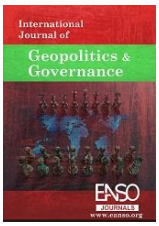
Article DOI: https://doi.org/10.37284/ijgg.4.1.3007



International Journal of Geopolitics and Governance
ijgg.eanso.org
Volume 4, Issue 1, 2025
Print ISSN: 2790-9549 | Online ISSN: 2790-9557
Title DOI: https://doi.org/10.37284/2790-9557

EAST AFRICAN NATURE & SCIENCE ORGANIZATION

Original Article

Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya

Kelvin Kiprono[1] *& Maurice Sakwa*[1]

[1] Jomo Kenyatta University of Agriculture and Technology.
[*] Author for Correspondence ORCID ID: https://orcid.org/0009-0009-8971-4897; Email: andamproject@gmail.com

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Date Published: *16 May 2025*

Keywords: *Public Participation of Youth, Development of Water Projects, Baringo County.*

ABSTRACT

Public participation has remained a significant factor in Kenya's development since the new constitution was enacted in 2010. Still, many challenges are visible regarding the extent to which youths play a part in the creation and execution of water projects, among others. These observations invite development researchers to conduct more studies to understand the drivers of youth involvement in water projects. This study aimed to investigate the drivers of youth participation in the development of water projects in Tiaty Sub-County, Baringo County. This is so because, despite Kenya, and by extension Baringo County Government's well-recognized framework for public involvement, little is known about how it has affected or been applied in youth's engagement in the water projects in the county. The study was anchored on three theories: Chambers' Participatory Rural Appraisal; Arnstein's Ladder of Citizen Participation; and Sen's Capability Theory Approach. The study used the survey design used and targeted a population of 52,000 youth residents of Tiaty Sub- County, Baringo County. Moreover, the study targeted officers working in Baringo County and, officials of water development projects. Cluster sampling was used to narrow down the region (based on wards) after which systematic sampling helped to pick the final respondents. Simple random sampling was to select the wards from which data was collected. To choose respondents from among the departmental employees and water project officials, stratified sampling was employed based on their roles and positions in governance. A total of 158 observations were included in the analysis, with a model fit showing a significant overall effect (LR chi2(28) = 128.31, $p < 0.001$) and a pseudo-R-squared value of 0.6145. Overall, the findings highlight the importance of community-based communication strategies and addressing access barriers to improve youth involvement in water development initiatives.

APA CITATION

Kiprono, K. & Sakwa, M. (2025). Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya. *International Journal of Geopolitics and Governance*, *4*(1), 130-149. https://doi.org/10.37284/ijgg.4.1.3007

CHICAGO CITATION

Kiprono, Kelvin and Maurice Sakwa. 2025. "Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya". *International Journal of Geopolitics and Governance* 4 (1), 130-149. https://doi.org/10.37284/ijgg.4.1.3007

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

HARVARD CITATION

Kiprono, K. & Sakwa, M. (2025), "Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya", *International Journal of Geopolitics and Governance*, 4(1), pp. 130-149. doi: 10.37284/ijgg.4.1.3007.

IEEE CITATION

K., Kiprono & M., Sakwa "Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya", *IJGG*, vol. 4, no. 1, pp. 130-149, May. 2025.

MLA CITATION

Kiprono, Kelvin & Maurice Sakwa. "Drivers of Public Participation of Youths in Development of Water Projects: Evidence from Tiaty Sub-County, Kenya". *International Journal of Geopolitics and Governance*, Vol. 4, no. 1, May. 2025, pp. 130-149, doi:10.37284/ijgg.4.1.3007

INTRODUCTION

The world has been embracing the concept of decentralized government due to increased demand for inclusivity, empowerment of citizens and more effective management of resources. The other idea underlying increased decentralization is to enhance decision-making capabilities of people at the community level (Silva & Bassi, 2012). USA, which is considered thefather of democracy, has been practicing decentralization through a federalsystem of governance. Federalism replicates in Germany and other Scandinavian states like Sweden (Howlett et al., 2013). Kenya too has realized the need to adopt decentralization in its governance practices, more so in the last one decade. Guided by a new constitution, the country has transitioned to a decentralized system of governance, marked by the establishment of 47 county governments (Musyoka, 2017; Obiero, 2018). The chief purpose of this transition is that it allows citizens to engage in the process of development in their communities in particular and the country at large (Musyoka, 2017). Obiero (2018) holds that the move to a decentralized governance system arose from the immense shortfalls of the centralized governance system. Precisely, centralized governance deprived the citizens off the opportunity to get involved in the birth and enforcement of public policies and development projects and programs (Obiero, 2018).

The youths are central in the global development discourse. Youth refer to the transition from a period of dependence, often referred to as childhood to a period where a person becomes independent known as adulthood. United Nations Youth (n.d) defines youths based on age. In this context, youths are people aged between 15 and 24. African Youth Charter, on the other hand, contends that youths are individuals in the age bracket of 18 and 35 years. According to Article 260 of Kenya's 2010 Constitution, youths are those aged 18 and 34 years (National Gender and Equality Commission, n.d).

Since its inception in the early 1960s as a component of government policy pertaining to urban renewal programs in the United States and the United Kingdom, empirical research on public involvement around the world demonstrates that the idea and practice have advanced significantly. Public engagement has matured in the United States and the United Kingdom in recent decades, appearing in a wide range of planning and design situations (Armitage, 1988). A focus the European Union shows the treatment of youths as homogenous group in the development and decision-making spheres, culminating in advocacy for the representation of young people at the European Union. According to Thijssen (2021), this manifests in the renewed EU Youth Strategy 2019-2027. The narrative about youths and participation in development in Europe overlooks many of the intricacies, distinctions, and nuances associated with this demographic. The youths' ambitions, unique backgrounds, and lived experiences influence the issues that interest them and which they are willing to advocate. This observation finds justification in the 2019 Eurobarometer, which shows that youths that are enrolled in learning institutions of all levels often develop interest in environmental issues, while those that are not enrolled in learning institutions pay more attention to socio-economic inequalities. Unsurprisingly, other dissimilarities

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

can be among other groups of youths. Differences between the youths significantly affect their participation level in formal development structures. Predominantly, marginalized and young people from disadvantaged backgrounds are less able to take part in development processes, impacting negatively on their lives (Thijssen, 2021).

