International Scholars Journals

African Journal of Water Conservation and Sustainability ISSN 2375-0936, Vol. 10(1), pp. 001-005, October, 2022. Available Online at www.internationalscholarsjournals.com © International Scholars Journals

Research Article

Community participation in rural water supply projects: Influencing factors and challenges in nyasa district

Stephen J. Bakari [1*] and Fokas Abel Mbunda[2]

[1]Department of Agriculture, Sokoine University of Agriculture, Morogoro, Tanzania

[2]Department of Agriculture, Henan University, Kaifeng, China

Received: 18-Jul-2022, Manuscript No. AJWCS-22-69533; Editor assigned: 21-Jul-2022, PreQC No. AJWCS-22-69533 (PQ); Reviewed: 05-Aug-2022, QC No. AJWCS-22-69533; Revised: 19-Oct-2022, Manuscript No. AJWCS-22-69533 (R); Published: 27-Oct-2022.

ABSTRACT

This study investigated community participation in rural water supply projects in Nyasa district as a case study, where several community water supply projects have been initiated by the government. Projects have always collapsed once the country government pulls out, cases attached to low community participation were always experienced as now the study intends to explore the influencing factors and challenges for participation. The study was guided by the given research objectives named to explore the influencing factors and challenges for community participation in rural water supply projects in the study area. Non-experimental design was used to collect data in a study area. The respondents were stratified in two categories such as the project beneficiaries and key informants. Purposive sampling technique was used to select key informants while simple random sampling was used to select household heads benefited with the project. A sample size of 98 was selected from a target population of 4,967 household heads. The interview questionnaires, observation through checklist and documentary review were used to collect both primary and secondary data. The collected data was analyzed using both qualitative and quantitative techniques by IBM SPSS v.20 to ensure triangulation. The study concluded that majority of the community members participated in water supply projects in implementation phase by material incentives than in other levels, the community awareness was a significant factor that influenced negatively in people`s participation and financial resources is a significant barrier for the community to participate in water development project. Then the study recommended that community members have to be actively involved in all stages of the project life cycle including decision making in planning, frequent seminars and workshops for building awareness and empowering women on the importance of participating among and budget should be allocated and timely disbursed to facilitate the community participation in water supply projects.

Keywords: Community participation, Rural water supply, Influencing factors, Challenges

INTRODUCTION

The involvement by its individual members in the community project plays a vital role in sustainability of the projects. The critical projects like that of water needs to be more participatory on its implementation in order to bring on desired outputs in an efficiently manner. Rouse, emphasized that; water plays a vital role in the survival of living things, together with the millennium development goals declaration of the year 2000 which aimed at reducing by half the world's population without access to sustainable safe drinking water by 2015 [1,2]. Participatory water project in planning and implementation creates a base for ownership sense for sustainable supply of adequate safe water, sanitation and hygiene services, in all the citizen's report cards they constantly make recommendations to the development partners to involve the community in project planning and throughout the project cycle to enhance ownership of the projects by the community in line with the new constitution [3]. In Tanzania, since independence in 1961, the government wanted to have

*Corresponding author. Stephen J. Bakari, E-mail: stephen.bakari@sua.ac

participatory planning in the economic planning process, with a view to attaining a bottom up planning [4]. The Tanzania government and international community calls for people involvement in development process that direct affect and contributes to their welfare in all program aspects such as education, health, transport and communication prior to any other. There should also be considered values, norms, social belief and opinions of the local people through which people are affected directly or indirectly by development interventions to complement the sustainability of development projects.

Problem statement

Many of studies show that community projects often collapse due to various factors, a possible reason for this failure is attributed by the lack of local participation in water projects, Oakley cites an analysis of a Danish funded water supply project in Tanzania, where he observes that participation had ranged from non-participation and manipulation over information and consultation to some degree of partnership and delegation of power [5,6].

