



Evaluation of the Influence of Project Stakeholders' Policy Advocacy on Sustainable Agroforestry Programs in Kilifi County, Kenya

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Abstract: While there have been significant ecological, economic, and social benefits of agroforestry, particularly palm tree cultivation, the sustainability of agroforestry programs in many regions remains constrained by inadequate stakeholder collaboration and weak policy support. This study examined the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya. Objectives were: to assess the influence of governance policies, membership diversity, legal frameworks and how knowledge transfer influence sustainable agroforestry programs in Kilifi County. Social Network Theory and Common Pool Resource Theory was used in this study. Convergent parallel mixed methods research design was adopted. The target population 167 stakeholders from which a sample of 126 participants was selected using stratified random, simple random, and purposive sampling techniques. Data was collected using structured questionnaires and interview guides. Quantitative data were analyzed using descriptive and inferential statistics, while qualitative data were analyzed thematically. The study found that stakeholders' policy advocacy positively influences the sustainability of agroforestry programs ($M = 3.60$, $SD = 1.14$). Inferential results revealed that policy advocacy ($\beta = 0.628$, $p < 0.001$) was a positive and significant predictor of the sustainability of palm tree growing programs. The study concludes that effective stakeholders' policy advocacy is critical for the sustainability of agroforestry programs. It recommends strengthening adaptive policy advocacy mechanisms to enhance the long-term sustainability of palm tree agroforestry initiatives in Kilifi County. Further research may explore the sustainability of agroforestry initiatives in other counties in Kenya to enhance the generalizability of the findings.

Keywords: Policy advocacy, sustainable agroforestry programs, palm tree growing, stakeholders, Kilifi County, Kenya.

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1. Introduction

Sustainable agroforestry, which integrates trees with crops and livestock production systems, has emerged as an effective strategy for addressing environmental degradation, climate change, food insecurity, and rural

poverty (Pancholi et al., 2023). As the dependent variable of this study, sustainable agroforestry programs enhance soil fertility, conserve biodiversity, sequester carbon, and improve household livelihoods, thereby contributing to sustainable agricultural development. Empirical studies indicate that agroforestry systems increase agricultural productivity and resilience while promoting environmental

sustainability, particularly in developing countries (Kumar, 2025).

The sustainability of agroforestry programs, however, depends not only on technical interventions but also on supportive policies and the active involvement of stakeholders in advocating for conducive policy environments (Kusters et al., 2020). This study focuses on project stakeholders' policy advocacy as the independent variable. Policy advocacy refers to the efforts by governments, communities, non-governmental organizations, research institutions, and the private sector to influence policies, regulations, and institutional frameworks that support sustainable agroforestry. Effective policy advocacy promotes resource mobilization, strengthens institutional coordination, and enhances the long-term sustainability of agroforestry programs (Ros-Tonen et al., 2021).

Globally, stakeholder policy advocacy has played a significant role in promoting sustainable agroforestry. The Food and Agriculture Organization (FAO, 2022) notes that stakeholder engagement and advocacy facilitate access to financial, technical, and institutional resources necessary for sustainable agricultural development. Similarly, the United Nations Sustainable Development Goal 17 emphasizes partnerships and advocacy as key mechanisms for achieving sustainable development. In countries such as Indonesia, coordinated advocacy among communities, forestry agencies, and NGOs has resulted in supportive policies, improved livelihoods, and successful reforestation efforts (Maryono et al., 2024).

In Sub-Saharan Africa, agroforestry and landscape restoration initiatives have increasingly relied on stakeholder advocacy to influence policies and improve governance. However, weak advocacy structures and fragmented policy implementation continue to hinder the sustainability of many programs (Owusu & Anang, 2024). Similar challenges are evident in East Africa, where inadequate policy advocacy and weak institutional linkages have constrained the effectiveness of agroforestry initiatives despite their potential to enhance climate resilience and food security (Anteneh & Melak, 2024).

In Kenya, agroforestry remains an important strategy for addressing deforestation, improving soil health, and promoting sustainable livelihoods. Although the government and development partners have implemented various agroforestry initiatives, studies indicate that weak policy advocacy, limited stakeholder influence on policy decisions, and inadequate institutional coordination continue to affect program sustainability (Ratner et al., 2022).

