts of climate change are known to a larger extent, some climate change documents at the national level make no reference to gender. A clear example is the CCAITFC 2013. This is in line with the observations of [Ampaire *et al.* \(2016\)](#) that suggested the presence of gender-blind sectorial policies. Unlike the study of [Gumucio & Rueda \(2015\)](#), where gender consideration is more included in the food and nutrition security sector than climate change in the Latin America and Caribbean (LAC) region, gender concerns are more integrated into the climate change sector when compared to water sector documents in Tanzania.

We also observed that some of the reviewed documents lacking clear strategies to achieve the gender goals described in the policies such as NAPA 2007 suggest the potential adaptation activities that do not address gender inequalities. NAWAPO 2002 calls for the participation of both men and women in decision-making, planning, management and implementation of water resources management and development, but fails to explicitly express how that will be achieved. These observations were also noted by [Bryan *et al.* \(2016\)](#) where gender considerations identified and formulated at the design stage were not taken into account at the implementation stage in sub-Saharan Africa countries.

Furthermore, gender is all about the relation between men and women and the role they play in society, while gender mainstreaming aims to reduce gender inequalities between women and men. However, the results show the limitation of gender mainstreaming in implementation activities of some policy documents such as the NAPA and the Guidelines for Integrating Climate Change Adaptation into National Sectorial Policies, Plans and Programmes of Tanzania (2012). The activities that were suggested to achieve gender equality are not addressing any structural inequalities ([Ampaire *et al.*, 2016](#)). Even though the guidelines to mainstream gender are in

place, failure to prioritize gender in the implementation stage could be a result of low understanding or a poor capacity to mainstream gender by the respective sectors.

In the M&E part of the policy process, *Gutierrez-Montes et al. (2018)* noted indicators such as ‘% of households in which adults and youth (males and females) participate in decision-making related to household, farm, and home garden activities’, to be biased. This is similar to our observations. The water strategy calls for at least 30% of members of the decision-making bodies at all levels to be women by 2010, while the goal calls for the participation of both men and women in the provision of water supply, sewerage and sanitation services. Moreover, the indicator does not track all the activities suggested for enhancing participation of men and women in activities for M&E purposes. It was further noted that the NAPA and climate strategy had no indicators to track gender mainstreaming activities.

Finally, there are few limitations identified in this study. First, the review focused on the content analysis of policy, strategy and guideline documents from the water and environment sector. Secondly, the study did not capture the perspectives of community members where policies are implemented. Furthermore, there was no focus on policy stakeholders to capture the policy formulation, budgeting and budget administration processes.

6. CONCLUSION AND POLICY RECOMMENDATIONS

This study aims to assess the extent of gender integration in climate change and water sector policies in Tanzania by examining the effectiveness of gender integration in climate change and water sector policies and exploring the climate change and water policy formulation process in Tanzania. The review noted the acknowledgment of gender issues, and the steps taken by the government of Tanzania toward gender integration in policies, plans and implementation strategies, whether under a cross-cutting issue or across the whole document. However, there are still existing gaps in terms of integrating gender in policy documents. Norms and cultures that favor men over women in the management of natural resources should be dealt with in order to ensure that gender is effectively integrated into policies. Gender equality as addressed in the SDG 5, target 5.A calls for governments to ‘undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws’, and also target 5.C ‘Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels’. Gender equality is a must. There is thus a need for the Ministry of Water and Environment in Tanzania to review the policy documents, strategies and guidelines to ensure effective gender integration.

Build capacity of various actors in different sectors involved in the development of policies, strategies and guidelines on understanding gender and gender integration throughout the policy formulation, implementation, and M&E.

There is a need to conduct research and collect gender-disaggregated data that describe gender differences, needs, constraints and course, and integrate such in the policy development process.

It is necessary to improve the equal participation of both men and women as key stakeholders in water and climate change-related policy-making processes.

The development of tangible gender indicators reflects the situation of men and women separately, for easy M&E. While our data did not capture the perspectives of policy stakeholders, who are very important people in the design of the policies and community members where policies are implemented, exploring these areas could shade more light on the existing gaps in water and climate change policies. These research gaps need to be addressed in the future research studies.

It is important for climate change and water policies in Tanzania to be gender-responsive so as to be in line with global agreements such as the Beijing Platform of Action 1995, SDGs 2030, Africa Agenda 2063 and Paris Agreement so as to attain gender equality goal by 2025.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

All relevant data are included in the paper or its Supplementary Information.

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