Despite all the government efforts of delegating the authorities to the local government authorities, Nyasa district still with poor achievement in water supply such that only 39 villages with water supply services out of 84 villages of the whole district less participation of community in water project planning and implementation considered as root cause [7]. Therefore, this research investigated the influencing factors and challenges of community participation in rural water supply projects in Nyasa district.

LITERATURE REVIEW

Community participation in Tanzania

The Tanzanian discourse of participation is rooted in African socialism and Nyerere's concept of self-reliance (kujitegemea), in which citizens are obliged to contribute their labour and resources in a community effort to build the nation (kujenga taifa) [8]. Community participation is one of the significant factors towards successful development projects particularly that of water. Nyasa district provide support to community in the management of the water supply services for sustainability by organizing and facilitate the establishment of COWSOS (Community Owned Water Users Organization) [9]

Driving forces to community participation

Community participation is a social process whereby specific groups with shared needs, often but not always living in a defined geographical area, actively pursue identification of their needs, make decision and establish mechanism to meet these needs [10]. SDG, addressed that at least one in four people likely to be affected by recurring water shortages, it then intends to take a new path more international cooperation, protecting wetlands and rivers, sharing a water treatment technology that leads to accomplishing this Goal [11]. That reduction targeted to facilitate some enabling environment for sustainable water supply projects including participatory water project planning and implementation to create a base for ownership sense [12,13].

Obstacles for community participation

Oakley cites an analysis of a Danish funded water supply project in Tanzania, where he observes that participation had ranged from non-participation and manipulation over information and consultation to some degree of partnership and delegation of power. Afsar in his study shows that poor people's participation in local development activities is very limited; community participation in the decision making process has been minimal. Because of the over class, bias and widespread corruption there has been severe neglect of the poor and the disadvantaged in the decision making process. While Khan identifies bureaucratic domination in the local councils, lack of knowledge, and lack of expertise in technical matters are the root causes for non-participation.

METHODOLOGY

The study area

The study conducted in Nyasa district where the coverage of water supply services in Nyasa district is at 48%, which is below to the target set by the National Water Sector Development Strategy (NWSDS 2006-2025) by 2015 coverage for rural should be 62%, where one of the reasons being attributed to poor community participation that leads to the water projects to lack sustainability [14]. The sample of 98 respondents (household head) was taken from two wards in Nyasa district.

Research design

Authors employed non-experimental design particularly cross sectional research design to collect both qualitative and quantitative data where primary data were collected from household heads in the field using questionnaires structured with couple of questions also the key informants interviewed using checklist containing relevant questions. Also accessed potential secondary data by reviewing relevant documents including strategic plan, journals, and water research reports and published papers.

Data collection, processing, analysis and presentation

After the data being collected from the field, the data were then edited, compiled, classified and summarized. This process was conducted using IBM-SPSS through which authors applied descriptive statistics and inferential statistics where by binary logit model was used to identify the effect of explanatory variables. The dependent variable was community participation, which is a binary variable. Since the dependent variable in regression is binary, the analysis was conducted by index model, log it be applied to analyze a specific objective two. The analyzed data results have been presented by using graphs, charts and tables to convey a meaningful interpretation and discussion of the findings.

RESULTS AND DISCUSSION

Characteristics of respondents

The total number respondents interviewed were 98 from two wards of Nyasa district. The study was conducted in a manner that both men and women having different age, sex, education

status and occupation were considered by the authors.

Levels of community participation in water supply projects in different project phases

Participation in planning phase: Having few percentages (13%) of the respondents who said that was involved in decision in project plan is an indication that community members were not much involved in decision making which could lead to unsuccessful of the project. As shown in a Figure 1.

