

**An evaluation of the effectiveness of government policies in promoting environmental protection in Kabale district,
Uganda**

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Abstract

This study investigated the efficacy of government policies in advancing environmental conservation in Kabale district, Uganda. Employing a cross-sectional survey design, a comprehensive mixed-method approach rooted in pragmatism philosophy was utilized to explore this phenomenon. Through simple random sampling, 347 respondents engaged in Sustainable Land Management practices were selected from a target population of 2639 within Rubaya, Butanda, Kamuganguzi, and Kitumba Sub-counties. Additionally, 25 key informants were purposively selected for in-depth interviews. The questionnaire was self-administered to ensure diverse perspectives from the 347 participants actively involved in sustainable land management practices such as agroforestry, crop rotation, trenches and check dams and mulching, resulting in 280 completed and returned questionnaires. Both quantitative and qualitative analyses were conducted. The research findings reveal a positive correlation between government policies and environmental protection. The quantitative analysis, particularly the regression study, demonstrates a statistically significant and positive relationship between government policy and environmental preservation. These results align with qualitative insights gleaned from interviews, where participants acknowledged existing government policies but highlighted challenges in their execution due to inadequate funding and human resources. Consequently, the null hypothesis (H₀₅) asserting no significant relationship between current government policies and environmental protection in Kabale district, Uganda, was refuted. The study concludes that government policy exerts a substantial impact on environmental conservation in Kabale district, Uganda. Recommendations stem from this conclusion, emphasizing strategies such as heightened awareness and education, enhanced collaboration among stakeholders, formulation and enforcement of supportive policies, establishment of robust monitoring and evaluation mechanisms, continued support from non-governmental organizations (NGOs), and the fostering of collaborative knowledge-sharing platforms. Policy improvements, intergovernmental coordination, resource allocation, stakeholder engagement, and enhanced policy implementation mechanisms are advocated to fortify environmental conservation efforts. In summary, this study underscores the pivotal role of government policies in driving environmental protection in Kabale district, Uganda, while advocating actionable steps to optimize policy implementation, inter-organizational coordination, resource allocation, stakeholder collaboration, and policy execution mechanisms for the betterment of environmental conservation endeavors.

Keywords: Effectiveness, Government Policy, Environmental Protection, Uganda

Introduction

Environmental protection is a cornerstone of sustainable development, as it directly impacts the well-being of present and future generations. In developing countries like Uganda, environmental degradation poses a

significant threat to achieving the Sustainable Development Goals (SDGs), particularly those related to poverty eradication, good health, clean water, and sustainable ecosystems.

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Uganda has grappled with environmental challenges such as rapid deforestation, soil erosion, and water pollution, which have had detrimental consequences for its economy, livelihoods, and biodiversity. Recognizing the urgency of addressing these issues, the Ugandan government has implemented various policies, including the National Environment Management Policy, the National Forestry Policy, and the Water Resources Management Act.

Despite these efforts, questions linger about the effectiveness of these policies in promoting environmental protection. This study delves into this critical question by evaluating the effectiveness of government policies in Kabale District, Uganda. The study examines the impact of these policies on deforestation, soil erosion, and water pollution, while also identifying factors that contribute to their effectiveness or ineffectiveness.

Sustainable land management and environmental protection are inextricably linked and mutually supportive. The degradation of land resources, such as soil erosion and deforestation, has far-reaching consequences for ecosystems, water quality, and biodiversity. Conversely, environmental pollution and degradation can undermine sustainable land management efforts by degrading soil quality, reducing agricultural productivity, and compromising ecosystem services.

The United Nations Development Programme (UNDP)2020) aptly highlights this interconnectedness, emphasizing that "by integrating sustainable land management practices with effective environmental protection measures, we can work towards a more sustainable future." This call for integration underscores the need for comprehensive environmental policies that

address both land management practices and environmental protection measures.

Effective environmental policy frameworks should recognize the synergistic relationship between sustainable land management and environmental protection. By promoting sustainable land management practices, such as conservation agriculture, agroforestry, and sustainable grazing, we can simultaneously protect soil health, enhance biodiversity, and mitigate climate change. Conversely, environmental protection measures, such as pollution control regulations and habitat conservation initiatives, can create an enabling environment for sustainable land management practices to thrive.

Policymakers should adopt a holistic approach that integrates sustainable land management principles into environmental protection policies. This integration can be achieved by:

- Incorporating sustainable land management practices into environmental impact assessments and natural resource management plans.
- Developing incentive programs that encourage farmers and land managers to adopt sustainable land management practices.
- Investing in research and development to advance sustainable land management techniques and technologies.
- Promoting capacity building and extension services to empower farmers and land managers to implement sustainable land management practices.
- Fostering collaboration among government agencies, non-governmental organizations, and local communities to promote sustainable land management and environmental protection.

