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# Contribution of Community Member Participation in Promoting Sustainability of Water Development Projects at Kikwe in Meru District, Arusha Region in Tanzania.

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### ABSTRACT

The main objective of this study was to examine the contribution of community members participation in promoting sustainability of water development projects at Kikwe in Meru District, Arusha region in Tanzania. To meet this objective, the study employed purposive and simple random sampling techniques, whereby purposive sampling technique was used to select the key informants who were knowledgeable and responsible for developmental issues in their respective areas of work while the simple random sampling technique was used to select respondents in the study area to represent the rest of the Kikwe community members. A total of 100 respondents were involved and were distributed in three categories; community members who were involved in filling questionnaires, local leaders and development partners who were involved in face-to-face structured interviews. The respondents in this study had varying age, sex, education levels, marital status, and most of all occupations. It was observed that majority of respondents were male while some were female. The number of male respondents was greater than that of female respondents showing that still there is male dominance in the involvement of development projects in the community. Majority of respondents were those aged between 20-25 years. Progress toward attaining sustainability of water and projects will require a shift from singularly focusing on expanding infrastructure in areas without service, to dually concentrating on achieving long-term functionality goals through improved operation and maintenance of existing supplies. It has been recommended that concerted efforts need to be initiated during the planning stage to collect information on the magnitude and extent of water shortage and number of beneficiaries; this will help to sort out the low level of water supply. Sufficient information should be used in formulating policies and in measuring progress towards the achievements of set targets and objectives.

*Keywords: Participation, sustainability, water projects, Tanzania*

### INTRODUCTION

Internationally the concept of community participation (engagement) has usually been referred to the involvement of local people in decision making process and the evaluation of development projects and programs which is associated with empowerment and respectful for use of local knowledge (Hawlett et al., 2011). Communities are given their own situations, so as to identify the solutions, which best suit them and carry out their own development work using their own resource. This frees them from dependence on the state's own body of experts and development of resources (URT, 2012). In Africa for the last twenty years ago the concept of engagement has been widely used in the discourse of development. For much of this period the concept has referred to engagement in social arena in the community or in development activities (Maganga et al., 2012).

In Africa the failures of top-down approaches has demonstrated on both developed and developing countries includes Tanzania, whereby most of the water projects reports indicate that water projects are suffer from a lack of sustainability. A possible reason for these failures is attributed to the lack of local participation in water projects (Hijzen, 2015). Recently, there is a clear commitment by the Government of Tanzania for the adoption of participatory approach as a means of empowering people to determine their own future. In this regard, the Tanzania Development Vision 2025 provides a national level guidance of water development projects in the use of participatory approach. According to the Tanzania Water Policy (2012) deliberate efforts must be made to empower the people and catalyze their democratic and community participation in seeking safe and clean water at households' level (URT, 2012).

The Brundtland Commission memorably defined sustainable development in its 1987 report (Our Common Future) as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (World Bank, 2005). Most authors perceive Sustainable Community Based Development Project differently. Roy (2003) viewed development as for the people and by the people. His argument was that, the essence of sustainable development is determined by the people within the community itself, which can be attributed to changes of the peoples' attitudes, leading to a change in their habits.

Meru district is prone to abject poverty mainly attributed to long dry spells leading to failure in most community projects. Many communities based projects facilitators and donors have initiated several communities based projects in the district as an intervention measure. These communities based projects include: World Vision, Care International, IRC, Red Cross, Action aid and Islamic relief. Community participation and water project sustainability is as old as man itself. The problem of lack or little community participation in water projects has been increasing in rates from when many countries initiated top-down approaches in many projects such as water projects (Hijzen, et al., 2005).

