



From victims to beneficiaries: Empowerment and Participation of Women in the Kidunda Dam Project in Morogoro, Tanzania

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Abstract

This article explores the empowerment and participation of women in developing the Kidunda Dam project in Tanzania, using the ladder of citizen participation framework to analyse their participation in decision-making, social and community engagement, and economic contributions. A qualitative research design was employed, with data collected through in-depth interviews, focus group discussions (FGDs), and documentary reviews, with a thematic analysis technique to identify and analyse the key themes related to women's participation in decision-making, social and community engagement, and economic contributions. Findings reveal that women have taken on various roles, including participation in project committees and contributing to decision-making processes, promoting transparency, information sharing, and increased community engagement. Economically, women have leveraged the dam's construction to initiate business ventures, significantly contributing to the local livelihoods. This article emphasises that empowerment in mega infrastructure projects requires more than formal participation. It demands equitable engagement at every stage. In alignment with the goals of Agenda 2063, the study underscores the need for gender-sensitive infrastructure design to promote inclusive and sustainable development. Policy recommendations call for participatory practices that ensure women's contributions are recognised, valued, and integrated into development frameworks.

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1.0 Introduction

In recent years, the discourse surrounding infrastructure development in Africa has increasingly recognised the need for inclusive growth and sustainable development. This shift is prominently reflected in the African Union's Agenda 2063, which envisions a continent where development is people-driven, relying on the potential of African citizens, especially women and youth. The Agenda 2063 is Africa's blueprint and master plan for transforming Africa into the global powerhouse of the future. It is the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance (AU, 2015). Within this broader framework, large-scale infrastructure projects such as the Kidunda Dam in Tanzania emerge as technical endeavours and as deeply political ventures with profound socio-economic implications.

The construction of the Kidunda Dam in Tanzania, as part of the overarching developmental objectives outlined in Agenda 2063: "The Africa We Want," gives an important opportunity for evaluating the effects of large-scale infrastructure initiatives on women (AU, 2015; URT, 2022). First planned in 1967 and reevaluated in 2002, the construction of Kidunda Dam is a vital infrastructural endeavour designed to improve agricultural output, ensure water supply stability, and increase hydropower generation in Dar es Salaam and Pwani Regions. The initiative, whose construction began in June 2023, emphasises the importance of water infrastructure in regional development and is backed by a significant funding commitment of 425.9 billion Tanzanian Shillings from Dar es Salaam Water and Sewerage Authority (DAWASA) for the 2023/24 fiscal year (URT, 2022).

Despite the ambitious goals of Agenda 2063, particularly its emphasis on inclusive growth and the empowerment of women as outlined in Aspiration 6, the roles of women in large-scale infrastructure projects in Africa remain inadequately understood and insufficiently addressed (AU, 2015; Ojediran & Anderson, 2020). Women's participation in large dam projects has often been concentrated in unskilled and low-paying labour positions. They have contributed as labourers, performing tasks such as carrying materials, construction site cleaning, and other physically demanding jobs (Abdullah & Rahman, 2021). However, they have faced barriers to accessing skilled roles and leadership positions, hindering their career growth and economic empowerment (WB, 2015). The construction of projects like the Kidunda Dam in Tanzania exemplifies the complex socio-economic and political challenges these initiatives pose, especially for women. Typically perceived as purely technical endeavours, such projects often fail to account for women's unique and multifaceted roles, ranging from being directly affected by displacement and changes in livelihood to participating in and influencing the development process (Adhikari, 2022). This oversight perpetuates a narrow narrative that views women primarily as victims rather than active agents capable of shaping the outcomes of these initiatives (Huang & Yaping, 2016).

This paper shifts the existing narratives surrounding large-scale infrastructure projects by recognising and emphasising the active roles that women can and should play in these initiatives. Rather than viewing women solely as victims of displacement and livelihood changes, this research seeks to highlight their potential as key beneficiaries and contributors to the development process (AU, 2015). By exploring how women can influence, participate in, and benefit from such projects, the study advocates for a more inclusive approach that acknowledges women's agency and ensures their voices are integral to the development of dam projects. This perspective challenges the traditional victim-centric view, promotes a more equitable and empowering approach to development, and offers a critical lens on the intersection of gender, infrastructure, and politics (Müller-Mahn, 2020). By situating women's experiences and achievements within the Kidunda Dam construction project context, this study contributes to a more comprehensive understanding of development that genuinely reflects the aspirations of Agenda 2063, advocating for inclusive and sustainable progress. This scholarly inquiry not only expands the academic discourse on gender and development but also provides practical insights for policymakers and practitioners involved in infrastructure development in Africa.