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Methods

Research Design

The researcher used a cross-sectional research design to gather data at a single point in time to assess the relationship between variables or phenomena. He combined quantitative and qualitative data collection methods to obtain a comprehensive understanding of the research topic.

The perspectives and opinions of community members on Sustainable Land Management activities and their role in environmental protection were gathered using a qualitative approach. In addition, a qualitative approach was used to gather deeper, more detailed information in the form of exhaustive written descriptions.

Target Population

The study focused on a group of 2639 respondents who were part of the population involved in or impacted by Sustainable Land Management Practices. All these residents were actively involved in these practices with assistance from organizations like Self Help Africa, African International Christian Ministry, Caritas, Nature Uganda, NAADS, and the local government of Kabale district. This active participation made data collection easier for the researcher.

Sample size

This research utilized a mixed method sampling approach. Initially, 280 individuals involved in Sustainable Land Management practices participated by responding to copies of the questionnaire in the first phase. Subsequently, 25 participants were deliberately chosen for in-depth qualitative interviews during the second phase. These specific individuals were selected by both the researcher and research assistants for their insights and perspectives.

Sample Size for Quantitative Data

The research employed Sloven's sample size formula to establish the study's required sample size, determining it to be 347 participants.

From the accessible population, a sample size of 347 respondents were determined using the Sloven's formula as follows:

$$n = N / (1 + Ne^2)$$

Where: n=means of sample size, N=the population size and e= the error of sampling or the confidence interval at 95% therefore e=0.05%. It represents also the level of precision.

Using the same formula $n = N / (1 + Ne^2)$

Sample size determination for Rubaya, Butanda, Kitumba and Kamuganguzi Sub counties for the residents practicing sustainable land management practices was given by:

$$n = \frac{N}{1 + Ne^2}$$

$$1 + Ne^2$$

$$n = \frac{2639}{1 + 2639(0.05)^2}$$

$$1 + 2639(0.05)^2$$

$$n = 347 \text{ individuals}$$

Selection of the Participants

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The researcher selected the study participants from existing farmers' groups in each village. These groups included men, women, adults, and youth who had participated in agricultural research projects conducted by AICM, Self Help Africa, Nature Uganda, and the National Agricultural Advisory Services (NAADS). The participants had a variety of social, economic, and educational backgrounds. Local officials, particularly LC1 Chairpersons, typically attended the meetings. The researcher argued that the chosen individuals were representative of the community.

Research Instruments

Questionnaire

The Questionnaire utilized in this research had two main parts: (1) a demographic section that asked about the respondents' gender, age, occupation, education level, marital status, and (2) a section on the independent, dependent variables and intervening variables, which used a 5-point Likert scale to obtain clear responses from the participants. The questionnaire allowed for standardization of the data that was collected. The same set of questions were administered to multiple participants, ensuring consistency in the data collected. This standardization enabled easier comparison and analysis of responses.

Structured questions were utilized for effective analysis and to make the surveys simpler for respondents to complete. The questionnaires were distributed and conducted independently to provide respondents enough time and space to complete them. These were finished whenever it was most convenient for the respondents. The likelihood of getting reliable information increased as a result. Using this method, more confidentiality was ensured. Sensitive information was disclosed without fear. Questionnaires were gathered afterward.

A 5 Point Likert scale rating of 5=strongly agree, 4=agree, 3= not sure, 2=disagree and 1=strongly disagree was used for the dependent, independent and intervening variable questions as recommended by (Amin, 2005)

Interview Guide

The researcher used in-person interviews to speak with respondents about how they regarded both dependent, independent and intervening factors. In order to collaborate on survey analysis findings and explore more in-depth relationships suggested by the quantitative analysis that were supported by the data, the researcher interviewed participants while being guided by an interview guide that contained semi-structured questions for important information. The researcher was able to better understand the study's goals and obtain additional information not available through self-administered questionnaires with the aid of face-to-face interview data. An interview guide was used because it provides a structured framework for conducting interviews. It outlines the key topics, questions, and prompts to guide the interviewer throughout the interview process. This structure ensures consistency across interviews and helps maintain focus on the research objectives. The researcher was able to explain, elaborate, and persuade the respondents of the value of the research by using interview guides. (Mugenda and Mugenda 2003).

Validity

Amin (2005) defines validity as "the extent to which a test measures what it claims to measure." In other words, validity is the degree to which a test accurately measures the construct or concept it is intended to measure. Amin emphasizes that a

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test can only be considered valid if it has been shown to accurately measure the construct of interest through appropriate methods of validation, such as content validity, criterion-related validity, or construct validity.