Africa lags in matters of public participation. While studies reveal an overall improvement in the uptake of public participation concepts in the region's development, there is evidence of low participation, more so with reference to vulnerable populations among them women and youths (Mutisya, 2018). Countries with a somewhat impressive record of public participation in the African continent include South Africa, Malawi, Lesotho, and Zimbabwe (Maphazi, 2012; Mazruki, 2015). Still, evidence from different studies reveal that public participation in most countries in African remains on paper. The situation is dire when examining policy implementation, with indications that people across the continent hardly get involved in policy implementation (Mazruki, 2015). A study focusing on Uganda identified the challenges affecting youth involvement in community development projects. They include lack of active government, unskilled labor force, overpopulation, limited economic resources, low education level, lack of political will and health disparities (Ashaba, 2016)

In Kenya, public is rooted in the 2010 constitution. The constitution paved way for decentralized governance to bring the government and the people closer together through the formulation of county governments. Public participation is a national value and principle (Article 10 (2)). It also features in other articles of the constitution, for instance, it is emphasized in environmental management (Article 69 (1) (d)). The principle is also fundamental in the management of parliament business (Article 118 (1) (b)). Public participation is an object of decentralization of governance as visible in (Article 174 (c) and (d)). Besides, the principle is public participation is integral in the governance of towns and cities in Kenya as captured in (Article 184 (1) (c)). County assembly procedures dwell on public participation while conducting business (Article 196 (1) (b)). Public finance accountability also rests on the value and principle of public participation (Article 201(a) (Government of Kenya, 2010).

Last, but not least, public participation is a function of power vested upon cunty governments (Fourth Schedule, Part 2 (14)). County Governments Act No. 17 (2012) Part VIII is the basis for facilitating the application of public participation. In line with County Governments Act No. 17 (2012), the County government of Baringo developed initiated and enacted the Public Participation in Governance Bill (2014) to put to effect paragraph 14 of part 2 of the Fourth Schedule of the Constitution of Kenya (2010). In effect, Public Participation in Governance Bill (2014) enabled the county to begin embracing and enforcing public participation as required by the constitution (Government of Kenya, 2010).

Studies focusing on the drivers of public involvement in counties across Kenya have identified the absence of an effective county participation framework, lack of goodwill among the leaders, and resource insufficiency as main reasons undermining the enforcement of public participation (Papa, 2016). Establishing the impacts of public participation on county development projects has also been among the goals of researchers. Results from these studies point to the insufficient opportunities as a hindrance to the embrace of public participation in counties across Kenya. Revelations from the studies are that a few people were involved in agenda-setting and planning of public projects in counties, mostly those at the top, leaving many out. Consequently, only a few people got participating in project execution and evaluation of projects (Mutisya, 2018). In a study conducted by Opondo (2017) focusing on public participation in budgeting process, it was established that countries lacked effective frameworks to actualize public participation, leading to low participation levels among the citizens in the counties in the budgeting process.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

By indication, many young people, as a result of various reasons, including lack of participation framework and proper leadership perceive the opportunities for public participation negatively, keeping them away from projects in the public domain in their communities.

The first county government of Baringo, which was established in 2013, sought to implement public participation as was stipulated in the constitution (Mukund, 2018). Some of the actions involved the engagement of citizens across the county in agenda setting, planning, budgeting, involvement of the public in procurement of services of goods, and oversight of projects. This was facilitated by the formation of Project Management Committees (PMCs) by the county government (Institute of Economic Affairs, 2015). Under this model, the county government intended to act as an agent, ensuring that the citizens were directly connected to public projects and processes, making people key players in making public decisions. The county government was to facilitate accountability by letting the people take the lead (Government of Baringo County, 2017). One area that the county has grappled with is the provision of water to its citizens. Being a semi-arid area, water is not easy to access. However, since the beginning of devolution, more than 200 water projects have been implemented in Baringo County. 15 of these projects are government-funded bore- holes, 100 of them are gravity systems while 23 are water pans. Also, there has been a rehabilitation of 61 existing water supply schemes, including, and pipeline extensions (Baringo County, 2021). However, no report shows the level of public participation of youth in the various water projects implemented in Tiaty Sub-County considering their importance in the youth's livelihood.

Notably, in order to guarantee public ownership of governance, foster social and economic development, and bring government services "closer" to the people, the county government of Baringo has thus implemented public participation for development projects in Baringo. Despite the endeavor, there seem to be substantial gaps in the understanding of the relationship between public engagement and the development of water projects especially in Tiaty Sub-County where water is a major developmental agenda and particularly among the youths, who appear marginalized, hence the need for the present study. The main objective underlying the increased advocacy youth involvement in development projects is that governments cannot maximize gains from the projects without involving youths. Specifically, Tiaty Sub-County will not maximize the benefits of its water projects to the population without active and meaningful participation of youths. Notably, the youths constitute majority of the total population in Baringo County (63%) (CIDP, 2021) and by extension, Tiaty Sub-County, making their involvement in development projects essential for attaining sustainable outcomes. However, studies examined here indicate inadequate level of youths' involvement in development projects, including water projects, which adversely affects the outcomes.

According to the Baringo County Integrated Development Plan 2020-2021, the youth population, those between 19 years to 34 years constitute 63% of the total population. This implies that the youth population is pivotal in the development of the county. The CIDP also admits after an extensive survey that public participation index for youths is approximately 33% (CIDP, 2021) and this implies a low level of involvement and inadvertently demands an examination of the forces impacting on public participation of youth in the water projects in the county. Unfortunately, the CIDP report does not reveal much about public participation of youth in water project. However, one can deduct that public participation of youth in water projects is low, given the low participation index (33%).

Statement of the Problem

Involving the youths in development projects is a matter that invites debate in the development circles globally, nationally, and locally, owing to a number of reasons. First, the ideals, knowledge, and experiences possessed by youths makes them uniquely qualified to advance the courses that

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

matter to them in development projects. Secondly, youths comprise a large percentage of the local population; as such, their voices largely reflect the needs of communities. Youths comprise 63% of the population in Baringo County and by extension, Tiaty Sub-County (CIDP, 2021). Last, it is rational to conclude prioritizing youths in development is necessary given that youths are a majority population and energetic and their involvement in projects can optimize development outcomes. The failure to do so culminates in negative perceptions regarding public participation and the loss of morale to engage in projects and their related gains.