2. Theoretical Lens: Gender and Infrastructure Development

Existing research identifies women as marginalised stakeholders in mega projects. Their participation is often limited to low-skilled roles, with minimal influence on decision-making processes (Abdullah & Rahman, 2021; Adhikari, 2022). Arnstein's ladder of citizen participation provides a theoretical lens for evaluating such involvement, ranging from tokenism to genuine empowerment.

2.1 Ladder of Citizen Participation

Citizen participation can best be examined through the lens of the ladder of citizen participation, developed by Sherry Arnstein in 1969, because it offers a framework for understanding the depth of citizen involvement in decision-making processes, especially in the context of public policy and mega-infrastructure projects. The model distinguishes participation varying from non-participation to genuine citizen power. In this context, women's empowerment in the Kidunda Dam project can best be achieved if their participation goes beyond tokenism and reaches higher rungs of the ladder where genuine influence over decision-making exists (Arnstein, 2019).

Arnstein's framework categorises participation into three main categories: non-participation, tokenism, and citizen power (Arnstein, 2019), which assist in differentiating between different forms of participation that merely offer the illusion of involvement and those which genuinely tend to empower citizens to influence outcomes. This distinction is vital in understanding how mega infrastructure project can either propagate gender inequality or serve as for actual empowerment.

Non-participation, which is the lowest level, encompasses manipulation and therapy. Manipulation reflects a deceptive form of participation where citizens are included in the process to create an "appearance of involvement". This implies that institutions give the false impression

of empowering citizens while deliberately withholding all powers. Arnstein describes this as placing people on advisory boards merely to "educate" or gain their support, turning participation into a tool for public relations rather than true citizen involvement (Wirtz et al., 2019), undermining the original idea of empowerment.

Therapy, on the other hand, places citizens as incapable or in, thus shifting the focus of participation from systemic issues to individual weaknesses. As Arnstein places it, this form of participation is ineffective and tends to reinforce disempowerment, especially for marginalised groups, including women (Arnstein, 2019; Lauria & Shively Slotterback, 2020). In the Kidunda Dam Project context, any forms of engagement that align with these rungs indicate that women are being used symbolically rather than genuinely empowered. Such non-participation would counteract the stated goals of Agenda 2063, emphasising inclusive growth and gender equality (Nchofoung et al., 2024).

Tokenism as a middle level of participation encompasses informing, consultation, and placation levels of participation, which, according to Arnstein, falls short of genuine citizen participation. Informing encompasses one-way communication from project leadership to citizens without any genuine avenue for citizens to shape decisions. Although it reflects an improvement in participation, it limits women's agency since they do not have a role in shaping project outcomes (Shen et al., 2024). Meetings can become one-sided, where people accept information or support proposals due to feeling overwhelmed by legal jargon and officials' authority. Conversely, consultation allows citizens to share their opinions and views without guaranteeing that their input will be reflected in decision-making. Whereas consultation may seem like advancement, it often becomes a ceremonial act where citizen feedback is not given real weight (Dvir & Vedlitz, 2024). Consultation methods like surveys, meetings, and public hearings often reduce participation to a ceremonial act, where people are treated as statistics. Authorities use attendance numbers or completed surveys to claim citizen involvement, which merely proves they have gone through the motions without genuinely considering citizens' views (Arnstein, 2019). Placation includes limited citizen representation in decision-making tables; however, such representatives are often outnumbered or strategically selected to minimise disruption to established power structures (Quick et al., 2016).

Placing a few hand-picked 'worthy' poor people on public bodies like the water bodies, board of education, police commission, or housing authority is an example of a placation tactic. For women in the Kidunda Dam Project, mere consultative or placatory participation would limit their role to symbolic involvement without real decision-making power. Tokenism represents a missed opportunity for genuine empowerment and risks reinforcing traditional gender power imbalances (Arnstein, 2019; Mwesigwa, 2021).