In Kilifi County, palm tree agroforestry programs have been promoted to address land degradation and rural

poverty. Despite these efforts, challenges such as weak policy advocacy, limited institutional support, and inadequate stakeholder influence on policy formulation persist, threatening the sustainability of these programs (Abubakar et al., 2023). While previous studies have largely focused on the benefits of agroforestry, limited empirical evidence exists on how project stakeholders' policy advocacy influences the sustainability of agroforestry programs. Therefore, this study sought to evaluate the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya.

1.2 Statement of the Problem

The agricultural sector is a key pillar of Kenya's economy, contributing significantly to food security, environmental sustainability, and rural livelihoods (Kogo et al., 2021). In Kilifi County, agriculture and forestry remain the main sources of livelihood for most households. However, the county continues to face environmental challenges such as deforestation, erratic rainfall, rising temperatures, and soil degradation, which threaten the sustainability of agroforestry systems (Meinhold & Darr, 2021). In response, sustainable palm tree agroforestry programs have been promoted to enhance climate resilience, restore degraded ecosystems, and improve rural livelihoods.

Despite the involvement of the County Government of Kilifi, the Kenya Forest Service, non-governmental organizations, and community groups in implementing these programs, their sustainability remains below expectations. Existing studies attribute this challenge to inadequate policy implementation, weak institutional support, and limited stakeholder participation in policy formulation and advocacy (Wanjira & Muriuki, 2020). Consequently, agroforestry initiatives continue to experience constraints that limit their long-term environmental and socio-economic benefits (Abubakar et al., 2023).

Project stakeholders' policy advocacy has been recognized as an important mechanism for influencing policy frameworks, strengthening institutional coordination, mobilizing resources, and creating an enabling environment for sustainable agroforestry programs (Jansen & Kalas, 2020). However, in Kilifi County, policy advocacy efforts remain fragmented and inadequate, limiting the sustainability of palm tree agroforestry initiatives. Although previous studies have focused on the benefits of agroforestry, limited empirical evidence exists on the influence of project stakeholders' policy advocacy on sustainable agroforestry programs. This study investigated the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya.

1.3 General Objective

To evaluate the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya.

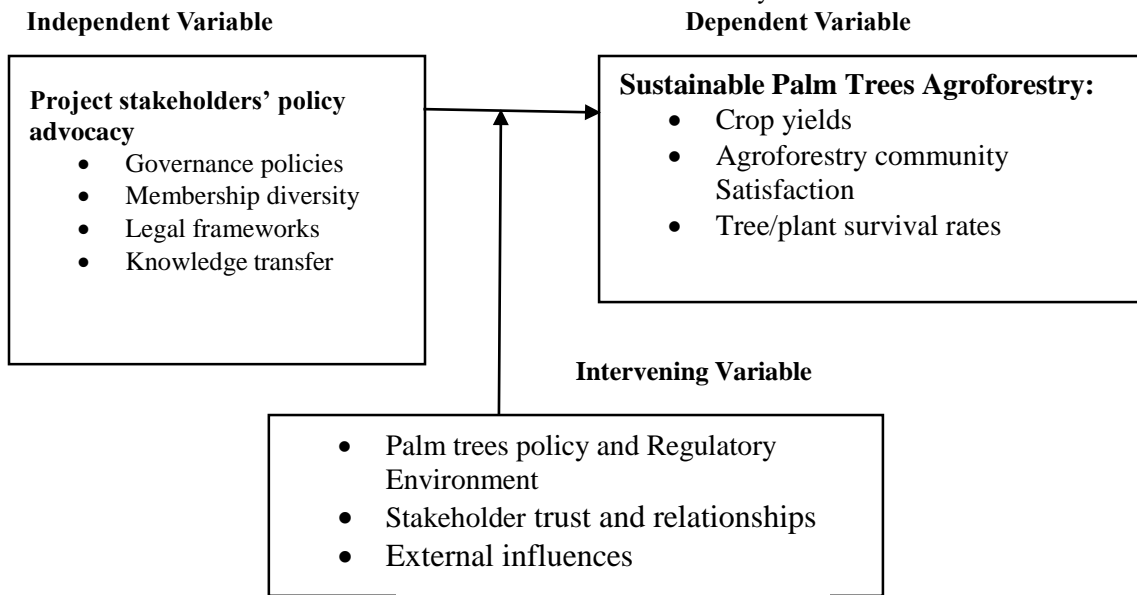
Specific Objectives

1. To assess the influence of governance policies on sustainable agroforestry programs in Kilifi County, Kenya.
2. To establish the influence of membership diversity on sustainable agroforestry programs in Kilifi County, Kenya.