Various development organizations and agencies have been involved in the development of water projects in Baringo County. Recent reports show complaints from the residents of Tiaty Sub-County, indicating low participation, and consequently, the failure to meet the development objectives. As noted in Koech's (2020) report, various issues are affecting the actualization of water projects to the locals. The core issue is the diversion or complete replacement of projects despite such projects having been identified and prioritized by the residents. Another issue is the high illiteracy level in the region, prohibiting the residents from probing the stalled or diverted projects (Koech, 2020). The complaints are indicators of problems of participation, which adversely influence their impacts on the youths and the general population. Participation of youths in water projects can take various forms, including empowering them to provide their views, encouraging them to volunteer, and including them in project leadership and management teams. Statement from the World Bank indicates that Kenyan youths are insufficiently facilitated to participate in social and economic development (Wakiaga, n.d). However, there indicators that the county government of Baringo is determined to suppress the gun-mentality and violent conflicts that engulf the youths and instead enhance their participation in life-changing development activities ("Tiaty Youth Urged to Stem Out from Cattle Rustling Activities," 2022; Baringo County Government CIDP 2018-2022). According to Kamotho (2019), various stakeholders have been engaging the youths in Tiaty Sub-County to discourage them from engaging in resource-driven conflicts. In other terms, youth involvement in project design and implementation is a welcome idea in Tiaty Sub-County. Still, many challenges are still visible regarding the extent to which youths play a part in the development and implementation of water and other projects. These observations invite development researchers to conduct more studies to understand the drivers of youth involvement in water projects. Imperatively, promoting public participation of youth is necessary for realizing the development agenda in Tiaty Sub-County, Baringo County.

Objectives of the Study

Main Objective

The study evaluated the drivers of public participation of youths in development of water projects in Tiaty Sub-County, Baringo County.

Specific Objectives

The specific objectives of the study were:

- To investigate the level at which mobilization strategies drive the participation of the youth residents of Tiaty Sub-County in the development of water projects.
- To examine the impact of socio-economic drivers on the public participation of youth residents of Tiaty Sub-County in the development of water projects.
- To ascertain the influence of youth perception of opportunities for public participation on their involvement in the development of water projects in Tiaty Sub-County.

Research Questions

The study answered the following four research questions:

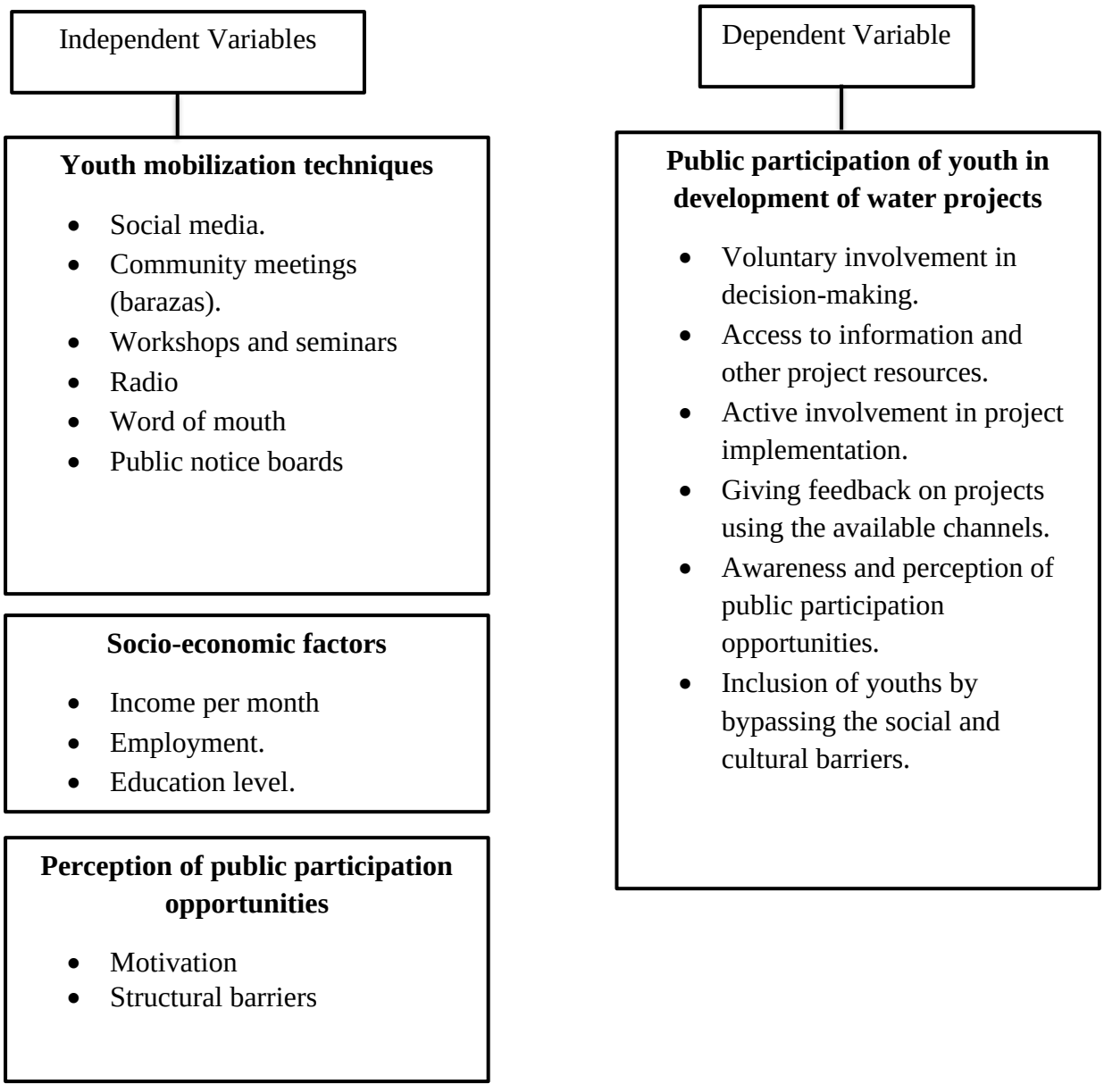
- How do mobilization strategies determine the level of engagement of the youth residents of Tiaty Sub-County in the development of water projects?

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

- To what extent do socio-economic drivers influence youths' participation in the development of water projects in Tiaty Sub-County?
- How does the perception of public participation influence youths' involvement in the development of water projects in Tiaty Sub-County?

Conceptual Framework

Figure 1 below illustrates the link between the independent variables in the conceptual framework which include youth mobilization techniques, socio-economic factors and perception of public participation opportunities, and the dependent variable, public participation of youth in development projects.



METHODOLOGY

Research Design

This study employed the survey research design to investigate the drivers of public participation of youth in development of water projects in Tiaty Sub-County of Baringo County, Kenya. The target population in this study were the youth residents of Tiaty Sub-County, Baringo County. Precisely, the researcher sampled the youth

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

residents of Tiaty Sub-County, with a focus on the youths aged 18 years to 34 years. Tiaty Sub-County has a population of 180,766 (Baringo County Government, Department of Finance and Economic Planning, 2019). The 2019 Census results revealed that the percentage of youths aged 18-35 years in Kenya was 29% of the total country's population (Ndungu, 2020). Based on this, it is estimated that Tiaty Sub-County has approximately 52,000 youths. The study also targeted officials heading various development projects across Tiaty Sub-County.