Content validity refers to the extent to which a test adequately covers the domain of knowledge or skills it is intended to measure. Criterion-related validity refers to the degree to which a test correlates with other measures or outcomes that are known to be related to the construct being measured. Construct validity refers to the degree to which a test accurately measures the underlying theoretical construct it is intended to measure, as demonstrated by patterns of correlation with other tests or measures, convergent and divergent validity, or factor analysis.

In this study however, emphasis was put on content and construct validity. The content validity of the instrument was determined using the following formula before the real field survey.

$$CVI = \frac{\text{no of items declared valid}}{\text{total no of items}}$$

CVI stands for content Validity index and in this study the point of validity=0.7 and above.

Construct validity is a measure of the degree to which data obtained meaningfully and accurately reflects and represents a theoretical scope. To achieve this, a study used a panel of experts/judges of five members. Two panelists recommended the removal of dependent variable questions citing content irrelevancy but others were in agreement with an instrument. All of them made comments and suggestions regarding the clarity of the questions. Going by the formula, the CVI for this research was 0.88. Thus, the study passed the test content validity calculated as the number of items regarded relevant by the experts (49) divided by the total number of items (55). The recommendations from the panel of experts were used to refine and enhance validity of the instruments. Their suggestions aided the researcher to remove ambiguous terms and aided missing items to make it possible for the study to produce clear and specific questions and improve the quality and validity of the questions.

Reliability: The reliability of the research instruments was established using Cronbach Alpha Coefficient test. This was computed using SPSS. The Cronbach Alpha statistics in this study for agroforestry was 0.834 (number of items were 9) and environmental protection was 0.716 (with 7 items). Since the average Cronbach alpha for the study was above 0.7 for all, the research instrument was regarded as highly reliable and consistent (Amin, 2005).

Presentation of the Findings**Government Policy and Environmental Protection in Kabale district, Uganda.****Table 1: Responses to Government Policy items.**

Opinion	SA	A	NS	D	SD	Mean	Std Dev
Statements							
There is effective enforcement of environmental policies that results to the implementation of sustainable land management practices.	102(36.4%)	0(0%)	0(0%)	35(12.5%)	143(51.1%)	2.58	1.861
Iam satisfied with the current government policies related to environmental protection	0(0%)	127(45.4%)	0(0%)	152(54.3%)	1(0.4%)	2.90	1.002
Iam aware of the national and community bylaws that govern the implementation of sustainable land management practices.	0(0%)	247(88.2%)	4(1.4%)	29(10.4%)	0(0%)	3.78	0.617
Government policies adequately	0(0%)	120(42.9%)	59(21.1%)	96(34.3%)	5(1.8%)	4.45	0.578

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address the
environmental
challenges faced
by the
community.

Government has	165(58.9%)	114(40.7%)	1(0.4%)	0(0%)	0(0%)	4.59	0.501
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the power to
regulate land use
practices to
protect the
environment.

The community	134(47.9%)	142(50.7%)	0(0%)	4(1.4%)	0(0%)	4.45	0.578
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members
actively
participate in the
formulation of
policies relating
to the protection
of the
environment.

Government	40(14.3%)	240(85.7%)	0(0%)	0(0%)	0(0%)	4.14	0.351
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policies can
influence
individual
behavior towards
sustainable land
management
practices.

The government	109(38.9%)	32(11.4%)	5(1.8%)	134(47.9%)	0(0%)	3.41	1.409
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provides
education and
training
programs for
farmers and
stakeholders on

sustainable land management practices							
The government invests in research and development of innovative sustainable land management practices	0(0%)	4(1.4%)	10(3.6%)	254(90.7%)	12(4.3%)	2.02	0.368

Source: Primary Data, 2023

Key: n=280, SA=strongly agree, A=agree, NS=not sure, D=disagree, SD=Strongly disagree, M=Mean, Std. Dev=standard deviation.

The data presented in the table 1 shows the responses of participants to several statements related to environmental protection and government policies. The responses were measured on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree".

In the first statement, only 102(36.4%) of the participants strongly agreed that there is effective enforcement of environmental policies resulting in the implementation of sustainable land management practices. On the other hand, 143(51.1%) of the participants strongly disagreed and 35(12.5%) disagreed with the statement, indicating that they perceive that there is ineffective enforcement of environmental policies.

In the second statement, 127(45.4%) of the participants agreed that they are satisfied with the current government policies related to environmental protection. However, 153(54.7%) of the participants indicated that they are dissatisfied or strongly dissatisfied with the policies.

The third statement revealed that 247(88.2%) of the participants were aware of the national and community bylaws that govern the implementation of sustainable land management practices.

On the other hand, a small percentage of 4(1.4%) of the participants were unsure about their awareness of the bylaws, implying that there might be room for improvement in terms of communication and education about the existing regulations. Additionally, a relatively small proportion of 29(10.4%) of participants disagreed with the statement, indicating a potential gap in awareness among this subset of respondents. These individuals may benefit from targeted awareness campaigns and educational initiatives to inform them about the importance of adhering to sustainable land management practices in line with national and community regulations.