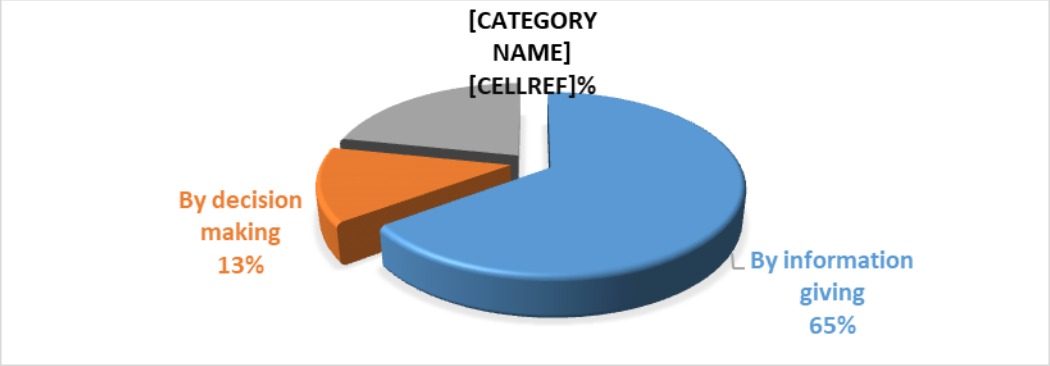

Figure 1. Different means of community participation in planning phase.

Participation in implementation phase

Findings shows that 76% of the respondent argues that they participate through material incentives (contributing money and labour) to enhance implementation of the project than in information giving and passive participation as shown in the Figure 2. The intention of the people is to have the access to safe and clean water in a very short distance. It has been observed that the construction of water points, the community members were engaged much in material incentives by contributing construction materials like stones and clearing sites as one shown in the Figure 3.

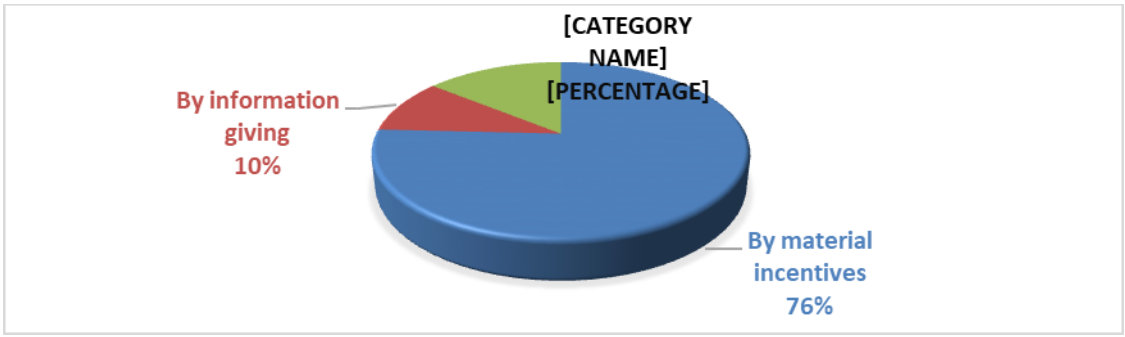

Figure 2. Different means of community participation in implementation phase.

Figure 3. One of the stones bundles collected by community member to be used in constructing the water point allocated near his living area and other shows the community members participating as man power clearing the construction site.

Participation in monitoring and evaluation phase

Most of the respondent about 88.8% argued that they do not participate in monitoring and evaluation of water supply projects through protection and security of the constructed water supply projects more over findings from key informants shows that the community do not participate during the planning and appraisal stage of the project except in implementation stage, where they participate by cutting the tree and make clearing of the site to construct the water storage and flow points and make security of

the materials as also accepted by 80.7% of the respondents.

Factors influencing community participation in rural water supply projects

Logistic regression model: The modal variables accounted for 54.9% and other variables contributed for 41.2% because the Nagelkerke R square=0.549. The results indicates that the sex and awareness of head of household had negative influence on probability to participate in water supply projects by household also significant, these findings imply that, sex and community awareness may lead to the decrease in stimulus of engaging in water project activities. The results also indicated that age, education level and community awareness have negative influence but not significant while marital status and occupational status having influenced positively but not significant on probability to participate in water supply projects in Nyasa as shown in a Table 1.