Sampling of the Target Population

The general formula for calculating sample size for this study was:

$$\boldsymbol{n = \frac{Z^2 p(1-p)}{E^2}}$$

Where:

n is the needed sample size.

Z represents the Z-score that corresponds to the preferred confidence level (95%). For example, for a 95% confidence level, the Z-score is approximately 1.96.

p is the projected ratio of the population with a particular characteristic (Research experts recommend the use of 0.5 for maximum variability).

E is the anticipated margin of error (often conveyed as a decimal).

With a 95% confidence level, a margin of error of 5% and maximum variability of 0.5, the sample size calculation for this study is as follows:

$$\boldsymbol{n = \frac{1.962 \times 0.5 \times (1-0.5)}{0.5^2}} = 384.16$$

It was appropriate to round of the figure to 385 because a fraction of a person does not exist. A further application of an online sample calculator was necessary to lead to a manageable population sample size of calculator was 193. The online Sample Size calculator used was the Calculator.net which calculates the minimum sample size that adequately and reliably meets the statistical requirements (Calculator.net, 2025). Thus, after computing for the confidence interval of 95% and accounting for the margin of error, the sample size of 385 was reduced to 193.

Data Analysis

The collected data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics, including frequencies and percentages, were used to summarize participants' demographic characteristics and results presented in tabular form.

To examine associations between categorical variables, Chi-square tests and Fisher's exact tests were employed, depending on the distribution and sample size requirements. The significance of these associations was reported using p-values with p-value less than 0.05 interpretated as statistical significance.

Binary logistic regression was conducted to identify predictors of youth participation in water development projects. The results of the regression analysis were presented in tabular form, including odds ratios (OR), confidence intervals (CI), and significance levels (p-values). This approach allowed for the identification of significant factors while controlling for potential confounders.

Ethical Considerations

All ethical considerations were adhered with. First, the respondents were asked to fill an informed consent to show that they willingly agree to answer all questions. Their choice to withdraw at any time of the data response process was also assured. Further, the respondents were assured of confidentiality and privacy and reminded that the data collected was mainly for academic purposes. Moreover, the respondents were asked not to give their names to ensure anonymity.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

FINDINGS

Demographic Characteristics of Youth who Participated in Development of Water Projects

The findings indicate that men were more involved in the development of water projects than women, with 58% of the 67 participating youths being male and 42% female—highlighting significant, albeit lower, female engagement. Participation varied across age groups, with the highest involvement among youths aged 26–30 (39%), followed by those aged 18–25 (36%), while the 31–34 age group had the lowest representation (25%). Educational attainment also influenced involvement, with youths lacking formal education (18%) or holding only a primary certificate (15%) participating more than those with university (15%) or postgraduate degrees (9%), possibly reflecting the limited presence of higher-educated individuals in Tiaty sub-county. Marital status played a role as well, with single (46%) and married (52%) youths forming the bulk of participants, while those divorced (2%), had little representation, suggesting that personal and social factors may affect participation in community development initiatives. These findings are presented in Table 1.

Table 1: Demographic Characteristics of Youths who Participated in Development of Water Projects

Variable	Frequency	Percent
Gender		
Male	39	58
Female	28	42
Age group		
18-25	24	36
26-30	26	39
31-34	17	25
Highest education level		
No formal education	12	18
Primary school certificate	10	15
Secondary school certificate	9	13
College certificate	8	12
College diploma	12	18
University degree	10	15
Postgraduate	6	9
Marital status		
Single	31	46
Married	35	52
Divorced	1	2

NB: The demographic data computed 67 respondents because only the 67 were observed to be directly involved in the development of water projects.

Socio-Economic Factors

The analysis of employment status and income in relation to involvement in development of water projects revealed significant differences between participants and non-participants. In terms of employment status, a larger percentage of those involved in water projects are self-employed (44%) compared to 18% of non-participants. However, a larger proportion of non-participants are unemployed (48%) compared to only 25% of participants. Regarding income, the majority of non-participants (67%) earn below 5,000, whereas only 19% of participants fall into this category. In contrast, a higher percentage of participants (48%) earn between 5,001 and 20,000, compared to 25% of non-participants.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Additionally, the income distribution for participants tends to be higher, with 25% earning between 20,001 and 40,000, compared to just 6% of non-participants. This suggests that higher income levels are more commonly found among individuals involved in development of water projects.

Regarding the question of whether employment or income status affects development, a significant difference is observed. A larger percentage of participants (76%) agree that employment and income status affect public participation of youths, compared to only 35% of non-participants. These findings suggest that those involved in water projects are more likely to believe that employment and income status play a role in development of water projects compared to those who are not involved in such projects.

On highest education level, the highest proportions of involvement were observed among youths with no formal education (19%) and those holding college diplomas (19%), followed by those with primary school certificates (17%) and college certificates (14%). Youths with secondary school certificates (12%) and degrees (12%) showed the lowest rates of involvement, while those with college certificates fell in the middle (14%).

Table 2: Socio-Economic Factors

Variable	Involved in water projects			DF	Chi2	p
	No	Yes	Total			
Employment status				**-**	**-**	**0.000**
Employed	18 (14%)	15 (25%)	33 (18%)			
Self-employed	22 (18%)	26 (44%)	48 (26%)			
Unemployed	60 (48%)	15 (25%)	75 (41%)			
Student	17 (14%)	3 (5%)	20 (11%)			
Others	9 (7%)	0 (0%)	9 (5%)			
Income per month				**-**	**-**	**0.000**
Below 5,000	84 (67%)	11 (19%)	95 (51%)			
5,001 – 20,000	31 (25%)	28 (48%)	59 (32%)			
20,001 – 40,000	8 (6%)	15 (25%)	23 (12%)			
40,001 – 80,000	2 (2%)	5 (9%)	7 (4%)			
80,001 and above	1 (1%)	0 (0%)	1 (1%)			
Employment / income status affects development				**1**	**27.52*** **	**0.000**
No	82 (65%)	14 (24%)	96 (52%)			
Yes	44 (35%)	45 (76%)	89 (48%)			
Education level				6	11.03*	0.087
No formal education	34 (27%)	11 (19%)	45 (24%)			
Primary School cert	19 (15%)	10 (17%)	29 (16%)			
Secondary School cert	34 (27%)	7 (12%)	41 (22%)			
College certificate	12 (10%)	8 (14%)	20 (11%)			
College diploma	14 (11%)	11 (19%)	25 (14%)			
Degree	9 (7%)	7 (12%)	16 (9%)			
Post graduate	4 (3%)	5 (8%)	9 (5%)			

NOTE: a: Fisher's exact test, b: Chi-square test, * $p < 0.1$ *** $p < 0.01$. The sample size of 185 represents the 96.0% response rate from the 193 initial sample size.