Overall, the data indicates that there is a substantial level of awareness among the participants regarding the governing bylaws for sustainable land management practices, but there are still some individuals who may require more information and support to improve their understanding.

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In the fourth statement, A notable portion of 120(42.9%) of the respondents agreed that government policies are adequate, indicating some level of confidence in the effectiveness of existing policies.

A significant percentage 96(34.3%) of participants disagreed with the statement, suggesting that there is a considerable number of individuals who do not believe the current policies as being sufficient in tackling environmental issues in their community.

A smaller but still significant proportion 59(21.1%) were not sure, these respondents expressed uncertainty or lack of knowledge regarding whether government policies adequately address environmental challenges.

On the other hand, a very small number 5(1.8%) strongly disagreed, representing a minority of participants with an emphatic stance on the inadequacy of government policies

In the fifth statement, 165(58.9%) of the participants strongly agreed,114(40.7%) agreed,1(0.4%) was not sure that the government has the power to regulate land use practices to protect the environment. Additionally, the very low percentage (0.4%) of participants who were not sure demonstrates that most participants have a clear understanding or belief in the government's capacity to enforce environmental protection measures related to land use practices.

The sixth statement shows that 134(47.9%) of the participants strongly agreed,142(50.7%) agreed and 4(1.4%) disagreed that community members actively participate in the formulation of policies relating to the protection of the environment. The implication is that the participants have a positive perception of community engagement in environmental policy-making. The high agreement rate suggests that the participants believe in the importance of including community voices and perspectives in decision-making processes related to environmental protection. This perception highlights the value placed on community involvement and the potential for community-driven initiatives and policies in addressing environmental concerns.

In the seventh statement, 40(14.3%) and 240(85.7%) of the participants strongly agreed and agreed that government policies can influence individual behavior towards sustainable land management practices respectively. The implication is that the participants acknowledge the influence of government policies in promoting and shaping sustainable land management practices. This perception highlights the importance of supportive policy frameworks and interventions by the government to drive positive behavioral changes towards sustainable land management.

In the eighth statement, only 32(11.4%) of the participants agreed,109(38.9%) strongly agreed,5(1.8%) was not sure and 134(47.9%) disagreed with the statement that the government provides education and training programs for farmers and stakeholders on sustainable land management practices, while 90.7% of the participants disagreed with the statement. The implication is that there is a perception among the participants that the government's investment in research and development of innovative sustainable land management practices is inadequate or lacking, as the majority of participants disagreed with this statement.

In the ninth statement,4(1.4%) of the respondents agreed,10(3.6%) was not sure,254(90.7%) disagreed and 12(4.3%) strongly disagreed that the government invests in research and development of innovative sustainable land management practices. The implication is that the respondents perceive a lack of government commitment or action towards investing in research and development of innovative sustainable land management practices. The overwhelming disagreement with the

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statement highlights a potential need for increased government attention, funding, and initiatives to address and promote sustainability in land management practices.

Statement “I am satisfied with the current government policies related to environmental protection”: The mean value of 2.90 suggests a relatively neutral response regarding satisfaction with current government policies related to environmental protection. The standard deviation of 1.002 indicates some variability in the responses, but the responses are not as spread out as in some other statements.

"I am aware of the national and community bylaws that govern the implementation of sustainable land management practices": The mean value of 3.78 suggests a relatively high level of awareness among respondents regarding the national and community bylaws governing sustainable land management practices. The moderate standard deviation of 0.617 indicates some variability in the responses, but the majority of respondents are clustered around the mean.

"Government policies adequately address the environmental challenges faced by the community": The high mean value of 4.45 indicates that a significant proportion of respondents strongly agree (SA) or agree (A) that government policies adequately address environmental challenges faced by the community. The relatively low standard deviation of 0.578 suggests a high level of agreement among the respondents.

"Government has the power to regulate land use practices to protect the environment": The high mean value of 4.59 suggests that a significant proportion of respondents strongly agree (SA) that the government has the power to regulate land use practices to protect the environment. The relatively low standard deviation of 0.501 indicates a high level of agreement among the respondents.

"The community members actively participate in the formulation of policies relating to the protection of the environment": The high mean value of 4.45 suggests that a significant proportion of respondents strongly agree (SA) or agree (A) that community members actively participate in the formulation of policies related to environmental protection. The relatively low standard deviation of 0.578 indicates a high level of agreement among the respondents.

The statement “Government policies can influence individual behavior towards sustainable land management practices”: The high mean value of 4.14 suggests that a significant proportion of respondents strongly agree (SA) or agree (A) that government policies can influence individual behavior towards sustainable land management practices. The relatively low standard deviation of 0.351 indicates a high level of agreement among the respondents.