3. To establish how legal frameworks influences sustainable agroforestry programs in Kilifi County, Kenya.
4. To determine how knowledge transfer influences sustainable agroforestry programs in Kilifi County, Kenya.

1.4 Conceptual Framework

The figure below presents the conceptual framework of the study. The independent variable is project stakeholders' policy advocacy while the dependent variable is the sustainable agroforestry programs. The study has also noted the moderating variable, which is not the focus of the study.



Source: Researcher (2026)

2. Literature Review

This chapter reviews the theoretical and empirical literature on project stakeholders' policy advocacy and sustainable agroforestry programs. It examines relevant concepts, discusses previous studies, identifies knowledge gaps, and presents the conceptual framework guiding the study.

2.1 Theoretical Framework

This study was anchored on Social Network Theory and Common Pool Resource Theory. Social Network Theory, advanced by John Barnes (1954), explains how interactions and networks among stakeholders facilitate information sharing, influence, and collective action. Common Pool Resource Theory, developed by Elinor Ostrom (1990), emphasizes collective governance and stakeholder

participation in the sustainable management of shared resources. The two theories provide a basis for understanding how project stakeholders' policy advocacy influences sustainable agroforestry programs.

2.1.1 Social Network Theory

Social Network Theory (SNT) was initially proposed by Barnes (1954) and later developed by Granovetter (1973) and Wasserman and Faust (1994). The theory posits that social relationships and interactions among individuals, groups, and institutions influence the flow of information, resources, and collective action necessary for achieving common goals.

The theory is relevant to this study because it explains how networks among project stakeholders facilitate effective policy advocacy for sustainable agroforestry programs. Through strong relationships among government agencies, non-governmental organizations, community groups, and

private sector actors, stakeholders can influence policy formulation, mobilize support, and advocate for institutional frameworks that promote sustainable agroforestry practices. Empirical studies have shown that stakeholder networks and collaborative advocacy enhance policy outcomes, strengthen institutional support, and improve the sustainability of agroforestry programs (Fares et al., 2021). Similarly, Baka et al. (2024) found that strong stakeholder linkages enhance coordination and policy influence, leading to more sustainable agroforestry interventions.

Despite its relevance, the theory has been criticized for emphasizing social relationships while giving limited attention to power dynamics and broader institutional and political factors that shape stakeholder interactions (Scott, 2017). Nevertheless, Social Network Theory provides an appropriate framework for explaining how project stakeholders' policy advocacy influences sustainable agroforestry programs in Kilifi County, Kenya.

2.1.2 Common Pool Resource Theory

Common Pool Resource (CPR) Theory, advanced by Elinor Ostrom (1990), posits that shared natural resources can be sustainably managed through collective action, stakeholder participation, and effective institutional arrangements rather than through privatization or centralized control alone. The theory emphasizes the importance of rules, monitoring mechanisms, and collaborative governance structures in ensuring the sustainable use of common resources.

The theory is relevant to this study because sustainable agroforestry programs depend on policies and institutional frameworks that promote the responsible management of shared resources such as land, forests, and tree cover. Project stakeholders' policy advocacy provides a mechanism through which governments, non-governmental organizations, community groups, and the private sector influence policy formulation and institutional reforms that support sustainable agroforestry practices. Through advocacy, stakeholders can promote policies that strengthen resource governance, enhance environmental conservation, and ensure the long-term sustainability of agroforestry programs.

Empirical studies support this perspective, showing that stakeholder participation in policy advocacy and collective governance contributes to improved natural resource management and sustainable environmental outcomes (Theriot & Block, 2024). Similarly, Ros-Tonen et al. (2021) observed that supportive policies developed through stakeholder engagement enhance the sustainability of agroforestry initiatives by strengthening institutional

coordination and promoting shared responsibility in resource management.

Although the theory has been criticized for paying limited attention to external political and market influences (Suyatna et al., 2024), it remains relevant to this study because it explains how project stakeholders' policy advocacy can shape policies and governance systems that foster the sustainability of agroforestry programs in Kilifi County, Kenya.

2.2 Review of Empirical Literature

Policy advocacy by project stakeholders plays a critical role in shaping the sustainability and expansion of agroforestry programs. It entails the collective efforts of governments, non-governmental organizations (NGOs), community-based organizations (CBOs), farmer groups, and private sector actors to influence policy formulation, implementation, and reforms that promote sustainable land use and environmental conservation (Anderson & Mburu, 2022). In agroforestry, policy advocacy contributes to sustainability by promoting supportive legislation, strengthening institutional frameworks, and integrating agroforestry into national and regional development agendas (Turyahikayo et al., 2021). This section reviews empirical literature on project stakeholders' policy advocacy and sustainable agroforestry programs at the global, regional, and national levels.