Notification Channels

The analysis examines the role of notification channels in influencing youths' involvement in water projects, revealing significant associations for most channels. Word of mouth was notably effective, with 83.1% of youths involved in

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

development of water projects learning about them through this channel compared to 51.6% of non-involved youths($\chi^2(1) = 16.82, p < .001$). Community meetings were equally impactful, with 83.1% of involved youths attending such meetings compared to 38.9% of non-involved youths ($\chi^2(1) = 31.46, p < .001$). County government announcements were another important channel, reaching 67.8% of involved participants versus 38.9% of those not involved($\chi^2(1) = 13.45, p < .001$).

Public notice boards showed a strong association with water development project involvement, as 57.6% of involved youths used this channel compared to only 2.4% of non-involved youths($\chi^2(1) = 76.65, p < .001$). However, other channels, such as radio and social media, exhibited weaker associations. Radio notifications reached 64.4% of involved youths and 50.0% of non-involved youths($\chi^2(1) = 3.37, p = .400$), while social media usage was reported by 54.2% of involved youths and 42.9% of non-involved youths ($\chi^2(1) = 2.09, p = .888$). These findings highlight the critical importance of traditional and community-centered channels, such as word of mouth, community meetings, and public notice boards, for mobilizing youths to participate.

Table 3: Notification channels

Notification channels	Statistic	Involved in water projects			Chi2	p
		No	Yes	Total		
Word of mouth	N	65	49	114	16.82***	0.000
	%	51.6	83.1	61.6		
Community meetings	N	49	49	98	31.46***	0.000
	%	38.9	83.1	53.0		
County government announcements	N	49	40	89	13.45***	0.001
	%	38.9	67.8	48.1		
Radio	N	63	38	101	3.37	0.400
	%	50.0	64.4	54.6		
Public notice boards	N	3	34	37	76.65***	0.000
	%	2.4	57.6	20.0		
Social media	N	54	32	86	2.09	0.888
	%	42.9	54.2	46.5		
Total	N	283	242	525		
	%	224.6	410.2	283.8	117.78***	0.000
Cases	N	126	59	185		

NOTE: *** p < 0.001. The sample size of 185 represents the 96.0% response rate from the 193 initial sample size.

Youth Motivation in Public Participation

The motivations to participate in water projects revealed distinct patterns of engagement among involved and non-involved youths, and these are presented in Table 4. Skill development emerged as a significant motivator, with 89.8% of youths involved in development of water projects citing this as a reason compared to 67.5% of non-involved youths($\chi^2(1) = 10.61, p = .008$). Similarly, the availability of essential resources through the projects was a critical factor, motivating 83.1% of involved youths versus 40.5% of non-involved youths($\chi^2(1) = 29.33, p < .001$). Networking opportunities also played a significant role, with 72.9% of involved youths motivated by this compared to 16.7% of those not involved ($\chi^2(1) = 56.12, p < .001$).

Sensitization and advocacy efforts influenced 62.7% of involved youths, compared to 15.9% of non-involved youths ($\chi^2(1) = 41.35, p < .001$). Role models were a motivator for 49.2% of involved youths compared to 8.7% of non-

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

involved youths ($\chi^2(1) = 38.75, p < .001$). On the other hand, personal interest showed no significant difference between groups, with 49.2% of involved youths and 65.9% of non-involved youths citing it as a motivator ($\chi^2(1) = 4.70, p = .211$). Peer influence was also relatively consistent, motivating 35.6% of involved youths and 29.4% of non-involved youths ($\chi^2(1) = .72, p < 1.000$).

Overall, the findings underscore the importance of practical benefits like skill development, resource access, and networking opportunities, alongside sensitization and the influence of role models, in motivating participation in water projects.

Table 4: Youth Motivation in Public Participation

Motivation to participate	Statistic	Involved in water projects			Chi2	p
		No	Yes	Total		
Skill development	N	85	53	138	10.61***	0.008
	%	67.5	89.8	74.6		
Project avails an essential resource	N	51	49	100	29.33***	0.000
	%	40.5	83.1	54.1		
Networking opportunities	N	21	43	64	56.12***	0.000
	%	16.7	72.9	34.6		
Sensitization and advocacy	N	20	37	57	41.35***	0.000
	%	15.9	62.7	30.8		
Personal interest	N	83	29	112	4.70	0.211
	%	65.9	49.2	60.5		
Role models	N	11	29	40	38.75***	0.000
	%	8.7	49.2	21.6		
Peer influence	N	37	21	58	0.72	1.000
	%	29.4	35.6	31.4		
Total	N	308	261	569		
	%	244.4	442.4	307.6	109.68***	0.000
Cases	N	126	59	185		

NOTE: *** p < 0.001. The sample size of 185 represents the 96.0% response rate from the 193 initial sample size.

Types of Structural Barriers

Structural barriers present notable challenges to youths in development of water projects, with varying levels of significance between involved and non-involved youths as presented in Table 5. Limited access to decision-making processes affected 84.8% of involved youths compared to 68.7% of non-involved youths, though this difference was not statistically significant ($\chi^2(1) = 5.04, p = .148$). Similarly, a lack of youth representation was reported by 78.0% of involved youths and 62.6% of non-involved youths, with no significant difference observed ($\chi^2(1) = 4.02, p < .270$).

Barriers related to capacity and expertise, however, showed significant disparities. A lack of capacity and expertise was cited by 74.6% of involved youths and 52.5% of non-involved youths ($\chi^2(1) = 7.54, p < .036$). Limited training and capacity-building opportunities were a prominent issue, affecting 74.6% of involved youths compared to 28.3% of non-involved youths ($\chi^2(1) = 31.94, p < .001$). Inadequate funding was another significant structural challenge, reported by 72.9% of involved youths and 32.3% of non-involved youths ($\chi^2(1) = 24.39, p < .001$).

Other barriers were minimal, with only 5.1% of involved participants citing additional unspecified challenges. The findings show that, structural

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

issues such as inadequate funding, limited training opportunities, and lack of capacity and expertise stand out as significant obstacles, emphasizing the necessity of systemic measures to deal with these challenges and enhance youth participation in water projects.