The highest level of participation in the ladder is *Citizen Power*, which encompasses partnership, delegated power, and citizen control. These levels represent genuine citizen influence in project outcomes (Chang, D & Meng, 2023). The partnership encompasses shared decision-making

authority between officials and citizens, ensuring that citizens gain the power to reject options, negotiate terms, share resources, and have their demands partially met. Arnstein describes this as a redistribution of power and a vital step towards genuine participation where citizens and authorities negotiate through joint boards and committees. Once agreed upon, the rules cannot be changed unilaterally. However, Arnstein notes that in many cases, citizens assert control through actions like community organising and protests rather than authorities willingly sharing power (Arnstein, 2019).

Delegated power grants citizens the power to control certain areas of the project, like budgeting or management, thus guaranteeing their voices are central to the implementation of the projects (Alamoudi, Abidoye, & Lam, 2022). Delegated power might include, for instance, a corporation or citizen board overseeing a community program instead of just taking part in one run by the city. At this stage, the ladder has been lowered to the point where the public has the important cards that ensure the program's accountability to them. Power holders must initiate negotiations to resolve disagreements rather than caving in to external pressure (Gaber, 2019).

Citizen Control is the apex of participation, where citizens gain full authority over the decision-making process, thus allowing them to direct the course of the project and allocate resources as needed (Hong, 2018; Arnstein, 2019). In the context of Kidunda Dam, meaningful participation or achieving its highest level is crucial to truly empower women. Women's participation at all levels contributes to decision-making and frames the project's outcomes to reflect their needs and priorities. This level of involvement is crucial for aligning the project with the goals of Agenda 2063, which seeks gender equality and inclusive, sustainable development (AU, 2015).

In this study, the use of Ladder of Citizen Participation by Sherry Arnstein is applied to critically analyse the extent to which women's participation in the Kidunda Dam Project constitutes genuine empowerment. This work argues that without reaching the higher level (rungs) of *Citizen Power*, women's participation risks being tokenistic, failing to translate into actual influence over project decisions (Arnstein, 2019). The analysis shows that empowerment in large-scale infrastructure projects cannot be achieved merely through symbolic inclusion. Genuine empowerment necessitates that women hold *substantive power* in decision-making, allowing them to actively shape both the process and the outcomes (Alamoudi, Abidoye, & Lam, 2022). This theoretical framework thus serves as an evaluative tool and a basis for advocating for deeper and more meaningful forms of engagement. The findings from the study demonstrate that for women's participation to contribute to empowerment, it must involve actual decision-making power: moving beyond consultation and token representation towards real, shared control over resources and outcomes (Arnstein, 2019).

3.0 Methodology

In this section, we outline the methodological approach employed in the study to examine women's participation and empowerment in the Kidunda Dam Project. The chosen methodology aligns with

the study's objective to provide a nuanced understanding of gender dynamics and empowerment within the context of mega-infrastructure projects, particularly Agenda 2063.

3.1 Research design and approach

We employed a qualitative research design to analyse the participation and empowerment of Women in the Kidunda Dam Project. This approach supports existing studies on mega-infrastructure projects, where qualitative methods are favoured when exploring socio-economic dynamics and gender-related issues (Massoi, 2019; Yin, 2018; Creswell, 2014). Creswell and Poth (2023) state that qualitative research aims to understand social phenomena in their natural settings comprehensively. This indicates that people's firsthand experiences as agents of meaning-making in their day-to-day lives are relied upon. In this context, we intend to document women's participation in these projects and analyse how their involvement contributed to the broader empowerment outcomes, specifically in the context of the agenda 2063 (AU, 2015).

3.2 Study area

In the context of this study, we selected Kidunda Dam as a case area to conduct this study. The study was conducted at the Kidunda Dam located at Kidunda village, approximately E37413500 and N9196000 downstream of the Mgeta and Ruvu rivers confluence in Morogoro South province (URT, 2008). The researcher selected Kidunda Dam for various reasons, as Kidunda Dam offers a unique case to explore how women can actively shape the project's outcomes by participating in various stages of its development. This includes their involvement in decision-making processes, contributing labour, advocating for community needs, and influencing the equitable allocation of resources. By examining women's roles in these areas, the study highlighted their potential impact on the project's success and its social and economic benefits to women and the community.