Community participation and water project sustainability is as old as man itself. The problem of lack and little community participation in water projects has been increasing in rates whereby most of Organizations and Government it's self-initiated top-down approaches in many water projects within a district (Hijzen, et al., 2005). Community based projects which have been phased-out, had major impacts on the community members' overall living standards but unfortunately they not exist for long time due to poor management and not achieving sustainability goal through the community itself. The new community based projects being initiated now are likely to join the graveyard path of other community projects in failing to impact community beyond the planned intervention phase. Those that plan these communities based projects may systematically fail to work out their sustainability as evidenced by many stalled projects in the district. This is a worrying trend in a district riddled with high levels of poverty, unemployment and poor infrastructure leading to underdevelopment. Therefore, this study explored the contribution of communities based projects facilitated or sponsored by World Vision, Care International, IRC, Red Cross, Action aid and Islamic relief. that have initiated several communities based projects in the district as an intervention measure. Specifically the paper examined the level of engaging community on sustainability of water project, identified approaches used to engage community on water project and examined the roles of community on sustainability of water project.

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## RESEARCH METHODOLOGY

This study was conducted in Meru district. The district was purposively selected based on evidence of existence of different community driven projects such as health, water, education, agriculture, tourism, and other projects introduced by the Government, donors and non-governmental organizations (NGOs). Advantage of conducting interview was applied in exploring information on how the selected factors for the study affects sustainability of the projects being implemented in Meru district.

In this study the descriptive Survey design were used. The descriptive design was relevant for this study since it ensured complete description of the situation as it is, making sure that there was minimum bias in the collection of data and to reduce errors in interpreting the data collected. The design was also helped to provide a detailed and highly accurate picture of the situation useful in literature review. According to Kothari (2004), descriptive survey is a method of collecting information by interviewing and administering questionnaires to a sample of individuals. Quantitative approaches have been used for data collection and data analysis. Information and opinions was collected directly from individuals who participated in community projects and those who were responsible for community development in the community. Numerical descriptions of things and their relationships have been done in this study and more emphasis is on interpretation of respondents 'views and opinions for in depth understanding of the paper (Tewksbury, 2009).

The targeted population of the study was the community driven project managers, Donor. Agencies and the targeted beneficiaries of the projects. The study was conducted at Meru district the population was 268144 according to the 2012 Tanzania National Census.

The study applied simple random sampling, Simple random sampling was used to select a total sample size of 70 respondents from 67415 targeted populations.

Data were collected using questionnaire, and documents (secondary data methods). The study used Questionnaires to respondents as a method of data collection. The researchers distributed a set of prepared questions and were filled by respondents in the study area. Researchers used open ended questions to collect data. The reasons of using questionnaires in term of open-ended questions enable large amounts of information to be collected from a large number of people in a short period of time and in a relatively cost-effective way, the results of the questionnaires can be quick and easily quantified.

The researchers used interview as one of method with an intention to get more information about the contribution of community engagement on water projects. Researchers used structured Interview. The structured interview is what the name implies. The only structure to the interview is the one that may provide the good answers. Basically, the interviewer is interested in hearing from researchers, so researchers will ask a variety of different questions to the respondent.

The data collected were summarized and presented by using frequency and percentage and presented using tables. Generally, the data collected from the field was edited, coded and re-phrased to make the point clear while maintaining the meaning accurately so researchers used qualitative data analysis and quantitative data analysis. In this study the information used to analyse statistically with the help of Statistical Package for Social Science (SPSS) computer software version 21, and Microsoft office Excel.

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## RESULTS AND DISCUSSION

### *Demographic characteristics of respondents*

The study involved a total of 60 respondents distributed in three categories where by the first category included the community members who were involved in filling questionnaires, local leaders and development partners who were involved in face-to-face structured interviews. The respondents in

this study had varying age, sex, education levels, marital status, and most of all occupations. This section will deal with presenting the characteristics of the respondents involved in this study.

### Sex of respondents

Table 1 Sex of respondents

Gender	Frequency	Percent
Male	29	58.0
Female	21	42.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Source: Research findings, 2023

Table.1 above shows that men were taken into consideration because they are the most affected by water related problems in their areas. Results obtained show that majority 29 (58.0%) of respondents were male while some other 21 (42.0%) of respondents were female. The number of male respondents was greater than that of female respondents showing that still there is male dominance in the involvement of development projects in the community. The findings as summarized in table above implies that gender is a deeply contextual phenomenon, and that what gender is and what it means to be a man or a woman is dependent on time and place, and vary depending on class, caste, religion, or ethnicity.