Table 5: Types of Structural Barriers

Structural barriers	Statistic	Involved in water projects			Chi2	p
		No	Yes	Total		
Limited access to decision making processes	N	68	50	118	5.04	0.148
	%	68.7	84.8	74.7		
Lack of youth representation	N	62	46	108	4.02	0.270
	%	62.6	78	68.4		
Lack of capacity and expertise	N	52	44	96	7.54**	0.036
	%	52.5	74.6	60.8		
Limited training and capacity building opportunities	N	28	44	72	31.94***	0.000
	%	28.3	74.6	45.6		
Inadequate funding	N	32	43	75	24.39***	0.000
	%	32.3	72.9	47.5		
Others	N	0	3	3	5.13	0.141
	%	0.0	5.1	1.9		
Total	N	242	230	472		
	%	244.4	389.8	298.7	75.54***	0.000
Cases	N	99	59	158		

NOTE: ** $p < 0.05$, *** $p < 0.001$. Fisher's exact test was used. The sample size of 158 represents the youths who identified structural barriers as obstacles to their participation.

Binary Logistic Regression for Drivers of Public Participation of Youths

Youth participation in development of water projects is a vital component of sustainable resource management and community development. However, this participation is often influenced by a range of factors, which can either encourage or hinder young people's involvement. This section examines the relationship between youth participation; measured as a binary outcome (Yes/No), and several key independent factors: youth mobilization techniques, socio-economic conditions, and perceptions of opportunities in youth participation. By analysing these variables, the study aims to uncover the underlying dynamics that determine whether youths choose to engage in development of water projects or not, offering insights into strategies for enhancing their involvement in such projects.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Table 6: Binary logistic regression for drivers of public participation of youths

Youth involvement in development of water projects	Odds Ratio	Std. Error	z	P-value	95% Conf. Interval	
					Lower	Upper
Youth Mobilization Techniques						
Social media	7.72*	8.79	1.79	0.073	0.83	72.00
Community meetings	13.7***	13.85	2.59	0.010	1.89	99.35
Radio	0.12**	0.11	-2.22	0.026	0.02	0.78
Word of mouth	4.15	3.96	1.49	0.136	0.64	26.89
County government	0.35	0.39	-0.93	0.351	0.04	3.20
Public notice boards	77.92***	102.18	3.32	0.001	5.96	1018.28
Socio-Economic Factors						
Income per month						
Below 5,000 (Reference)	-	-	-	-	-	-
Between 5,001 and 20,000	0.85	0.75	-0.18	0.855	0.15	4.77
Between 20,001 and 40,000	5.93	6.69	1.58	0.114	0.65	54.06
40,001 and above	0.27	0.45	-0.78	0.435	0.01	7.24
Employment affects	0.67	0.69	-0.39	0.699	0.09	5.02
Highest Level of Education						
No formal education (Reference)	-	-	-	-	-	-
Primary School Certificate	3.44	3.95	1.07	0.283	0.36	32.67
Secondary School Certificate	0.94	1.31	-0.04	0.965	0.06	14.44
College Certificate	3.92	5.20	1.03	0.304	0.29	52.79
College Diploma	0.66	0.93	-0.30	0.768	0.04	10.43
Degree	5.76	8.04	1.26	0.209	0.37	88.61
Post-graduate	10.93	18.59	1.41	0.160	0.39	306.62
Perception of Public Participation Opportunities						
Motivation						
Project avails an essential resource	1.18	1.04	0.19	0.848	0.21	6.67
Skill development	0.87	0.92	-0.13	0.893	0.11	6.95

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Youth involvement in development of water projects	Odds Ratio	Std. Error	z	P-value	95% Conf. Interval	
					Lower	Upper
Personal interest	0.16*	0.16	-1.79	0.073	0.02	1.18
Peer influence	0.26	0.24	-1.44	0.151	0.04	1.63
Networking opportunities	2.52	2.03	1.15	0.251	0.52	12.21
Role models	8.53*	9.76	1.87	0.061	0.91	80.33
Sensitization and advocacy	0.18	0.20	-1.53	0.125	0.02	1.62
Structural Barriers						
Limited access to decision making processes	29.96**	43.98	2.32	0.021	1.69	532.12
Lack of capacity and expertise	1.80	1.67	0.63	0.529	0.29	11.13
Lack of youth representation	0.27	0.26	-1.34	0.179	0.04	1.83
Inadequate funding	2.91	2.40	1.30	0.195	0.58	14.63
Limited training and capacity building opportunities	1.70	1.42	0.63	0.530	0.33	8.79
Constant	0.00	0.01	-2.96	0.003	0.00	0.14

NOTE: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Table 6 presents the results of the binary logistic regression model examining the factors influencing youth participation in development of water projects revealed several important findings. The model has a strong overall fit, with a likelihood ratio chi-squared statistic of 128.31 ($p < 0.001$), explaining 61.45% of the variance in the dependent variable, youth participation in development of water projects.

A number of factors were found to significantly influence youth participation. Social media exposure was associated with a significantly higher likelihood of participation, with an odds ratio (OR) of 7.72 ($p = 0.073$), though this result is marginally significant. Community meetings also played a significant role in promoting youth involvement, with an OR of 13.70 ($p = 0.010$), indicating that youths taking part in community meetings were substantially more likely to participate in development of water projects. On the other hand, receiving information through radio was linked to a noticeably decreased likelihood of participation (OR = 0.12, $p = 0.026$), suggesting that radio may not be an effective medium for engaging youth in these projects. Public notice boards, however, had a very strong positive effect on participation, with an OR of 77.92 ($p = 0.001$), highlighting the importance of physical communication channels in motivating youth engagement.

Some other factors showed positive trends but were not statistically significant. For instance, word of mouth (OR = 4.15, $p = 0.136$) and role models (OR = 8.53, $p = 0.061$) both showed potential as important predictors of participation, although their effects were not conclusive in the statistical analysis. Similarly, barriers such as limited access to projects had a significant effect on youth participation (OR = 29.96, $p = 0.021$), suggesting that overcoming access restrictions could substantially increase youth involvement in such projects.

However, several factors did not significantly influence participation. These include income levels, educational attainment (with no significant effect across different education categories), peer influence, and inadequate funding, all of which had no statistically significant association with youth participation.

The results emphasize the importance of community-based communication channels like meetings and public notice boards in driving youth participation in development of water projects. Although social media and role models show some potential, the influence of these factors warrants further exploration. Additionally, addressing barriers to access and considering more targeted communication strategies could enhance youth involvement in such initiatives.

DISCUSSION

The discussion examines the findings and compares these with related literature.