3.3 Sampling and Data Collection

A total of 40 informants were purposively selected to provide a comprehensive understanding of participation and the roles played by women in the development of the Kidunda dam project. Purposive sampling is commonly employed in qualitative research to identify participants capable of offering substantial and pertinent data regarding the phenomena under analysis (Creswell and Poth (2023). The sampling criteria delve into women directly affected by the Kidunda Dam project, including those involved in decision-making processes, community engagement and participation in economic activities. The approach falls suit with existing studies (Müller-Mahn, 2020) on mega-infrastructure projects that underscore the importance of targeting specific populations to capture nuanced perspectives on participation and empowerment (Palinkas et al., 2015; Fuseini, 2024).

Primary data were collected through in-depth interviews and focus group discussions (FGDs). Whereas in-depth interviews enabled respondents to freely and thoroughly describe their experiences and perspectives, FGDs facilitated an avenue for a broader discussion of women's

perceptions and the development of the Kidunda Dam project (Creswell & Poth, 2023). Similarly, documentary reviews assisted in setting a base for understanding the broader socio-political context of the Kidunda Dam Project and its alignment with national development goals (URT, 2022).

3.4 Data Analysis

Data from interviews, FGD and documentary reviews were analysed using thematic analysis, a favourable way to identify themes and patterns when dealing with qualitative data (Creswell & Poth, 2023), especially related to the participation and empowerment of women in the development of the Kidunda dam project. Indeed, thematic analysis enabled the authors to unveil key themes relating to women's participation in decision-making, economic empowerment and social engagement. Prior studies have confirmed that thematic analysis is effective when analysing intricate interactions between gender, mega infrastructural development, and empowerment (Baporikar, 2024). Creswell and Poth (2023) state that thematic analysis is used to locate, recognise, and interpret themes and patterns in qualitative data.

3.5 Data Validity

In terms of validity, the study collected data from Kidunda dam in Kidunda village through in-depth interviews and focus group discussions to accurately represent the opinions the informants gave. Testing of the research questions was done before going to the field to ensure they aligned with the content of the study's objective, background, and problem statement. Validity testing aims to determine whether the research has honestly assessed what needs to be tested or whether the analysis's conclusions have been accurate (Creswell & Poth, 2023). To confirm validity, the research instruments were reviewed by academic peers. Reliability was ensured by using simple and clear language in the interview questions, minimising the risk of confusion among informants.

4.0 Findings

This section presents the study's key findings, focusing on women's roles and contributions to the Kidunda Dam Project. It highlights how women participated in decision-making, social and community engagement, and economic activities, providing insights into their transformative roles as active agents rather than passive beneficiaries or victims. These findings challenge traditional narratives and underscore the importance of inclusive practices in mega infrastructure projects.

4.1 Roles of Women in the Kidunda Dam Project

4.1.1 Decision-making role

A common narrative exists where women have been regarded as victims of mega-construction projects rather than agents and beneficiaries. However, this study has revealed that women have assumed diverse roles and responsibilities in shaping decisions about implementing and constructing the Kidunda dam project. For example, women in leadership positions have played a

crucial part in disseminating project information and engaging with other women and community members to build consensus. Through village meetings and gatherings, women were involved as part of the community in the decisions of the establishment of a dam project in the village.

Participation of women in project decisions was ascertained during the FGDs with women leaders, where it became evident that their input was not only sought but also valued. These discussions highlighted how women leaders took active roles in negotiating terms, addressing concerns, and ensuring that the needs and perspectives of women were represented in the decision-making process. Moreover, women were instrumental in mobilising resources and advocating for equitable distribution, further underscoring their role as change agents rather than victims. This involvement reflects their position as agents of change and not mere observers. This study underscores the importance of recognising and fostering women's contributions in large-scale infrastructure projects, challenging the traditional narrative, and promoting a more inclusive and equitable approach to development. As one local leader shared during an FGD:

“We participated in council meetings where DAWASA introduced the Kidunda dam project to us. During these meetings, we, as leaders, were able to provide our input on how the construction of this project would benefit the residents of Kidunda Village, including providing employment opportunities with a focus on gender equality. Our involvement in the meetings enabled us to organise public meetings from the ward to the village level. As a result, the project was introduced to the villagers, who welcomed it wholeheartedly, recognising it as a solution to many developmental issues and water challenges in the village” (FGD with women local leaders, 22nd April 2024).