Globally, policy advocacy has significantly contributed to the advancement of sustainable agroforestry through inclusive governance and climate-smart agricultural policies. Dawson et al. (2021) observed that multi-stakeholder partnerships involving governments, NGOs, and local communities facilitated the integration of agroforestry into national climate action plans under the Paris Agreement. In Indonesia, stakeholder policy dialogues led to the adoption of the National Agroforestry Policy in 2019, which promoted tree-based farming systems as a strategy for biodiversity conservation and rural poverty reduction (Kusuma & Ristiani, 2022). Similarly, in Latin America, advocacy networks comprising farmer cooperatives and NGOs successfully influenced agricultural policies to incorporate agroforestry and carbon credit incentives, thereby enhancing the sustainability of agroforestry systems (Furlan & Alvarez, 2023). These studies demonstrate that sustained policy advocacy creates an enabling environment for sustainable agroforestry programs.

In Sub-Saharan Africa, project stakeholders' policy advocacy has increasingly been recognized as an important driver of agroforestry adoption and sustainability. In Ghana, collaborative advocacy efforts by civil society organizations, farmer groups, and government institutions

facilitated the integration of agroforestry into the National Climate-Smart Agriculture Strategy (Amadi & Kusi, 2021).

Similarly, in Uganda, advocacy initiatives and research collaborations contributed to the development of the National Agroforestry Policy Framework, which strengthened coordination between the forestry and agriculture sectors (Kato & Namutebi, 2020). In Nigeria, stakeholder advocacy influenced reforms in land use policies, thereby reducing barriers to agroforestry adoption among smallholder farmers (Olayemi et al., 2023). These findings suggest that effective policy advocacy enhances institutional support and promotes sustainable agroforestry practices.

In Kenya, stakeholder policy advocacy has played an important role in advancing agroforestry policies and practices. According to Mwangi and Wekesa (2022), advocacy efforts by environmental NGOs, farmer organizations, and government agencies contributed to the formulation of the Kenya Climate-Smart Agriculture Strategy (2017–2026) and the Forest Conservation and Management Act (2016), both of which recognize agroforestry as a key climate adaptation strategy. In Kilifi County, Mutinda et al. (2023) found that advocacy initiatives by palm tree farmer cooperatives and environmental organizations influenced the development of county policies supporting subsidized training and extension services for palm-based agroforestry.

Similarly, Njoroge and Maina (2024) reported that stakeholder advocacy enhanced funding for tree planting initiatives and strengthened coordination among agriculture, forestry, and environmental agencies. However, challenges such as weak advocacy structures, bureaucratic processes, policy inconsistencies, and inadequate enforcement continue to constrain the effectiveness of these initiatives.

Although existing studies demonstrate the importance of policy advocacy in promoting sustainable agroforestry, most have focused on general advocacy outcomes, policy reforms, and agroforestry adoption. Limited empirical evidence exists on how project stakeholders' policy advocacy specifically influences the sustainability of agroforestry programs, particularly palm tree growing programs in Kilifi County, Kenya, thereby necessitating this study.

3. Methodology

This study adopted a convergent parallel mixed methods research design, which integrated both quantitative and qualitative approaches to provide a comprehensive understanding of the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya. The target population comprised 133 respondents and 34 key informants drawn from stakeholder groups involved in sustainable agroforestry programs. Using Yamane's (1967) formula, a sample size of 100 respondents was obtained, while 26 key informants were selected purposively. Stratified random sampling and simple random sampling techniques were used to select respondents, whereas purposive sampling was employed to select key informants based on their roles and expertise in agroforestry policy and program implementation.

Data were collected using structured questionnaires administered to respondents and interview guides administered to key informants. The questionnaires collected quantitative data on project stakeholders' policy advocacy and sustainable agroforestry programs, while the interview guides gathered qualitative insights on policy advocacy practices, stakeholder engagement, and program sustainability.

Quantitative data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations, as well as inferential statistics comprising correlation and regression analysis to determine the influence of project stakeholders' policy advocacy on sustainable agroforestry programs. Qualitative data were analyzed thematically, and the findings were presented narratively to complement and enrich the quantitative results.