Table 1. Logistic regression result (variable in the equation).

Independent variables	B	S.E.	Wald	df	Sig.	Exp (B)
Age	-.445	.305	2.129	1	.145	.641
Gender	-1.693	.730	5.374	1	.020	.184
Education level	-15.399	32152.317	.000	1	1.000	.000
Marital status	20.556	17062.861	.000	1	.999	.874
Occupational status	20.342	40192.812	.000	1	1.000	1.662
Community awareness	-1.999	1.404	2.027	1	.048	7.381
Financial resources	.442	.848	.271	1	.602	1.556
Constant	-5.925	50363.644	.000	1	1.000	.003
Modal summary						
-2 Log likelihood	Cox and Snell R square			Nagelkerke R square		
112.574a	.412 41.2%			.549 54.9%		
Significant at 0.05 since P<0.05						

Challenges facing community participation in rural water supply projects

The findings indicate some challenges that cause people not to participate fully in the water supply projects. These challenges are associated with financial resources, management capacity, education and information sharing as shown in the Figure 4.

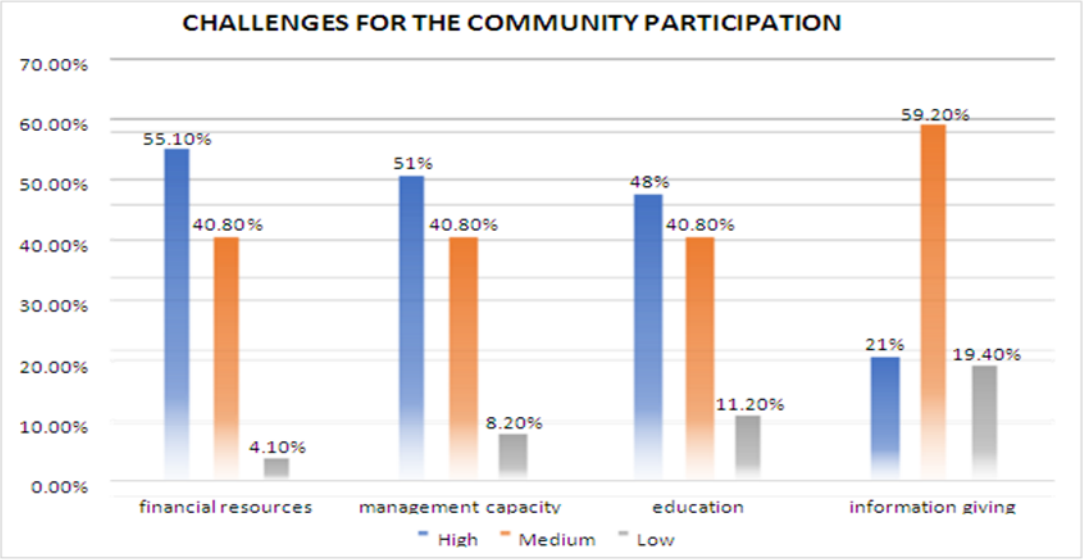

Figure 4. Challenges for the community participation.

Financial resources

Most of the people argued that financial resource is a significant barrier for them to participate in planning, implementation and monitoring of the water supply project, that 55.1% of the respondents ranked financial resources as higher challenge compared to other challenges. This implies that people fail to participate in water supply project activities because they will need to let their resources to be used when they should participate.

Management capacity

The capacity of the community members to participate and contribute in water supply project activities in the issues of management was found to be a very high challenge, as given by 51.0% and 40.8% of the respondents who ranked management

capacity as high challenge to their participation which implies that for the successful community participation, people need to be given with the skills and knowledge of project management in such a way that they can manage them.