Similarly, a participant shared her experience during a village meeting:

“I was involved in the village meetings where we discussed the dam project. As women, we raised concerns about how it would affect our farms and water access. They listened to our suggestions, and I felt my voice mattered in the decision-making process” (Interview 1, 23rd April 2024).

4.1.2 Social and Community Engagement

Findings exhibit that the dam project has improved community involvement. One of the primary drivers of this development has been a commitment to transparency and information sharing. Residents, including women, were informed about project updates, potential impacts, and decision-making procedures through regular community meetings, information sessions, and created feedback systems. This inclusive approach has enabled a more inclusive and participatory project design and given the community the courage to share their ideas, concerns, and objectives actively. During a FGD, women expressed their appreciation for the inclusive nature of the meetings:

“Leaders conducted community meetings in the village; these gatherings were inclusive, with the participation of all community members, including us; we were encouraged to voice our opinions and make suggestions regarding the project. During the meetings we requested the project management to prioritise employment opportunities related to the project for us. We also proposed allocating designated areas near the project site to facilitate entrepreneurial activities.” (FGD held with women, 22nd April 2024).

4.1.3 Participation in Economic Activities

Findings have demonstrated that the dam construction has created a special atmosphere for business ventures, allowing women in the neighbourhoods to make a substantial economic contribution. Women have taken advantage of the dam project's advancement to launch modest enterprises that aid in the building process and the inflow of labour. These businesses provide the construction workforce with food services, lodging, and essential supplies. Additionally, some women have engaged in transport services, offering local logistics support critical for moving materials and personnel. An interview participant highlighted the economic impact of the project:

“The government has allocated a special area next to the project site where we engage in various entrepreneurial activities, such as selling food to the project workers. Additionally, new roads have been constructed, and others have been improved, making it easier for us to transport our goods from Kidunda village to market areas like Ngerengere, Morogoro town, and Dar es Salaam. This has helped increase our income.” (Interview 2, 24th April 2024).

Similarly, women in a FGD shared their experiences:

“Through the dam project, we were allowed to participate in various economic activities, like selling food to workers and managing small businesses. This has helped us increase our income and support our families.” (FGD with women, 25th April 2024).

These findings underscore the multidimensional roles women played in the Kidunda Dam Project. Their contributions to decision-making, community engagement, and economic activities highlight the transformative potential of inclusive practices in mega-infrastructure projects. Recognising and fostering such roles is essential for achieving gender equality and sustainable development.

5.0 Discussion of the Findings

This section analyses the study findings, focusing on key themes and their implications in the framework of participation and decision-making. It draws on existing theories and conceptual models to provide a deeper understanding of the extent and effect of community participation through the lens of Arnstein's ladder of citizen participation.

5.1 Participation in Decision Making

The Arnstein ladder of citizen participation offers a valuable framework for understanding varying levels of citizen participation in decision-making processes. The framework conceptualises participation as a continuum, ranging from non-participation to degrees of citizen power, reflecting how much influence individuals or groups possess in shaping outcomes (Singh, 2006; Arnstein, 2019; Hurlbert & Gupta, 2024). Recent studies, such as those by Naiga et al. (2024), pinpoint the application of this framework in analysing community involvement in large-scale projects, demonstrating its relevance in fostering inclusive governance.

At the ladder's lower rungs, participation is often symbolic and superficial, with citizens having little or no real decision-making authority. These levels include manipulation and therapy, where engagement is more about creating an illusion of involvement rather than empowering participants (Arnstein, 2019). Handout et al. (2024) further emphasise that tokenistic participation undermines trust and exacerbates existing inequalities, particularly in marginalised communities. Citizens may be informed or consulted, but without mechanisms for integrating their feedback into actual decision-making, such engagement risks remaining tokenistic. As one ascends the ladder, participation becomes more substantive. True decision-making power emerges at higher rungs, where citizens act as partners, possess delegated power, or achieve full control over decisions. At these levels, participation is meaningful and transformative, fostering empowerment and equitable outcomes (Arnstein, 2019; Quick & Feldman, 2023).