4. Results and Discussion

A total of 126 participants were targeted, comprising 100 questionnaire respondents and 26 key informants. Out of these, 116 participants responded, resulting in an overall response rate of 92.1%. Specifically, 92 out of 100 questionnaire respondents participated, yielding a response rate of 92.0%, while 24 out of 26 key informants participated, representing a response rate of 92.2%. The high response rate indicates strong stakeholder participation and provides a reliable basis for data analysis, conclusions, and recommendations regarding the study.

**Table 1: Aspects of Project Stakeholders' Policy Advocacy and Sustainable Agroforestry programs
n=92**

Statements	SD % F	D % F	N % F	A % F	SA % F	Mean	Std Dvt
The agroforestry program is guided by well-documented governance policies.	6% 6	12% 11	20% 18	38% 35	24% 22	3.65	1.10
Governance structures clearly define the roles and responsibilities of stakeholders.	7% 6	14% 13	22% 20	37% 34	20% 18	3.50	1.12
There is a system in place to ensure compliance with governance policies.	10% 9	18% 17	25% 23	30% 28	17% 15	3.25	1.18
There will be little enforcement to ensure compliance with governance policies.	28% 26	30% 28	18% 17	12% 11	4% 4	2.00	1.15
Governance policies are reviewed regularly to improve program performance.	5% 5	12% 11	20% 18	40% 37	23% 21	3.70	1.08
The agroforestry partnership includes a diverse range of stakeholders (NGOs, private sector, government, communities).	6% 6	10% 9	18% 17	42% 39	24% 22	3.75	1.05
The diversity of members enhances decision-making and innovation in the program.	7% 6	12% 11	20% 18	40% 37	23% 21	3.70	1.08
Equal opportunity is provided for all stakeholder groups to contribute to governance.	5% 5	12% 11	25% 23	38% 35	20% 18	3.55	1.10
Some stakeholder groups will be excluded from contributing to governance processes.	25% 23	30% 28	20% 18	12% 11	5% 5	2.10	1.18
Differences in stakeholder backgrounds are respected and valued in governance processes.	5% 5	10% 9	20% 18	42% 39	25% 23	3.80	1.05
The agroforestry program operates within a recognized legal and institutional framework.	6% 6	12% 11	20% 18	40% 37	24% 22	3.70	1.08
Legal agreements between stakeholders are clear and well enforced.	7% 6	14% 13	22% 20	37% 34	19% 17	3.50	1.12
There is legal clarity on ownership, benefit-sharing, and responsibilities.	5% 5	12% 11	25% 23	38% 35	20% 18	3.55	1.10
There will be uncertainty over ownership, benefit-sharing, and responsibilities.	28% 26	30% 28	18% 17	12% 11	4% 4	2.00	1.15
The program's compliance with legal requirements supports transparency and trust.	5% 5	10% 9	20% 18	42% 39	25% 23	3.80	1.05
Overall Composite Mean and Standard Deviation						3.45	1.14

Source; Field Data, 2026

Table 1 shows the results of how policy advocacy by project stakeholders influences the adoption of palm tree agroforestry programs in Kilifi County. The composite mean (M = 3.45) was obtained by averaging the mean

scores of all items measuring policy advocacy, while the composite standard deviation (SD = 1.14) was derived from the dispersion of responses across the same items. The findings revealed that the respondents were mainly on

the same agreement that policy advocacy mechanisms have positive influence to the implementation of the agroforestry programs. The moderate standard deviation suggest that the stakeholders have a certain diversity in their perception of the governance policies, the diversity in membership and the legal systems.

With regards to the existence of well documented governance policies, 35 respondents (38.0%) agreed that there is clear governance policy determining the agroforestry program, and 22 (23.9%) strongly agreed. Conversely, there were 18 (19.6%) respondents who remained neutral, 11 (12.0%) disagreed and 6 (6.5%) strongly disagreed. This gave a mean score of $M = 3.65$ ($SD = 1.10$), which indicated high recognition of systematic structures of governance. This result aligns with that of Turyahikayo et al. (2021), who claim that the formal policies of governance offer clarity, accountability, and consistency in the development programs of multi-stakeholders.

Equally, in the question of whether the governance arrangements define clear roles and responsibilities of the stakeholders, 34 respondents (37.0%) admitted and 18 (19.6%) strongly agreed, 20 (21.7%) remained neutral and 19 (20.7%) disagreed. The subsequent mean of $M = 3.50$ ($SD = 1.12$) shows that majority of the respondents experienced role clarity in governance structures. This is in line with Amadi and Kusi (2021), who note that well-defined roles minimize overlaps and provide better action coordination in partner-led initiatives.