Women and men have been found to participate in project by offering labor force in different ways, and on different terms, not only in Tanzania, but worldwide. In addition, differences are found between women and men, as well as among different groups of women (rural-urban; rich-poor; educated, non-educated) and men. Certain kinds of work have been stereotyped as being 'male' or 'female,' because of the socialization process on the division of labour which stipulates different roles for men and women. Most rural women carry water, firewood, and farm produce on their heads, take care of children, cook and farm.

Marital Status: Results collected concerning marital status as shown in Table 2 reveal that majority 31 (62.0%) of respondents were not married, 9 (18%) respondents were married, while some few 10 (20.0%) were divorced. Men and women were considered in this study because they are both involved in the different socio-economic activity that needs water and are required to support water schemes for its sustainability; also, for the purpose of providing clear picture of their participation in water schemes.

Table 2: Marital Status

Marital Status	Frequency	Percent
Married	9	18.0
Divorced	10	20.0
Single	31	62.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Source: Research findings, 2023

The findings as presented in table above are significant in that married people that are the families tend to take the access of project services delivery seriously because it affects the livelihood and welfare of the family. It is also case that households in a form of family are most like to take at least in joining the courses their households with single occupants. Majority of respondents were single because as presented in this study majority of respondents are still challenged by unstable economic status making them to be unmarried.

### Education Status

The respondents were asked to state their levels of education and results obtained as shown in table indicate that majority 28(41%) of respondents had attained higher level education meaning that they have attended to colleges or universities, followed by 12 (24.5%) who had attained secondary level education and 10 (20%) reported to have only attained primary education level.

These finding implies that majority of the respondent have at least basic education level. This increase the likelihood to be able to participate in project as they can be equipped with specific project skills and knowledge to undertake project tasks. It is also reasonable to argue that such respondents are likely to take interest in the management of the projects and hence sustainability because these projects are directly affecting their livelihoods considering the economic contributions and the general social wellbeing.

**Table 3 Education Status**

Education Status	Frequency	Percent
Primary	10	20.0
Secondary	12	24.0
University	8	16.0
College	20	40.0
Total	50	100.0

Source: Research Findings, 2023

#### *The level of engaging community on sustainability of water project*

In this research objective the researchers again intended to establish the extent of community participation in different phases of the project and so the following questions were asked regarding this objective. In this first question that was posed to an organizations, the researchers collected varying information as have been illustrated in table below. Findings collected and presented in figure above reveals that most of the organizations in the study area does not engaging in the process of implementing water development projects from taps as has been reported by 75.5% of the respondents involved in this study, followed by 24.3% who implementing the project in the study area.

**Table 4 Organization/institution implementing community water Projects**

Organization/institution implementing community water Projects	Frequency	Percent
Yes	17	24.3
No	53	75.7
Total	70	100.0

Source: Research findings, 2023

Results also agree with results from the WHO (2016), which showed that 663 million people in the world, mostly in sub-Saharan Africa still lack access to safe and clean drinking water. Those who are not connected to the water supply system often resort to purchasing water from independent providers, often at very high prices and those who cannot afford it, consume unsafe polluted water, which in turn contributes to the spread of water borne diseases including typhoid fever, cholera, dysentery.

#### *Community engagement in implementation of water projects*

In this question that was posed to an organization, the researchers collected varying information as have been illustrated in table below. Results obtained from the study as shown in the figure above reveal that among 70 respondents, whereby (17.1%) reported that community involvement in water development projects is essential for water project sustainability particularly through conducting of inception meeting, 29 (41.4%) reported to be engaged in sustainability of water project through conducting awareness with community while 29 (41.4%) participated in all of the above mentioned ways. From these results the study reveals that community participation is integral in sustainability of water development projects in differing localities.