This framework is particularly relevant in the context of this study, as the findings reveal how women participated in decision-making processes related to the dam project. By involving women leaders in disseminating project information and engaging the wider community, the process moved beyond mere consultation to a more inclusive and participatory approach. Women could voice their concerns and opinions during village meetings and gatherings, contributing to a sense of shared decision-making. Arnstein suggests that the higher the levels of citizen power in decision-making, the more effective and democratic the participation, ultimately leading to more just and equitable outcomes (Arnstein, 2019; Barrow et al., 2024). However, the findings also raise questions about the extent of their actual influence. While their involvement reflects progress toward partnership, the degree of power-sharing and control over final decisions needs further analysis to determine whether their participation achieved the highest ladder rungs, symbolising true empowerment.

The findings of this study are supported by similar research, including a recent 2024 study by Khan et al., which emphasises the critical role of women's involvement in infrastructure projects. The authors highlight that incorporating women's perspectives leads to more inclusive and effective infrastructure development. They argue that when women actively participate in decision-making, the resulting infrastructure better addresses the needs of all users, promoting gender equality and

improved project outcomes. This aligns with observations by Scudder (2012) on resettlement operations, which emphasise the necessity of local leadership in improving resettlement outcomes. Scudder highlights that the contributions of local leaders, including women, are crucial in conducting baseline socio-economic surveys, organising community participation, and addressing issues arising from resettlement. Similarly, the study by Wunubo and Ibrahim (2018) on the Kashimbila Multipurpose Dam project demonstrated that public participation, particularly in decision-making and planning processes, plays a vital role in the social acceptance of such projects. These studies affirm the importance of involving local communities, especially women, in decision-making to mitigate challenges and enhance the success of large-scale infrastructure projects (Mwesigwa, 2021).

In contrast, other scholars have documented more constrained roles for women in similar contexts. For instance, Hoang (2016) found that women in rural areas often lack power and voice in managing large development projects, with their needs frequently overlooked in policies and budget allocations. Recent studies by Naiga et al. (2024) and Haddout et al. (2024) echo these findings, emphasising that women in marginalised communities often face systemic exclusion from decision-making processes, particularly in large-scale infrastructure projects. Similarly, Smith (2024) reported that women living downstream from the proposed Mongton Dam faced significant socio-economic challenges and limited participation in decision-making due to entrenched traditional and cultural barriers.

These contrasting views highlight women's ongoing challenges in achieving meaningful participation in large-scale development projects, underscoring the need for continued efforts to empower women and ensure their active involvement in such initiatives. As Handout et al. (2024) assert, addressing these barriers requires inclusive frameworks that prioritise gender equity and dismantle systemic obstacles to participation. Without these interventions, the transformative potential of women's involvement in development projects will remain unrealised

5.2 Social and Community Engagement

The Arnstein ladder of citizen participation (2019) views social and community engagement as a spectrum where citizens' roles can range from passive recipients to active participants with real influence. Community engagement is often superficial at the lower levels, serving the interests of those in power without granting meaningful input or control to the community. As citizens move up the ladder, their engagement becomes more active and influential, culminating in partnerships or full control, where communities have substantial power in shaping decisions and outcomes. For social and community engagement to be effective, Arnstein suggests that it must empower citizens by involving them as true collaborators in the decision-making process, ensuring their voices have a tangible impact on the direction and success of community projects (Arnstein, 2019).

The study findings demonstrated increased community engagement especially among women on the dam construction project in Kidunda village. This change was triggered by a dedication to

openness and information exchange, aligning with principles of participatory development (Naiga et al., 2024). Residents, including women, are kept informed about project advances, potential impacts, and decision-making processes through the regular community meetings, information sessions, and feedback mechanisms that have been developed (Haddout et al., 2024). A more inclusive and participatory project design has been made possible by this method, which has given the community the confidence to actively express their thoughts, concerns, and goals (Arnstein, 2019; Barrow et al., 2024).