When asked whether system ensure compliance with governance policies, 28 (30.4%) respondents agreed and 15 (16.3%) strongly agreed, 23 (25.0%) respondents remained unconvinced and 26 (28.3%) respondents disagreed. The average of $M = 3.25$ ($SD = 1.18$) was achieved indicating moderate agreement, which presupposes that compliance mechanisms are present but do not work equally. On the other hand, the argument that governance policies are not enforced was largely disapproved by the respondents with 28 participants (30.4%) disagreeing and 26 (28.3%) strongly disagreeing, thus a low mean was obtained at $M = 2.00$ ($SD = 1.15$). This supports the perception that enforcement mechanisms are typically in place but their effectiveness depends on the effectiveness. These results support Mwangi and Wekesa (2022) who point out the fact that the gaps in governance structures are usually caused by institutional capacity problems but not the lack of policies.

The review of the governance policies at regular basis was also widely acceptable as 37 respondents (40.2%) agreed and 21 (22.8%) strongly agreed, and only 16 (17.4%) disagree. The average of $M = 3.70$ ($SD = 1.08$) shows that the governance structures are dynamic and responsive,

which Njoroge and Maina (2024) present as the essential factor in maintaining the relevance of the policies in the environments of dynamic development.

The research findings on the diversity of membership show that there was a high consensus that agroforestry partnerships are comprised of a wide variety of stakeholders. In particular, 39 respondents (42.4%) responded that they agreed and 22 (23.9%) strongly agreed which led to a mean of $M = 3.75$ ($SD = 1.05$). This reflects far-reaching awareness of universal stakeholder representation. These findings are in agreement with Turyahikayo et al. (2021), who opine that diversity enhances the legitimacy and pool of resources in collaborative programs.

Majority of the respondents were on agreement that diversity leads to better decision-making and innovation with 37 respondents (40.2%) strongly agreed and 21(22.8%) strongly agreed while 18 (19.6) respondents were neutral. It has a mean of $M = 3.70$ ($SD = 1.08$), indicating that they were considered to be a driver of creativity and problem-solving because of its diversity. Equal opportunity for stakeholder in the governance was also affirmed, as 35 respondents (38.0%) agreed and 18 (19.6%) strongly agreed yielding a mean of (M) $n = 3.55$ and $SD = 1.10$.

The idea of the absence of some groups of stakeholders in governance was, however, not accepted by any of the respondents with 28 (30.4%) responding by disagreeing and 23 (25.0%) strongly disagreed with the statement, which led to a low mean of $M = 2.10$ ($SD = 1.18$). Also, the respect of diverse stakeholder backgrounds was highly rated as 39 respondents (42.4%) indicated agreement and 23 (25.0%) strongly agreed which gave a mean of $M = 3.80$ ($SD = 1.05$). Such results validate the conclusions of Amadi and Kusi (2021), who state that inclusive governance can generate trust and long-term involvement of stakeholders.

Concerning legal frameworks, 37 (40.2%) of the respondents agreed, 22 (23.9%) strongly agreed showing that the agroforestry program is run within a well-understood legal and institutional framework, with the mean of $M = 3.70$ ($SD = 1.08$). Equally, the legal agreements among the stakeholders were perceived to be clear and well enforced by 34 (37.05) who agreed and 17(18%) strongly agreed with a mean of ($M = 3.50$) and $SD=1.12$.

The clarity of the law about ownership, shares of benefits and responsibilities was endorsed by 35 respondents (38.0%) who agreed with the statement, 18 (19.6%) strongly agree, which led to $M = 3.55$ ($SD = 1.10$). Conversely, ambiguity regarding ownership and benefit-

sharing was mostly disregarded with 28 (30.4%) respondents disagreeing and 26 (28.35) strongly disagreeing giving a low mean of $M = 2.00$ ($SD = 1.15$). Transparency and trust had a close relationship with the access to legal requirements with 39 respondents (42.4%) agreeing and 23 (25.0%) strongly agreeing with the mean being $M = 3.80$ ($SD = 1.05$). These results are in agreement with Mwangi and Wekesa (2022) as well as Njoroge and Maina (2024), who opine that trust, accountability, and sustainability of a program in the long run require legal clarity and compliance.