**Table 5 Involvement of the community in implementation of water projects**

Involvement of the community in implementation of water projects	Frequency	Percent
We conduct Inception meeting	12	17.1
Conduct Awareness meetings with the community	29	41.4
All of Above	29	41.4
Total	70	100.0

Source: Research findings, 2023

These findings are supported by Dungumaro et al. (2003) who asserted that, the emergence of participatory approaches demonstrates the importance of local communities' consent in taking part in public decision-making processes, especially on issues that directly affect their welfare. In this context, the

local community participation could provide an important database, experience and ideas that could lead to practical, relevant, achievable, and acceptable solutions to water related problems.

#### *Awareness on implementation of water projects*

This question was asked to the respondents particularly to the community members if they aware and implementing any of water development project taking place at their area. It was important to assess the implementation of water projects in the community so as to determine if they would be able to give relevant information concerning water development project issues. Results obtained are summarized in table below

**Table 6 Awareness of the community towards project implementation**

Awareness of the community towards project implementation	Frequency	Percent
Yes	17	24.3
No	53	75.7
<b>Total</b>	<b>70</b>	<b>100.0</b>

**Source: Research findings, 2023**

The findings as shown in Table 6 above reveals that most of the community members are not aware of the project implemented in their community. Where by only 17 respondents agreed that they implement water project while 53 respondents from the were not implement water project. Most of the respondents also admitted that they were not well-informed during establishment of water projects at their villages. They said their village leaders just informed them about the project but they didn't ask them to give out their views about how things should go about the project. Moreover, the study findings reveal that most respondents were not satisfied with the way they communicate with their project leaders

#### *Approaches used to engage community on water project*

The Implementation phase of the Project is where the project is put into action. The Implementation phase consist of four sub phases: Execution, Monitoring & Control, and Move to Production. The researchers again asked the participants in this study as to what method was used during the implementation phase of the water project in the study and the results

Results indicate that majority (84.3%) of the respondents reported that the project implementation phase uses the bottom-up approach and has made it easy for them to participate fully in the implementation of the water project by providing labour, (15.7%) of the remaining respondents in the study area uses a top-down approach and their participation only involved contribution of 20% of the total implementation costs given in terms of voluntary labour and materials like stones, sand, and bricks.

#### *Benefits of water to the community*

In this first question that was posed to the community members the researchers collected varying information as have been illustrated in table below. Findings collected and presented in figure above illustrate how people within the community in the study area benefit from several water projects initiated in their specific area. From 70 respondent it has been reported that 54.3% of the respondents involved in this study increasing their income through establishing related water activities. Followed by 27 % benefit through initiation of agriculture activities particularly irrigation. Other 4% and last 1% benefits through home activities (domestic) and industrial activities (Table 7).

**Table 7 Benefits of water to the community**

Benefits of water to the community	Frequency	Percent
Increase source of income	38	54.3
Agriculture activities	27	38.6
home activities	4	5.7
industrial activities	1	1.4
<b>Total</b>	<b>70</b>	<b>100.0</b>

**Source: Research findings, 2023**

Results in this study agree with the statement by WHO that in 2015, an estimated 91% of the world's population had access to an improved drinking-water source, thus, meeting the Millennium Development Goal 7 target of halving the proportion of the world's population without sustainable access to safe water (WHO, 2016). Results also agree with results from the WHO (2016), which showed that 663 million people in the world, mostly in sub-Saharan Africa still lack access to safe and clean drinking water. Those who are not connected to the water supply system often resort to purchasing water

from independent providers, often at very high prices and those who cannot afford it, consume unsafe polluted water, which in turn contributes to the spread of water borne diseases including typhoid fever, cholera, dysentery, and diarrhea (Prasad, 2006; UNICEF and WHO, 2012; Masanyiwa et al., 2013).

### ***Factors hindering the sustainability of water projects***

Under this objective the researchers present the results as collected from the study area concerning the factors that limit the participation of community members in in water development projects implemented in their localities.