The importance of women's active involvement in community engagement is further reinforced by Herrera (2024), who highlights women's critical role as custodians of natural resources and agents of accountability in development projects. Herrera argues that involving women in decision-making ensures that projects address the community's diverse needs while promoting gender equality and sustainability. These insights align with the Kidunda Dam Project, where mechanisms for inclusive engagement allowed women to contribute meaningfully, fostering a more collaborative and equitable approach to development.

By embedding these mechanisms, the Kidunda Dam Project moved toward a more collaborative community engagement model, providing a pathway for women and other marginalised groups to actively shape the project's outcomes. These findings align with broader literature that underscores the significance of involving women and the community in infrastructure development. Shrestha et al. (2022) assert that the active participation of women and community members is essential for tailoring infrastructure projects to diverse needs, fostering ownership, and enhancing sustainability. They argue that such involvement increases community support and cooperation, encourages creativity, and ensures adherence to ethical standards, thereby improving accountability and transparency (Khosravi et al., 2019; Shrestha et al., 2022).

Similarly, Scudder (2012) emphasises that including local communities, particularly women, in major infrastructure projects can address their concerns and promote sustainable development, transforming the project into a symbol of shared prosperity and collective progress. Tortajada (2014) supports this view, noting that even stakeholders with limited responsibility or knowledge can still influence critical issues, demonstrating the impact of diverse forms of engagement on project outcomes.

Additionally, Tabi and Wustenhagen (2017) highlight the importance of social acceptance in infrastructure development, noting that addressing ecological impacts and fostering a sense of local ownership is vital for successful project implementation. This is reflected in the Kidunda case, where involving women and the community contributes to broader social acceptance and the success of large infrastructure projects.

However, these positive findings contrast with those of other scholars. Despite advocacy efforts by organisations like the World Commission on Dams, Ogoi (2023) points out the challenges of achieving genuine community engagement and participatory decision-making in large-scale

development projects. Similarly, Krisanachuta et al. (2016) report that top-down approaches in post-dam rehabilitation programs in Thailand often neglect marginalised voices, including those of women. Makalela et al. (2021) further highlight that gender inequality and marginalisation remain significant obstacles to effective planning and development in rural South Africa. These contrasting perspectives underscore the complexity of fostering true participatory practices and highlight the ongoing need for inclusive approaches that address community and gender-specific challenges in development projects.

5.3 Participation in Economic Activities

The Arnstein Ladder of Citizen Participation, when applied to economic activities in a dam development project, views citizen involvement as critical to ensuring that economic benefits are distributed fairly and equitably. At lower levels of participation, local communities, especially marginalised groups like women, may be excluded from meaningful economic decision-making, resulting in benefits that primarily serve external interests. As participation increases, citizens gain more influence over economic activities, such as resource allocation, compensation, and employment opportunities. Arnstein suggests that genuine participation, where citizens have a significant say in economic decisions, leads to better outcomes, where the economic activities of the project are more likely to reflect and serve the needs of the local community, ensuring that they are beneficiaries rather than mere bystanders (Arnstein, 2019).

The construction of the Kidunda Dam has created a distinctive environment for entrepreneurial activities among women in the surrounding areas. Women capitalised on emerging opportunities to establish small businesses catering to the construction workforce's needs and the influx of workers. These entrepreneurial ventures include providing food services, lodging, and essential supplies and engaging in transport services crucial for moving materials and personnel. The findings indicate that these activities allowed women to contribute to the local economy significantly, assuming new economic roles that support the dam's construction and enhance their financial independence.

Recent studies support these findings. For example, Ojediran and Anderson (2020). demonstrates how women actively seek to influence community development and achieve empowerment through entrepreneurship. Similarly, Jiang et al. (2018) highlight the role of women in strengthening local supply chains and ensuring smooth project operations while contributing to community development. A commentary by the UK government Infrastructure and Projects Authority (*Inspiring the Next Generation of Women in Infrastructure and Construction*, 2024) underscores ongoing efforts to empower women in construction-related roles, emphasising their inclusion's broader societal and economic benefits. These insights align with the Kidunda Dam Project, where mechanisms for inclusive engagement allowed women to contribute meaningfully to entrepreneurial activities. Muller-Mahnn (2020) further underscores the importance of these economic endeavours in promoting financial independence and economic inclusion, which, in turn, support community development and regional economic vitality. These studies reinforce the

notion that women can play a crucial role in the development process and economic growth when provided with motivation, opportunity, and resources.