The qualitative findings complemented the quantitative results by demonstrating that project stakeholders' policy advocacy is fundamental to the sustainability of agroforestry programs in Kilifi County. Key informants reported that their organizations actively engage in advocating for policies and regulations that support sustainable agroforestry practices. They noted that continuous engagement with policymakers creates an enabling environment through supportive policies, increased resource mobilization, and stronger institutional commitment. One key informant stated that *"Our organization regularly interacts with government agencies to influence the enactment of policies that will advance sustainable agroforestry that is critical in achieving long term environmental and economic benefits"* (Respondent 1).

The findings further revealed that stakeholders collaborate through advocacy forums, consultations, and joint initiatives to influence policy implementation at both county and national levels. Through these collaborative efforts, stakeholders are able to present unified positions, share evidence-based information, and advocate for policies that promote sustainable agroforestry. As one respondent remarked, *"We can influence policy making and policy implementation on the county and national levels through collective action and putting forward unified voices in the stakeholder forums"* (Respondent 2).

These findings are supported by Social Network Theory, which posits that strong relationships and interactions among stakeholders facilitate information sharing, collaboration, and collective influence on policy decisions. They are also consistent with Common Pool Resource

Theory, which emphasizes that sustainable management of shared resources requires supportive institutions, collective action, and participatory governance.

The key informants further observed that effective policy advocacy facilitates access to favorable regulations, financial support, and institutional backing, which are essential for the successful implementation and sustainability of agroforestry programs. However, they noted that bureaucratic delays and conflicting stakeholder interests occasionally hinder advocacy efforts. Nevertheless, sustained advocacy was viewed as essential for strengthening community participation and ensuring long-term program sustainability. One respondent noted that *"Strong policy advocacy ensures that agroforestry projects receive necessary support and resources which directly influence their effective implementation and sustainability"* (Respondent 3). These findings demonstrate that project stakeholders' policy advocacy is a critical driver of sustainable agroforestry programmes in Kilifi County.

Inferential Statistics and Hypothesis Testing

This section presents the inferential statistical analysis and hypothesis testing on the influence of project stakeholders' policy advocacy on sustainable agroforestry programs in Kilifi County, Kenya. Pearson correlation analysis was used to determine the strength and direction of the relationship between the study variables, while regression analysis was employed to establish the predictive influence of policy advocacy on sustainable agroforestry programs.

Correlation Analysis

Pearson correlation analysis was conducted to determine the relationship between project stakeholders' policy advocacy and sustainable agroforestry programs. The results revealed a positive and statistically significant relationship between the two variables ($r = 0.628$, $p < 0.001$). This indicates that increased stakeholder involvement in advocating for supportive policies, legal frameworks, and institutional reforms is associated with improved sustainability of agroforestry programs in Kilifi County.

Table 2: Correlation between Project Stakeholders' Policy Advocacy and Sustainable Agroforestry Programs

Variables	Sustainable Agroforestry Programs
Project Stakeholders' Policy Advocacy	0.628**
Sig. (2-tailed)	0.000
N	92

** Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data (2026)

The positive relationship implies that effective policy advocacy enhances the sustainability of agroforestry

programs by creating an enabling policy environment, strengthening institutional support, and promoting long-

term stakeholder commitment. These findings are consistent with Social Network Theory, which argues that strong interactions and networks among stakeholders facilitate information sharing, collective action, and influence on policy decisions. The findings are also supported by Common Pool Resource Theory, which emphasizes that sustainable management of shared natural resources requires supportive institutions, collective action, and appropriate policy frameworks.

The qualitative findings corroborated the quantitative results. Key informants observed that policy advocacy enables stakeholders to engage policymakers, influence

legislation, and secure institutional and financial support for agroforestry programs. They further noted that advocacy promotes awareness creation and encourages long-term community participation in sustainable agroforestry initiatives.

Regression Analysis

Regression analysis was conducted to determine the extent to which project stakeholders' policy advocacy predicts sustainable agroforestry programs in Kilifi County. The model summary results are presented in Table 3.

Table 3: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate
1	0.628	0.394	0.387	0.431

Predictors: (Constant), Project Stakeholders' Policy Advocacy
Source: Field Data (2026)

The model summary indicates a moderately strong positive relationship (R = 0.628) between project stakeholders' policy advocacy and sustainable agroforestry programs. The coefficient of determination (R² = 0.394) shows that policy advocacy explains 39.4% of the variation in sustainable agroforestry programs in Kilifi County. This suggests that while policy advocacy plays a significant role

in enhancing sustainability, other factors not included in the model also contribute to sustainable agroforestry outcomes.

The overall significance of the regression model was assessed using ANOVA, and the results are presented in Table 4.