The statement “The government provides education and training programs for farmers and stakeholders on sustainable land management practices. “The mean value of 3.41 suggests that, on average, the respondents are slightly towards agreement (A) regarding the government providing education and training programs for farmers and stakeholders on sustainable land management practices. The high standard deviation of 1.409 indicates a significant variation in responses, with some respondents strongly agreeing while others strongly disagreeing.

"The government invests in research and development of innovative sustainable land management practices. “Has the low mean value of 2.02 which suggests that, on average, the respondents lean towards disagreement (D) regarding the government's investment in research and development of innovative sustainable land management practices. The low

standard deviation of 0.368 indicates a relatively low level of variation in responses, suggesting a higher level of consensus among the respondents.

Overall, the data suggests that there is a mixed perception among the participants regarding the effectiveness of government policies and the level of community participation in environmental protection. The government needs to take into account these perceptions and work towards increasing awareness, education, and effective implementation of policies to ensure sustainable land management practices.

Table 2: Correlation results for Government Policy and Environmental Protection

		Government Policy	Environmental Protection
Government Policy	Pearson Correlation	1	.576**
	Sig. (2-tailed)		.000
	N	280	280
Environmental Protection	Pearson Correlation	.576**	1
	Sig. (2-tailed)	.000	
	N	280	280

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

The analysis from table 2 above shows that there is a significant positive correlation between Government policy and Environmental Protection, with a Pearson correlation coefficient of .576**

The positive correlation coefficient of .576** indicates that as government policies related to environmental protection increase, the level of environmental protection also tends to increase. This suggests that there is a relationship between government policies and environmental protection efforts. The analysis mentions that the correlation coefficient is significant at the 0.01 level (2-tailed). This means that the observed correlation between government policy and environmental protection is unlikely to have occurred by chance. The low p-value (Sig. = .000) suggests a strong statistical significance. The analysis implies that government policies play a role in promoting environmental protection. When governments prioritize policies that focus on environmental conservation, there is a positive impact on environmental protection initiatives. The significant correlation between government policy and environmental protection suggests that policymakers should consider implementing effective policies to address environmental concerns. These policies may include regulations, incentives, and initiatives aimed at protecting the environment and mitigating environmental issues.

This is in line with the Systems theory that emphasizes understanding the interconnections and relationships between components within a system. In the context of the above correlation results, the correlation between government policies and environmental protection efforts highlights a connection between these two factors. The positive correlation coefficient indicates that as government policies related to environmental protection increase, the level of environmental protection

also tends to increase. This finding aligns with the idea of interconnectedness, where changes in one component (government policies) are related to changes in another component (environmental protection efforts).

While the analysis reveals a significant correlation, it does not establish a causal relationship between government policy and environmental protection. Further research is necessary to understand the precise nature of this relationship and to identify specific policies that have the most significant impact on environmental protection.

Table 3: Showing model summary results on Government Policy and Environmental Protection

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576 ^a	.332	.330	2.865

a. Predictors: (Constant), Government Policy

Table 4. Showing ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1135.944	1	1135.944	138.346	.000 ^b
Residual	2282.623	278	8.211		
Total	3418.568	279			

a. Dependent Variable: Environmental protection

b. Predictors: (Constant), Government Policy

Table 5. Showing Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	13.980	1.102		12.681	.000
Government Policy	.414	.035	.576	11.762	.000

a. Dependent Variable: Environmental Protection

The correlation was used to establish the relationship between the current government policies and the level of environmental protection.

The table 3 about the model summary indicates that the regression model accounts for 33.2% of the variance in environmental protection, as indicated by the R square value of .332. The adjusted R square value is .330, which adjusts for the number of predictors in the model.

The ANOVA table 4 shows that the regression model is significant, as indicated by the F value of 138.346 and the associated p-value of .000. This suggests that the relationship between government policy and environmental protection is statistically

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significant and therefore the null hypothesis that stated that ‘there is no significant relationship between government policies and the level of environmental protection in Kabale district of Uganda is rejected.

The coefficients table 5 above shows that the intercept is 13.980 and the coefficient for government policy is .414. The standardized coefficient (beta) for government policy is .576, which indicates that a one-unit increase in government policy is associated with a .576 unit increase in environmental protection, controlling for other factors. The t-value for the government policy coefficient is 11.762, and the associated p-value is .000, indicating that the coefficient is statistically significant.

The regression equation is given by $Y=13.980+0.414X$

Overall, this analysis suggests that government policy is positively associated with environmental protection. Specifically, the results suggest that increasing the level of government policy may lead to an increase in environmental protection by approximately .576 units, controlling for other factors. However, it's important to note that this is a correlational relationship and does not necessarily imply causation. Additionally, the model only accounts for 33.2% of the variance in environmental protection, which suggests that there may be other important factors that influence environmental protection beyond just government policy. Hence the null hypothesis that stated that there is no significant relationship between the current government policies and the level of environmental protection was rejected.

