

Stakeholder Involvement and Implementation of Sustainable Community Food Security Projects in Nyando Basin, Kenya

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Abstract Food insecurity presents a serious development challenge in Kenya. It is estimated that 11 million Kenyans suffer from acute hunger caused by food insecurity at the household and community levels. Nyando basin in Western Kenya experiences acute food insecurity caused in part by perennial floods within the basin, extreme household poverty and high disease burden. There is consensus among food security scholars and policy advisors that communities must be placed at the center of sustainable food security policy and interventions. Kenya's National Food and Nutrition Security Policy places communities at the center of food security; further providing impetus for the design and implementation of sustainable sustainable community food security projects. The success of sustainable sustainable community food security projects may depend on the involvement of stakeholders in sustainable community food systems. However, few studies have examined the relationship between stakeholder involvement and implementation of sustainable sustainable community food security projects. This study was conducted in the Nyando basin in three community projects involved in highbrid cassava, sorghum and sweet potatoes farming. Two hundred and forty-five stakeholders involved in sustainable community food security projects in Nyando basin were interviewed using a questionnaire. Respondents included community farmers drawn from three food community self-help groups, county government officials, agricultural extension officers, managers of community based and non-governmental organizations involved in cassava, sorghum and sweet potato farming within the basin. Descriptive and inferential data were analysed. Descriptive data included frequencies, means and standard deviation. Inferential statistics included correlation coefficient, coefficient of determination, ANOVA and regression coefficient. The study found statistically significant relationship between stakeholder involvement and implementation of sustainable sustainable community food security projects. It is recommended that stakeholder involvement should be enhanced in sustainable community food security projects to promote timely implementation and completion of sustainable sustainable community food security projects, reduce the cost of implementation, ensure sustainable farming practices. It is also recommended that stakeholder involvement should be integrated in sustainable community food security policies and projects.

Keywords: stakeholder involvement, food security, sustainable community food security, sustainable community food security projects, Nyando basin

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1. Introduction

Food insecurity is one of the most challenging development problem in Kenya. It is estimated that by 2011, 11 million Kenyans were suffering from chronic food insecurity, with four million people requiring emergency food assistance. It is also estimated that nearly 30% of children in Kenya are malnourished [1]. To address food insecurity in the country in a more sustainable manner, the government developed the National

Food and Nutrition Policy in 2011. The National Policy proposes a number of policy interventions to address the food and nutritional challenges in Kenya. Among its other overarching strategies, the National Food and Nutrition Policy [2] recognizes the critical role of local communities in addressing food insecurity in a sustainable way. Thus, mobilization of community support to address the growing food and nutrition challenge in the country is identified by the national policy as a critical pillar of sustainable food and nutrition in Kenya, thereby centering sustainable community food security projects in the national policy discourse and interventions.

1.1. Centrality of Stakeholder Involvement in Community Food Security

Sustainable community food security is a relatively new food security-promoting strategy that considers all the factors within a region or community's food system that influence the availability, cost, and quality of food to area households, particularly those in lower income communities [3]. They argue that since sustainable community food security focuses on regional and local food systems, it is concerned with the full range of food chain events including agriculture, the availability of supermarkets and other affordable outlets for quality food, the involvement of the wider citizenry and local and state governments in seeking solutions to food insecurity, and the services and environments that encourage healthy food choices including schools, nutrition service providers, and commercial food operations. Based on these broader conceptualizations, it is evident that sustainable community food security projects encompass a wide variety of community-based efforts to increase the quantity, quality, and affordability of food for local residents, especially for poor members of the community.

Dowler and Caraher [4] argues that sustainable community food projects are hard to define and characterise consistently. In their view, term- sustainable community food projects, is used by a range of professionals and sectors to conceptualize local food and nutrition security initiatives that share common characteristics: food (its production, preparation or consumption), local involvement (management, delivery, paid/unpaid workers) and state support (funding, space, professional input, transport, equipment). Dowler and Caraher [4] posits that sustainable community food security projects have varying management and organisational structures, and can encompass local activities run by volunteers to those where a statutory worker has been given time to engage with the local community in developing food; and the funding and support for these local initiatives can come from local authorities and other charitable sources [4]. Campbell, Carlisle-Cummins, and Feenstra [5] posit that although sustainable community food security projects vary widely in their focus, scope, and motivation, sustainable community food security projects and their efforts are modest and initiated in response to specific community needs, these projects are broad based social and economic experiment in how to build food economies that are more locally based and increasingly self-reliant.