Education

Education is the password to enter into the development intervention. Meaningful participation in development project largely depends on the educational status of community people the findings showed that about 75.5% of the respondents have only primary education. Illiterate people are often beheld down upon as problematic as they more often cannot articulate their demands and put forward their opinions in a systematic way. Hence, their illiteracy is leading them to nonparticipation.

Information sharing

The findings discovered that 59.2% of the respondents ranked information sharing in a medium level which implies that, this challenge is not much given as an obstacle to their participation compared to other challenges.

CONCLUSION

Most of the people in rural areas participated in water supply projects by involving themselves more in implementation stage (manpower and material incentives) than in planning (decision making) and other levels. The findings show that people participated more through providing labour in collecting construction materials like stones, sand and graves, clearing water point and watering the wall but, only few other people of who cannot participate by providing manpower participates by information giving and very few in decision making. Community awareness and Sex was a significant factor that influenced negatively in people`s participation hence limiting their ability to contribute towards planning and implementation of community water projects in the study area, because they were not aware on their roles, obligations and importance of participating in water supply projects conducted in their areas. Financial resource is a significant barrier for the community to participate in water development project, delay in disbursement and shortage of funds from the government, the government does not disburse funds at required time hence cause implementation of water supply projects and participation unsuccessful.

RECOMMENDATIONS

The authors recommended that in order to improve communities participation and support to water supply projects and achieve access improvement, community members have to be actively involved in all stages including decision making in planning, implementation as well as management and monitoring stages at the district, ward and village level.

The study recommends frequent seminars and workshops for building awareness of the importance of participating among people as well as emphasize on women participation on water supply projects activities. Also, we recommend that financial resources should be allocated to facilitate participate of the community in water supply projects, however budget should be allocated and timely disbursed to the allocated villages and wards to accelerate the participation.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Rouse MJ (2013). Institutional governance and regulations of water services: The essential elements. 2nd edition, IWA Publisher, London, England. 12.
2. Oakley P (1991). Projects with people: The practice of participation in rural development. Internation labour office publisher, Geneva, Switchzer land. 297.
3. Khan MM (2009). Decentralization in Bangladesh: Myth or Reality? AH Development Publishing House, Dhaka, Bangladesh.
4. Ladele AA, Tackie-ofosu V (2013). Gender analysis of commitment and participation in rural water supply project in Suhum Kraboa Coaltar District of the Eastern Region of Ghana. J Sustains Dev Afr. 15: 86-98.
5. Aldasher G (2003). Electrol Participation based on Social Exchange: Theory and Evidence. Bocconi University publication, Milan, Italy. 1-28.
6. Hulchanski JD (2010). Community Development: Theory and Practice UCS 1000. University of Toronto, Toronto.1-15.
7. Jaggi S (2003). Descriptive statistics and exploratory data analysis. Indian agricultural statistic Institute (IASRI). 1: 1-8.
8. Katz T, Sara J (2010). Making water supply sustainable. Recommendation from Global Study; UNDP World Bank Water and Sanitation Program.
9. Kothari CR. (2004) Research Methodology: Methods and Techniques. 2nd Edition, New Age International Publishers, New Delhi, India.
10. Ruderman M (2000). Resource guide to concepts and methods for community based and collaborative problem solving. Women's and Children's Health Policy Center, Department of Population and Family Health Sciences, Johns Hopkins Bloomberg School of Public Health. 1-62.
11. Mugenda A, Mugenda O (2003). Research methods quantitative and qualitative approaches. Africa Centre for Technology Studies (ACT), Nairobi.
12. Samad DM (2002). Participation of the Rural Poor in Government and NGO Programs: A Comparative Study. Asia Pac J Rural Dev. 9: 5.
13. International Monetary Fund (2008). United Republic of Tanzania: Poverty Reduction Strategy Paper: Annual Implementation Report. IMF Country Reports International Monetary Fund Publication Services, Washington, D.C.
14. URT (2005). Poverty and Human Development Report 2005. Mkuki na Nyota Publishers, Kariakoo, Tanzania.