Youth Mobilization Strategies

The study found that community engagement strategies and social media use had a positive effect on youth participation in development projects. However, use of radio, word of mouth and government announcements did not have a significant effect on youth participation in development projects. The finding on the positive aspects of community engagement and social media use agrees with the Han and Ahn's (2020) study that identified youth collective action as a necessary strategy for engaging the youth in development, reiterating the fronting of youths as change agents in the contemporary sustainable development discourse. It agrees with the Ogunmodede et al. (2020) study that showed that information and communication technologies and especially social media are proving effective in mobilizing youths in the development realms. Further, Van Gyampo and Obeng-Odoom (2013) together with Suarez-Balcazar's (2020) found that the use of radio and word of mouth are inimical to enhanced youth participation in development project owing to the high adoption levels of innovative and new media

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

platforms as a means of effective engagement among the youth.

Socio-economic Drivers

Further, the findings of this study showed no statistically significant relationship between income levels, education level and employment status of youth participation in water development projects. The results here disagree significantly with reviewed literature with both Were (2020), Otieno et al. (2018) and Barasa (2020) noting that more educated youths were significantly inclined to participate in development projects than the less educated youths. Umunakwe (2014) had mentioned that youths with higher incomes were more amenable and empowered to participate in developmental projects as they had impetus to see these projects thrive. What this means is that the findings of the study offer an important albeit contrary view about income levels, education level and employment status and how they affect youth participation in development projects. Clearly, there is a different way to look at socioeconomic drivers of youth participation in development projects and as such this study fills a significant research gap.

Perception of Public Participation Opportunities

Furthermore, from the findings, there is a substantial correlation between structural barriers, particularly limited access to decision-making processes, and youth involvement in water development projects. There was also a significantly positive influence of personal interest on youth participation in development projects but not so for other drivers like peer influence, role models and networking opportunities. Significant studies have found that structural barriers mainly characterized by missed opportunities in decision-making negatively affects youth participation in development projects (Diduck et al., 2013; Tang, 2021; Luo et al., 2022); to this extent, the findings agree with literature. Others have however found that networking opportunities, peer pressure and role models have a positive influence on youth participation in development projects (Pavlidis& Baker, 2010; Ahmad, et al., 2012; Dano, 2016); this disagrees with the present findings. Thus, the present study offers results on perception of public participation opportunities that are coherent in some cases and contrary in others with related literature thus furthering research in the relevant field.

CONCLUSION

The conclusions of this study are organized by the objectives and presented as follows.

Youth Mobilization Strategies

The study found that community engagement strategies and social media use had a positive effect on youth participation in development projects. However, use of radio, word of mouth and government announcements did not have a significant effect on youth participation in development projects. Clearly, advancing youth participation in development projects requires community engagement and the use of new media platforms as opposed to conventional media platforms. One potential limitation here is the absence of a qualitative information to deepen the study's understanding about why conventional media is not working for youth participation.

Socioeconomic Drivers

The findings of this study showed no statistically significant relationship between income levels, education level and employment status of youth participation in water development projects. This implies that youth participation in development projects in Kenya and especially in rural areas like Tiaty Sub County was not contingent on socioeconomic drivers further implying that all cadres of youth notwithstanding their socioeconomic status have the capacity to effectively participate in youth development projects.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Perception of Public Participation Opportunities

The findings here evidences that there is a substantial relationship between structural barriers, particularly limited access to decision-making processes, and youth involvement in water development projects. There was also a significantly positive influence of personal interest on youth participation in development projects but not so for other drivers like peer influence, role models and networking opportunities. This implies that the perception for youth participation in development project shifts depending on the drivers and for youths in Tiaty Sub County, decision-making capacity and personal interests ranks high on the list of drivers that positively influences their participation in development projects.

STUDY LIMITATIONS

The study outlines three limitations that warrant consideration. Firstly, the study's focus on a specific county may limit generalizability to a national context or water development projects in areas that are not necessarily semi-arid. Secondly, the cross-sectional design captures participation patterns at a single point in time, whereas longitudinal data most certainly would reveal evolving engagement trends. Thirdly, the study also did not fully explore intersectional factors like gender dynamics, roles, division of labour, social and cultural norms, among others, which could mediate participation outcomes.

RECOMMENDATIONS

Drawing from the aforementioned facts and conclusions, the research offers the following suggestions to improve public participation of youths in development of water projects.

Perceptions of Public Participation Opportunities

- It was concluded that limited access to decision-making processes is a significant barrier to youth involvement in water development projects. Therefore, it is recommended that government agencies and other actors including NGOs should create inclusive decision-making frameworks that actively involve youth in these projects to increase their participation.
- It was also concluded that personal interest plays a role in public participation of youth, with those personally interested in water development projects more likely to engage. Therefore, actors should foster individual motivation through targeted engagement strategies, focusing on personal interests to enhance involvement.
- It was further concluded that factors like peer influence, networking opportunities, and role models do not significantly affect public participation of youth. Government agencies and other actors should prioritize more direct motivational strategies rather than relying heavily on these factors, as they have a limited impact on participation.

Recommendations for Further Research

Regarding academic enrichment, the researcher proposes that researchers endeavour to focus on specific active development projects and collect data in the long term to detect the actual patterns of public participation of youth in the development of water projects. Ethnographic studies would be more ideal since they utilize face-to-face interviewing and participant observation and could help to shed more on each of the objectives, resulting in more concrete conclusions. Also, there is a need to make a distinction between educational level and literacy level as the two maybe impact differently on public participation. and can impact negatively on the quality of data collected.

The study focused on development of water projects; however further research is needed covering different sectors to develop a holistic picture of public participation of youths in development.

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

REFERENCES

Ahmad, A. L., Rahim, S. A., Pawanteh, L., & Ahmad, F. (2012). The understanding of environmental citizenship among Malaysian youths: A study on perception and participation. *Asian social science*, 8(5), 85.

Armitage, A. (1988). *Comparing the policy of aboriginal assimilation: Australia, Canada, and New Zealand*. UBC Press.

Ashaba, K. (2016). Influence of youth participation towards the social-economic development of the community: a case study of Kashari Subcounty Mbarara District in Western Uganda. https://ir.kiu.ac.ug/bitstream/20.500.12306/5573/1/img05168.pdf

Barasa, M. A. (2023). Training Opportunities and Youth Participation in Development Agenda in Kenya. *Africa Journal of Technical and Vocational Education and Training*, 8(1), 101-110.