However, not all mega-dam projects create economic opportunities for women. Mubangizi and Simatele (2017) document the severe economic hardships faced by women displaced by the Kariba Dam in Zimbabwe, where the loss of land and resources severely undermined their livelihoods and economic stability. Similarly, Cernea (2000) emphasises that large-scale development projects often fail to address the economic repercussions for displaced populations, particularly women suffering from reduced economic opportunities and livelihoods. Kaluba and Mukupe (2000) offer further evidence of the gendered economic impact of displacement, highlighting how inadequate resettlement planning and limited access to essential resources disproportionately affected women, thus exacerbating inequalities.

A more recent finding is reflected in the study by Owour et al. (2023) and Owuor (2025) on the Thwake Multipurpose Dam in Makueni County, Kenya, which offers a nuanced lens, revealing that whereas both displaced and non-displaced experienced social and economic challenges, displaced women faced more severe economic and social vulnerabilities. The disruption of livelihoods caused by dam construction often led to shifts in gender roles, with women assuming greater economic responsibilities to support their families. These findings align with Mahat (2012), who documented similar patterns of economic disadvantage among women displaced by dam projects in Nepal, a situation similar to what Krisanachuta et al. (2016) established in Thailand.

While the Kidunda Dam Project demonstrates that dam construction can create opportunities for women to gain economic independence, these contrasting findings highlight the impact of variability. Projects that lack inclusive planning and participatory processes risk exacerbating economic vulnerabilities, particularly for women. In contrast, those integrating local perspectives and prioritising gender inclusivity are more likely to yield equitable and sustainable outcomes.

6.0 Conclusion

This study examined how women participated in and contributed to the development of the Kidunda Dam project, challenging the traditional narrative that views women as passive victims of large-scale infrastructure projects. By applying Arnstein's Ladder of Citizen Participation, the study critically analysed the depth of women's involvement in decision-making, community engagement, and economic activities, emphasising their role as active agents of change shaping. The findings revealed that women played a critical role in various aspects of the project. Respondents affirmed that they could participate in decision-making processes, engage with the community, and contribute to economic activities. These roles demonstrate a significant shift towards empowerment, reflecting the capacity of women to shape outcomes when meaningful participation is enabled. However, the study acknowledges the impact variability highlighted in the broader literature. These contrasting findings reinforce the importance of inclusive and participatory frameworks to mitigate adverse outcomes.

7.0 Recommendations

In order to ensure the transformative potential of women's participation in large-scale projects like the Kidunda Dam, it is crucial to address systemic barriers that limit their access to decision-making roles. Policymakers should adopt participatory frameworks aligned with Tanzania's National Gender Policy and Agenda 2063, which prioritise women's inclusion at all levels of decision-making. For instance, project committees should ensure at least 30% representation of women in leadership roles. This will dismantle systemic barriers and foster genuine empowerment, as highlighted in the findings. To address the economic challenges identified, the government and project stakeholders, such as DAWASA, should establish dedicated zones for women-led businesses near infrastructure projects. This includes providing access to microfinance and capacity-building programs tailored to entrepreneurial activities, ensuring long-term economic benefits for women. To prevent tokenism, which involves superficial engagement without real influence, participatory frameworks must empower women beyond symbolic representation. Policies should ensure genuine participation through shared decision-making and leadership opportunities, aligning with the higher rungs of Arnstein's Ladder of Citizen Participation.

8.0 Limitations and areas for further studies

This study provides valuable insights into the participation of women in the Kidunda Dam Project; however, it has its limitations. One of the primary limitations is the inability to assess the long-term socio-economic impacts of the project on women's empowerment, particularly regarding income sustainability and entrepreneurship. Future research needs to address this gap by exploring how such projects influence women's livelihoods, including their ability to maintain economic independence and adapt to changing circumstances. Comparative studies across different infrastructural contexts and regions are necessary to identify best practices for fostering gender-inclusive development. Further exploration is needed into the structural and cultural barriers limiting women's meaningful participation in decision-making processes. Such studies would provide valuable insights into designing more effective, gender-responsive strategies for large-scale development initiatives.

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