Table 4: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.954	1	10.954	38.472	0.000
Residual	25.631	90	0.285		
Total	36.585	91			

Dependent Variable: Sustainable Agroforestry Programs
Source: Field Data (2026)

The ANOVA results indicate that the regression model is statistically significant (F = 38.472, p < 0.05). This implies that project stakeholders' policy advocacy significantly

predicts sustainable agroforestry programs in Kilifi County.

The regression coefficients are presented in Table 5.

Table 5: Regression Coefficients

Predictor Variable	B	Std. Error	Beta	t	Sig.
Constant	1.980	0.563	-	3.517	0.001
Project Stakeholders' Policy Advocacy	0.348	0.120	0.231	2.900	0.004

Dependent Variable: Sustainable Agroforestry Programs
Source: Field Data (2026)

The regression results indicate that project stakeholders' policy advocacy has a positive and statistically significant influence on sustainable agroforestry programs ($\beta = 0.231$, $p = 0.004$). This implies that an improvement in stakeholder policy advocacy leads to a corresponding improvement in the sustainability of agroforestry programs. The regression equation can therefore be expressed as:

$$\text{Sustainable Agroforestry Programs} = 1.980 + 0.348 (\text{Project Stakeholders' Policy Advocacy})$$

The qualitative findings further supported these results. Key informants reported that advocacy initiatives facilitate the enactment of supportive policies, mobilization of resources, and enhancement of institutional collaboration. They emphasized that continuous engagement with policymakers contributes to favorable regulations and

increased investment in agroforestry initiatives. One key informant stated: "Our organization regularly interacts with government agencies to influence the enactment of policies that will advance sustainable agroforestry that is critical in achieving long-term environmental and economic benefits." (Respondent 1)

Another respondent noted: "Strong policy advocacy ensures that agroforestry projects receive necessary support and resources which directly influence their effective implementation and sustainability." (Respondent 3).

These findings affirm the propositions of Social Network Theory, which emphasizes that networks of stakeholders create opportunities for collective advocacy and influence policy outcomes through collaboration and information exchange. Similarly, Common Pool Resource Theory underscores that sustainable resource management depends on supportive institutional arrangements, collective governance, and policies that encourage cooperation and equitable resource use.

Hypothesis Testing

The null hypothesis stated that project stakeholders' policy advocacy has no significant influence on sustainable agroforestry programs in Kilifi County, Kenya. The regression results revealed that policy advocacy had a positive and statistically significant effect on sustainable agroforestry programs ($\beta = 0.231$, $p = 0.004$). Since the p-value was less than the significance level of 0.05, the null hypothesis was rejected.

5. Conclusion and Recommendations

5.1 Conclusion

This study concludes that project stakeholders' policy advocacy is a critical determinant of the sustainability of agroforestry programs in Kilifi County, Kenya. The findings from both quantitative and qualitative analyses demonstrate that advocacy efforts aimed at influencing policies, strengthening legal and institutional frameworks, and promoting stakeholder participation contribute significantly to the long-term sustainability of palm tree agroforestry programs. Effective policy advocacy creates an enabling environment that enhances resource

mobilization, improves coordination among stakeholders, and facilitates the formulation and implementation of supportive agroforestry policies.

The study further concludes that sustained engagement of stakeholders in policy processes promotes collective action, strengthens institutional collaboration, and enhances community participation in agroforestry initiatives. These findings affirm the propositions of Social Network Theory and Common Pool Resource Theory, which emphasize the importance of stakeholder networks, collective action, and supportive governance structures in achieving sustainable natural resource management.

5.2 Recommendations

1. One of the key recommendations of the study is that the national Government of Kenya, in collaboration with the Kenya Forest Service, non-governmental organizations, and community-based organizations, should strengthen and institutionalize stakeholder policy advocacy mechanisms for sustainable agroforestry programs. This should include regular stakeholder policy forums, collaborative advocacy initiatives, and continuous engagement with policymakers to promote supportive legal and institutional frameworks for palm tree agroforestry. Such structured advocacy efforts are expected to enhance policy responsiveness, improve stakeholder coordination, and strengthen the long-term sustainability of agroforestry programs.
2. In addition, the study recommends that stakeholders should develop and implement inclusive and participatory policy advocacy strategies across all levels of agroforestry governance. This should involve regular consultation with local communities, dissemination of policy information, and evidence-based advocacy aimed at influencing policy formulation and implementation. These measures are expected to enhance awareness, promote collective action, strengthen institutional support, and improve the effective implementation and sustainability of agroforestry programs in Kenya.

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