The first is lack of support: This was among the factors that has been reported to in this study by the community members. It is observed here that the community members report there is no support from the project team that facilitate or motivate them to be involved in the water projects.

**Table 8: Factors hinders sustainability of water projects**

<b>Factors hinders sustainability of water project</b>	<b>Frequency</b>	<b>Percent</b>
lack of community participation and awareness	23	32.9
lack of support from the community and government	20	28.6

**Source: Research findings, 2022**

Results as presented in Table 8 above show that majority (28.6%) agreed that the lack of support for community members to be involved in water project inhibits their participation. It was also reported that village leaders just informed them about the project but they didn't ask them to give out their views about how things should go about the project. Other results in this study show that (32.9%) lack community participation and awareness. These results imply that the use of top-down approaches in the implementation of community projects still is pervasive in our localities and so the sustainability of the projects is very much jeopardized.

Second improper use of resources: The researchers also found out that improper use of resources in the local settings is an obstacle towards community members' participation in water development project.

## **CONCLUSIONS AND RECOMMENDATIONS**

### ***Conclusion***

The main objective of the paper was to examine the contribution of community member's participation in promoting sustainability of water development project in Kikwe an administrative ward in Meru District of Arusha Region in Tanzania. The main objective was supported by three specific objectives namely to examine the level of engaging community on sustainability of water project, to identify approaches used in promoting community participation in sustainability of water development projects

Most of the respondents also admitted that they were not well informed during establishment of water projects at their villages. They said their village leaders just informed them about the project but they didn't ask them to give out their views about how things will be about the project. Moreover, the study findings revealed that most respondents were not satisfied with the way they communicate with their project leaders. It is generally concluded from the findings in this section that there is still low community involvement in water development projects

Researchers in this study observed that several participatory approaches are employed in the involvement of Results obtained in this study has shown that majority of the respondents involved in this study reported that, most of water projects implemented in the local communities are based on top-down mode of recruitment which is criticized as an umbrella for district and ward officials to use community members as rubber stumps to get funds from donors and consequently regarding it as ineffective participation. Collected result in this study revealed that the government still uses top-down approach which does not allow the beneficiaries or community to participate in other activities related to the project like planning process, problem identification, decision making, implementation, monitoring, and evaluation.

Most of the community members in the study area fetch their water for various households use from taps followed by those who fetched their water from wells in their localities. It is concluded in this study that most people in urban and rural areas still have multiple sources of water for household use as observed in this study and that community participation is integral in sustainability of water development projects in differing localities. Among the roles reported in this study to be contributing to promoting sustainability of water development project.

The main hinderance is lack of support for community members to participate and improper use of resources while the indirect factors include setting of water prices, poor quality of service delivery, absence of payment receipt for the service, long distance from household to the main water source and existence of alternative water sources.

### ***Recommendations***

The following recommendations were drawn from the conclusion:

Concert efforts need to be initiated during the planning stage to collect information on the magnitude and extent of water shortage and number of beneficiaries; this will help to sort out the low level of water supply. Sufficient information should be used in formulating policies and in measuring progress towards the achievements of set targets and objectives.

Legal measures should be taken against project and grassroots local leaders who swindle project funds; this will serve as precedence to other future corrupt and dishonest leaders. The study conducted shows that there was no transparency on the expenditure of project funds which gave an indication of embezzlements which is a critical problem for many development projects in developing countries. In order of water projects to be sustainable needs strong financial sources to cover operation and maintenance costs.

Capacity Building. Proper training and technical support at all levels and for all groups engaging in water project implementation and management should given priority. Water attendants should be given basic technical training which serves a purpose for minor repairs in case of system breakdowns.

People should be mobilized to build interest in sustaining the initiated project services. Mobilization should start at the initial stage of project implementation. Community members should be well briefed at the beginning of water project about cost sharing.

Frequent facilitation, support, and monitoring from relevant institutions at different levels of project implementation are important and highly recommended to guarantee project sustainability. The decision-making processes should be transparent and consultative, involving all key stakeholders, to determine how these services will be provided and managed to the standards expected.

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