Baringo County Government CIDP 2018-2021. (2021). County Integrated Development Plan 2018-2022. https://www.devolution.go.ke/wp-content/uploads/2020/02/Baringo-CIDP-2018-2022.pdf

Baringo County Government CIDP 2018-2022. (2022). County Integrated Development Plan 2018-2022. https://www.devolution.go.ke/wp-content/uploads/2020/02/Baringo-CIDP-2018-2022.pdf

Baringo County Government, Department of Finance and Economic Planning. (2021). County Population Density and Distribution, 2018. https://www.baringo.go.ke/images/downloads/general/County-Population-Density-And-Distribution.pdf

Calculator.net (2025). Sample Size Calculator. Accessed from https://www.calculator.net/sample-size-calculator.html

Dano, N. (2016). Investigating youth perceptions of youth participation in development: A focus on community engagement as a platform for youth/student participation at Rhodes University (Doctoral dissertation, Rhodes University Grahamstown South Africa).

Diduck, A. P., Pratap, D., Sinclair, A. J., & Deane, S. (2013). Perceptions of impacts, public participation, and learning in the planning, assessment, and mitigation of two hydroelectric projects in Uttarakhand, India. *Land Use Policy*, 33, 170-182.

Government of Baringo County. (2017). Government of Baringo County. Retrieved May 12, 2017, from Public Participation Framework: https://www.Baringo.go.ke/publicparticipation-framework

Government of Kenya. (2010). *The Constitution of Kenya, 2010*. Nairobi: Government Printer.

Han, H., & Ahn, S. W. (2020). Youth mobilization to stop global climate change: Narratives and impact. *Sustainability*, 12(10), 4127.

Howlett, B., Ramesh, H., & Perl, H. (2013). *The Change to Change: Modernization, development and politics*. New York: Free Press.

Institute of Economic Affairs, (2015). *Government Financial Outcomes for the years 2014-2015*. Nairobi. IEA. Accessed from https://ieakenya.or.ke/download/annual-report-2015/

Koech, F. (2022). Tiaty residents feel cheated as crucial projects are diverted by politicians. Daily Nation. https://nation.africa/kenya/counties/baringo/tiaty-residents-feel-cheated-as-crucial-projects-are-diverted-by-politicians-3948274.

Koech, M. C. (2020). *An Examination Of Gender Gaps In Systems Of Land Ownership In Relation To Food Security In Kenya* (Doctoral dissertation, University of Nairobi).

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

Levenda, A. M., Keough, N., Rock, M., & Miller, B. (2020). Rethinking public participation in the smart city. *The Canadian geographer/Le géographe canadien*, 64(3), 344-358.

Luo, Z., Li, J., Wu, Z., Li, S., & Bi, G. (2022). Investigating the Driving Factors of Public Participation in Public-Private Partnership (PPP) Projects—A Case Study of China. *International journal of environmental research and public health*, 19(9), 5192.

Maphazi, N. (2012). A critical analysis of the role of public participation in governance and service delivery with specific reference to the Buffalo City Municipality (Doctoral dissertation, Nelson Mandela Metropolitan University).

Marzuki, A. (2015). Challenges in the Public Participation and the Decision Making Process. *Sociology & Space/Sociologija i Prostor*, *53*(1).

Mukund, M. P. (2018). Improving rural wastewater management. In *Corporate social responsibility: win-win propositions for communities, corporates and agriculture* (pp. 213-228). Wallingford UK: CAB International.

Musyoka, M. M. (2017). *Factors Affecting The Effective Management Of Budget In Selected County Governments In Kenya (Makueni, Nairobi, Narok And Kakamega Counties)* (Doctoral dissertation, Kca University).

Mutisya, M. (2018). The Impact of Public Participation on Makueni County's Development Programs-A Case Study of Ivingoni/nzambani Ward, Kibwezi East Constituency (Doctoral dissertation, University of Nairobi).

National Gender and Equality Commission (n.d). Youth and Children. NGEC. Accessed from https://www.ngeckenya.org/

Ndungu, T. (2020). Out of 47.6 million Kenyans, 35.7 million are under the age of 35. Citizentv.co.ke. https://www.citizen.digital/news/out-of-47-6-million-kenyans-35-7-million-are-under-the-age-of-35-323822

Obiero, S. O. (2018) Community Values and Sustainability of Beach Management Units: Does Project Committee Composition Matter?. *Journal or management Science*, 4(9), 67-77

Ogunmodede, A. M., Ogunsanwo, M. O., &Manyong, V. (2020). Unlocking the potential of agribusiness in Africa through youth participation: An impact evaluation of N-power Agro Empowerment Program in Nigeria. *Sustainability*, 12(14), 5737.

Opondo, W. P. (2017). People's Participation in County Budgeting Process: a Case of Nairobi County (Doctoral dissertation, University of Nairobi).

Otieno, E. O., Onyango, M. A., &Kinaro, Z. (2018). Relevance of formal education in rural youth participation in planning of community development projects in Kenya.

Papa, R. O. (2016). Factors influencing public participation in project development in Busia county Kenya (Doctoral dissertation, University of Nairobi).

Pavlidis, A., & Baker, S. (2010). Who Participates?: Differing Perceptions of Risk by Young People and the Impact on Strategies for Youth Participation. *Youth Studies Australia*, 29(1), 27-34.

Silva, T., & Bassi, P. (2012). Participatory Communication. Washington, D.C.: The International Bank for Reconstruction and Development / The World Bank.

Suarez-Balcazar, Y. (2020). Walkability safety and walkability participation: A health

Article DOI: https://doi.org/10.37284/ijgg.4.1.3007

concern. *Health Education & Behavior*, *47*(3), 430-438.

Tang, J. (2021). Young People's Perception of Opportunities to Participate in Democratic Governance (Doctoral dissertation, City University of New York).

Thijssen, S. (2021). Meaningful youth participation: An urgent call for change in European processes. Great Insights Magazine. https://ecdpm.org/work/a-call-for-change-from-young-people-in-africa-and-europe-volume-10-issue-1-2021/meaningful-youth-participation-an-urgent-call-for-change-in-european-processes

Umunnakwe, V. C. (2014). Factors influencing the involvement in non-agricultural income generating activities of rural youth: A case study in Jabalpur district of Madhya Pradesh, India. Journal of the University of Ruhuna, 2(1-2).

United Nations (n.d). Definition of Youth. https://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-definition.pdf

Van Gyampo, R. E., & Obeng-Odoom, F. (2013). Youth Participation in Local and National Development in Ghana: 1620-2013. *Journal of Pan African Studies*, *5*(9).

Wakiaga, P. (n.d). Why we must involve the youth in our country's development. https://kam.co.ke/why-we-must-involve-the-youth-in-our-countrys-development/

Were, F. (2020). *Determinants of Youth Participation in Community Development Projects: a Case of Homa-Bay County, Kenya* (Doctoral dissertation, University of Nairobi).