Findings from Qualitative data collected through interviews were in agreement for example:

A participant who was the District Natural Resources Officer had this to say:

“Although there are government policies on the sustainable utilization of the environment, their enforcement is still poor. This is due to a lack of adequate resources and personnel to enforce the policies effectively. However, most of the community members are aware of these policies and actively participate in the formulation of community bylaws to promote environmental protection. This community-based approach has been effective in supplementing government efforts to protect the environment for example wetland user committees and Village Natural Resources Committees have been formed with internal rules and regulations supported by the government and United Nations Development Programme (UNDP). There is also a challenge where majority of the land users are not landowners and therefore there is a need for bylaws targeting landowners not entirely land owners”.

Another participant who was the parish chief said *“whereas, there are government policies in place for environmental protection, the effectiveness of their enforcement is hindered by inadequate resources and personnel for example we lack fuel to monitor the environmentally related activities. However, the community has demonstrated a commendable understanding of these policies and has played a vital role in supplementing the government's efforts through active participation in the formulation of community bylaws”.*

The Programs Officer of African International Christian Ministry (AICM-Kabale) on the other hand stated that:

“As an implementing partner in the same area we have supported community members and the councilors of Rubaya and Butanda sub counties to formulate bylaws to manage their environment sustainably for example, two bylaws, one for Rubaya Subcounty and Butanda Subcounty were passed by the subcounty councils in 2020 and by the district council in 2022 and are now awaiting the Solicitor General to append his signature. This was achieved

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after supporting community members to come up with their action points that were presented in their respective subcounty council meetings and passed. These bylaws are complementing the already existing local and national laws but the challenge is lack of resources for their enforcement and poor sensitization. These Community bylaws provide a framework for regulating and enforcing soil and water conservation practices. They can specify the requirements for implementing trenches and check dams, including their design, construction, and maintenance standards. Bylaws ensure that individuals and organizations comply with these regulations, fostering a sense of responsibility and accountability within the community". Some sub counties such as Kitumba and Kamuganguzi do not have community bylaws about soil and water conservation though farmers are implementing sustainable land management practices and at times local government officials lack resources for enforcement but we hope that when we get funds from donors, we shall scale up the projects to those areas and we see how to support them".

In policy terms, the interpretation highlights the importance of supporting the formulation and implementation of community bylaws for soil and water conservation. It emphasizes the need for adequate resources for enforcement and improved sensitization efforts to ensure compliance. The varied adoption of bylaws across sub-counties underscores the potential for scaling up these efforts to other areas and the importance of addressing the gaps in policy coverage to promote sustainable land management practices consistently.

Discussion of the Findings

In a bid to achieve its overall objective, this study sought to ascertain the effectiveness of government policies in promoting Environmental Protection.

Pearson's Linear Correlation results indicated a positive significant relationship between government policies and environmental protection in Kabale district of Uganda.

The positive correlation coefficient of .576** indicates that as government policies related to environmental protection increase, the level of environmental protection also tends to increase. This suggests that there is a relationship between government policies and environmental protection efforts.

Simple linear regression analysis findings also indicated that government policies had a significant positive effect on environmental Protection in Kabale district of Uganda. This meant that any increase in government policies results to a high rate of environmental protection.

Descriptive analysis results about whether there was effective enforcement of environmental policies resulting in the implementation of sustainable land management practices indicated the low percentage (36.4%) of respondents strongly agreeing with this statement which suggests that a significant portion of the participants perceive ineffective enforcement of environmental policies. This indicates a potential gap between policy implementation and actual sustainable land management practices on the ground. It implies that there might be a need for stronger enforcement mechanisms or better communication about the outcomes of policy enforcement to improve perceptions and encourage compliance.

Also, with 45.4% of respondents expressing agreement with the statement that they were satisfied with the current government policies related to environmental protection, it appears that a considerable portion of the respondents are satisfied

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with the current government policies. However, the fact that 54.3% expressed dissatisfaction or strong dissatisfaction indicates a notable level of discontent. This highlights the need for assessing and addressing the concerns and expectations of those dissatisfied to improve the effectiveness and public acceptance of environmental policies.

Still, the high percentage (88.2%) of respondents indicated awareness of national and community bylaws governing sustainable land management practices is encouraging. This suggests that the majority of respondents have knowledge of the regulations in place for sustainable land management practices. However, it would still be valuable to investigate the specific areas where awareness might be lacking and develop targeted education and outreach programs to fill those knowledge gaps. The finding that only 42.9% of participants agree with this statement that government policies are adequate in addressing environmental challenges faced by the community suggests that a significant portion of the respondents feel that government policies fall short in adequately addressing community environmental challenges. This calls for a closer examination of the specific concerns and issues raised by the participants to identify areas for improvement. It also emphasizes the importance of engaging the community in policy-making processes to ensure their needs and perspectives are taken into account.