According to Campbell et al., [5], the persistent and strategic challenges facing sustainable community food security projects are three fold: (1) an economic challenge rooted in the difficulty of finding price points that work for farmers while ensuring that low-income consumers have access to healthy food and food system workers have decent wages and benefits; (2) a social challenge to confront racial and class bias while forging practical solutions; and (3) a political challenge of reconciling "insider" and "outsider" strategies, the former emphasizing incremental reform and the latter systemic change. These challenges resist simple solutions, but progress can be made if researchers and practitioners join forces. The nature of these challenges calls for effective stakeholder engagements in food security projects., since available

evidence suggests an association between stakeholder engagement and effective implementation of sustainable community food security projects. Campbell, Carlisle-Cummins, and Feenstra [5] framework is relevant for not only understanding the persistent and strategic challenges that face sustainable community food projects but also provides a rationale for effective engagement of stakeholders in sustainable community food projects.

Available evidence suggest that the success of sustainable community food systems depend greatly on stakeholder engagement strategies [6,7,8]. The salience of stakeholder engagement in sustainable community food projects is inherent in the definition, nature and themes of sustainable community food and sustainable community food security projects. In a comprehensive research of the persistent and strategic challenges facing sustainable community food security projects, Campbell, Carlisle-Cummins and Feenstra [5] developed a sustainable community food system bibliography that identified persistent and strategic challenges facing sustainable community food security stakeholders. According to the review, these challenges are economic, social, and political in nature [5]. Marsden and Morley [9] posit that there is a growing recognition among scholars and policy advisors in food systems of the need to re-examine the interconnections and linkages between food security, sustainability, sovereignty and justice in the provision, supply, allocation and consumption of food. These 'interconnections and linkages 'in the sustainable community food systems require the effective engagement of stakeholders. Addressing food security at the community level, and especially in sustainable community food systems, require the coordinated support and meaningful engagement of stakeholders: stakeholders need to have a shared understanding of the determinants of food insecurity in their communities, who is heavily affected and the strategies that the community members need to put in place to address food insecurity sustainably.

Sustainable community food security interventions may have some untoward impact on the environment [10,11]. The farming practices adopted by farmers in a sustainable community food security project, for instance may have an impact on the environment. The decision for example, whether to use organic fertilizers or to use commercial fertilizers in community farm systems, need the active engagement of diverse stakeholders with a stake in the sustainable community food security systems or projects. Whereas some stakeholders in the sustainable community food systems may favour the application of organic fertilizers, some with commercial interests may favour the use of commercial fertilizers, some of which have negative effects of the soil and water sources for the community. To ensure sustainable sustainable community food security projects, stakeholders involved in sustainable community food systems must focus on promoting pro-environmental behaviors in their food security programming. Sustainable sustainable community food security projects must identify negative environmental impacts that their sustainable community food systems may precipitate. Effective involvement of stakeholders in sustainable community food security programming is therefore critical for sustainable food systems and projects at the community level. To address the 'interconnections and

linkages 'in the sustainable community food systems (Marsden and Morley 2014), especially the interconnections and linkages between sustainable community food security and sustainable agricultural practices may require effective engagement of stakeholders.

Food sovereignty is a critical component of what Marsden and Morley [9] refer to as 'interconnections and linkages 'in the sustainable community food systems. The term food sovereignty, coined by Via Campesina in 1996, posits that the people who produce, distribute, and consume food should control the mechanisms and policies of food production and distribution, rather than the corporations and market institutions they believe have come to dominate the global food system. The term also encompasses the right of peoples to healthy and culturally appropriate food and their right to define their own food and agriculture systems. The phrase "culturally appropriate" signifies that the food that is available and accessible for the population should fit with the cultural background of the people consuming it. The realization of food sovereignty at the community level, requires the active engagement of stakeholders involved in sustainable community food security programming.

Food sovereignty is intuitively political in conception [12,13]. Thus to assure the realization of food sovereignty in sustainable community food systems and projects require a comprehensive understanding of the politics and the broader political economy of food insecurity and food security. A number of scholars have persuasively articulated the centrality of politics and power distribution in sustainable community food projects [14,15,16]. Stakeholders are people with conflicting interests: there are stakeholders who benefit when community members are food insecure. Thus, any intervention at the community levels that is likely to address food insecurity in a sustainable manner, is likely to resist any food security intervention and programming at the community level. Even beyond concern about the power of commercial food value chain players, the power dynamics between different genders at the community level may affect the implementation and overall performance of sustainable community food security systems or projects. In a number of agricultural oriented developing countries like Kenya, men wield more decision making powers compared to women. Again, while most of the farm labour in sustainable community food systems is provided by women, men mostly make decisions on how the produce and the income from the farms are distributed.