With 58.9% of participants strongly agreeing with this statement that Government has the power to regulate land use practices for environmental protection, it indicates a general perception that the government has the authority and capability to regulate land use practices to protect the environment. This signifies a positive acknowledgment of the government's role in environmental stewardship and suggests a potential opportunity for leveraging regulatory measures to drive sustainable land management practices.

Also, while nearly a half (47.9%) of participants agree that community members actively participate in policy formulation, this finding still suggests room for improvement. Encouraging increased community engagement in decision-making processes can lead to more inclusive and effective environmental policies. It is important for governments to create mechanisms that facilitate meaningful community involvement, such as public consultations, participatory workshops, and partnerships with local organizations. Furthermore, the high percentage (85.7%) of participants agreeing with this statement that government policies have an influence on individual behaviour indicates a widespread belief in the influence of government policies on individual behavior. This finding highlights the potential of policy measures to shape environmentally friendly practices and encourages policymakers to leverage this influence to promote sustainable land management. It also emphasizes the importance of clear and consistent messaging to raise awareness and foster positive behavioral changes among individuals.

Government investment in research and development of innovative sustainable land management practices: The finding that only 1.4% of participants agreed with this statement reveals a significant perception gap. It suggests a widespread belief that the government is not adequately investing in research and development of innovative practices. This highlights the need for increased government support and funding in promoting research and development initiatives that contribute to sustainable land management. Strengthening these efforts can lead to the identification and implementation of effective solutions for environmental challenges.

The quantitative findings from the regression analysis indicate a significant positive association between government policy and environmental protection. This aligns with the qualitative data collected through interviews, where participants

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acknowledged the presence of government policies but highlighted challenges in their enforcement due to inadequate resources and personnel. The qualitative data also emphasized the active participation of the community in formulating bylaws to supplement government efforts. Therefore, the null hypothesis H05: There is no significant relationship between current government policies and environmental protection in Kabale district of Uganda was rejected and it was concluded that the current government policies had a significant positive relationship with environmental protection in Kabale district of Uganda.

These findings are consistent with previous research conducted in Africa, which has identified similar challenges in policy implementation, including inadequate funding, lack of political will, and weak institutional frameworks. Recommendations from previous studies, such as strengthening policy implementation mechanisms, increasing public participation, and improving intergovernmental coordination, resonate with the current findings.

It is important to note that the regression model only explains 33.2% of the variance in environmental protection, suggesting that other factors not accounted for in the analysis also influence environmental outcomes. Therefore, while government policy shows a significant association, it is necessary to consider other variables and contextual factors that might impact environmental protection.

Ntuli and Mugambi (2019) investigated the effectiveness of environmental policies and regulations in promoting environmental conservation in Tanzania. The results showed that environmental policies and regulations had a positive impact on environmental conservation in Tanzania, but there were challenges in implementing the policies due to limited resources and poor coordination among stakeholders.

The findings are also consistent with Mhone and Akanimo (2018) who critically reflected on regional and sub-regional policies related to environmental governance and sustainable development in Africa. The study analyzed policies such as the African Union's Agenda 2063 and the New Partnership for Africa's Development (NEPAD). The authors identified various challenges such as inadequate funding, lack of political will, and weak institutional frameworks. They recommended strengthening policy implementation mechanisms, increasing public participation, and improving intergovernmental coordination.

Findings were also in line with Chitongo and Ndebele's (2019) study that analyzed the effectiveness of environmental policy implementation in Zimbabwe by examining the factors that hinder and facilitate effective implementation. They found that inadequate financial resources, lack of political will, and inadequate capacity of implementing agencies were the major challenges to effective implementation. On the other hand, the study revealed that public participation, inter-ministerial cooperation, and stakeholder collaboration were among the key factors that facilitated effective policy implementation.

Conclusions

The majority of the participants voiced their concern over the government's inability to effectively enforce environmental protection legislation. To close the gap between intentions and actual sustainable land management practices, these policies' implementation and enforcement must be improved. The study also emphasizes the significance of community ordinances in promoting accountability and responsibility among people and groups with regard to soil and water conservation practices.

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Farmers are still using sustainable land management practices even though some sub-counties lack relevant bylaws. Local government officials are having trouble enforcing these practices, however, due to a lack of enforcement resources.

Government policy and environmental protection are significantly positively associated, according to the quantitative results of the regression study. This is consistent with the qualitative information gathered through interviews, in which participants acknowledged the existence of government policies but noted difficulties in their implementation due to a lack of funding and manpower. The null hypothesis H05: There is no significant relationship between current government policies and environmental protection in Kabale district, Uganda was rejected and it was concluded that the current government policies had a significant positive relationship with environmental protection in Kabale district of Uganda. This was in line with the theory of change and the systems theory.

Recommendations

The government and non-governmental Organizations should support the local communities to establish Community Bylaws in the sub counties without bylaws: It is recommended that sub-counties such as Kitumba and Kamuganguzi develop community bylaws specifically addressing soil and water conservation. These bylaws should be formulated through participatory processes, involving community members and relevant stakeholders to ensure their effectiveness and ownership.

The local communities, research institutions and Non-governmental Organizations should conduct regular monitoring and evaluation to assess the implementation of community bylaws and the impact of sustainable land management practices. This will help identify areas of improvement, address challenges, and refine the bylaws and enforcement strategies as needed

The government should strengthen policy implementation and allocate adequate resources and personnel for effective enforcement of environmental policies.

The government should support the means of transport for example the Ministry of Finance and Economic Planning and Ministry of Local Government should equip department of natural resources with transport to allow the effective enforcement of policies related to natural resource management.

To foster a culture of environmental protection and community engagement, it is essential for the government, local community and the private sector to focus on increasing public awareness and participation. To achieve this, well-planned awareness campaigns should be conducted, aimed at educating the community about existing environmental policies and regulations. These campaigns should emphasize the significance of preserving and safeguarding the environment for current and future generations. The government should encourage and inspire community members to play an active role in the formulation and implementation of community bylaws pertaining to environmental protection. This involvement will empower local residents to have a direct impact on decisions that influence their surroundings and natural resources.

There is the need to improve intergovernmental coordination: The government should enhance cooperation and coordination among different government agencies responsible for environmental protection to ensure a holistic approach. This can be done by creating a dedicated coordinating body or committee consisting of representatives from different government agencies responsible for environmental protection. This body will serve as a platform for regular communication, collaboration, and joint decision-making.

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Policymakers should prioritize and allocate adequate financial resources to support the comprehensive implementation of environmental policies. First and foremost, sufficient funding should be directed towards enforcement activities. This includes investing in monitoring and surveillance mechanisms to ensure compliance with the policies. Allocating resources to enforcement will serve as a deterrent to potential violators and uphold the integrity of the policies. Capacity building initiatives are equally essential to enhance the effectiveness of policy implementation. Allocating resources to train and equip relevant personnel, such as the district Natural Resources Officer, Environment officer and the parish chiefs and this will empower them to carry out their duties with proficiency and confidence.

To achieve effective policy implementation, it is imperative to strengthen collaboration among key stakeholders, including government agencies, community members, and implementing partners. By fostering strong partnerships with organizations operating in the environmental sector, we can harness collective resources, exchange valuable knowledge, and coordinate efforts for greater impact. To foster these collaborations, policymakers should actively engage with environmental organizations, NGOs, and other relevant entities. Establishing partnerships with these organizations will allow for the pooling of resources, expertise, and innovative approaches to tackle environmental challenges effectively.

The government should enhance funding mechanisms for environmental protection initiatives which is crucial for sustainable land management practices and environmental protection. Adequate financial resources are needed to support various initiatives such as research and development, conservation projects, and implementing sustainable practices. Funding mechanisms can ensure that resources are allocated towards activities that promote environmental protection, including sustainable land management practices.

Garnering political support and commitment to prioritize environmental protection is essential for sustainable land management practices and overall environmental well-being. Political leaders have the power to influence policy decisions and allocate resources towards environmental protection efforts. When political support is strong, it can lead to the formulation and implementation of policies that promote sustainable land management practices. This commitment can also result in the integration of environmental considerations into broader development plans and decision-making processes

International organizations, research and academic institutions, environmental agencies and the government bodies should develop robust institutional frameworks that support effective policy implementation and coordination that support effective policy implementation and coordination is vital for sustainable land management practices and environmental protection. Strong institutions can provide the necessary structure and mechanisms to ensure that policies related to land management and environmental protection are effectively implemented.

By implementing these recommendations, policymakers, researchers, and stakeholders can work together to promote sustainable land management practices, strengthen environmental policies, and enhance environmental protection efforts in the studied region.

Contribution of the Study to Knowledge

The research uncovers a notable deficiency in policies within sub-counties such as Kitumba and Kamuganguzi, where there's an absence of community bylaws aimed at preserving soil and water. The lack of explicit regulations restricts the enforcement of sustainable land management practices thereby impeding initiatives to safeguard soil quality and water reservoirs. This

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finding adds to our understanding by highlighting the necessity for inclusive policies encompassing different facets of environmental conservation, particularly in soil and water management

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