The power asymmetry in sustainable community food systems may unwittingly affect the performance of sustainable community food security projects. It is important to identify and understand the differential power dynamics presented by different stakeholders involved in a sustainable community food security system or project. This calls for active identification of the different stakeholders and designing effective stakeholder engagement strategies in the sustainable community food security projects. Food sovereignty and its attendant outcomes are therefore part of the critical components of the 'interconnections and linkages 'in the sustainable community food systems [9], and active involvement of stakeholders in the sustainable community food value chains is critical and important for

the successful implementation and performance of sustainable community food security systems and projects.

2. Research Methodology

The study was conducted in the Nyando basin of Western Kenya. The Nyando basin is one of the regions in Kenya that experiences serious food insecurity. The perennial flooding and with the basin exposes the families and communities in the Nyando Basin not only to food insecurity but also to diseases that cumulatively affect the productive capacity of the families and communities living within the basin. A cross-sectional study design was used. The target population was 769 people composed of members of three food security projects (cassava, sorghum and sweet potato projects), agricultural extension officers, county government officials, managers of non-governmental organizations providing technical support to community food security projects within the basin.

Using Krecjie and Morgan sample size estimation, a sample size of 260 was found to be sufficient for this study. Data was collected using questionnaire. Simple random sampling and stratified sampling procedures were used. Data was collected using a self-administered questionnaire. Simple random and stratified sampling procedures were used. Descriptive and inferential statistics were computed using SPSS. Descriptive statistics included frequencies, percentages, means and standard deviations; while inferential statistics included Pearson's correlation(r), co-efficient of determination (R^2), Anova Test (p value) and Beta coefficients (β). Both descriptive and inferential statistics were analysed using SPSS.

3. Results and Discussion

The purpose of the study was to establish the relationship between stakeholder involvement and implementation of sustainable community food security projects. This section presents the findings of the study.

The Table 1 presents the demographic data of the study respondents. The study sought information on the respondents 'gender, participant's age, education level, marital status, and number of years actively involved with sustainable community food security projects. Out of the 245 respondents, 97(39.6%) were female and 148(60.4%) were male. The data suggest that more women are actively involved with sustainable community food security projects than men. Out of 245 respondents, 91(37.1%) were aged between 40-49 years; 71(29%) were aged between 50-59 years; 37(15.1%) were above 60 years; 30(12.2%) were aged between 30-39 years; 16(6.5%) were aged between 20-29 years. The data on age of respondents suggests that more productive community member are involved in sustainable community food security projects. Out of 254 respondents, 109(44.5%) had primary level certificate, primary level holders, 72(29.4%) were secondary/O-Level holders, 42(17.1%) were diploma holders, 7(2.9%) A-Level holders, 6(2.4%) had bachelor degree while a3(1.2%) had master degree. The data on

education indicates that majority of the respondents involved in sustainable community food security projects are primary school certificate level holders followed by secondary school level certificate holders. On marital status, out of 245 respondents, 217(88.6%) were married, 19(7.8%) were widows/widower/ separated/divorced, 9(3.7%) were single.

Table 1. Demographic Profile of Research Participants

Particulars	Category	Frequency	Percentage
Gender	Female	97	39.6
	Male	148	60.4
	Total	245	100.0
Participant age	20 - 29	16	6.5
	30 - 39	30	12.2
	40 - 49	91	37.1
	50 - 59	71	29.0
	60 - Above	37	15.1
	Total	245	100.0
Education level	No Education	6	2.4
	Primary	109	44.5
	Secondary/O-Level	72	29.4
	A-level	7	2.9
	Diploma	42	17.1
	Bachelor's degree	6	2.4
	Master's degree	3	1.2
Total	245	100.0	
Marital Status	Married	217	88.6
	Single/Divorced	9	3.7
	Widow/Widower/Separated	19	7.8
	Total	245	100.0
No. of years involved in Sustainable community food Security Projects	0 - 5 years	138	56.3
	6 -10 years	67	27.3
	11- 20 years	31	12.7
	21- 30 years	9	3.7
	31- 50 years	0	0.0
Total	245	100.0	

The study also sought information on the number of years the respondents have been involved in sustainable community food security projects. Out of 245 respondents, 138 (56.3%) have been involved with sustainable community food security projects for between 0-5 years, 67(27.3%) had been involved for between 6-10 years, 31(12.7%) had been involved with the projects for between 11-20 years, 9(3.7%), between 21-30 years. The findings on the number of years of active involvement in sustainable community food projects suggest that sustainable community food security projects are recent developments in sustainable community food security programming in the Nyando basin.

3.1. Analysis of Implementation of Community Food Security Projects

The study sought the perspectives of the implementation of community food security projects. Five positively worded statements on implementation of sustainable community food security projects were assessed using a 5-Likert scale.

Item ICF'SP1 sought information from the respondents on the extent to which they agreed that community food security projects are implemented in time. Out of 245,

169(69.0%) strongly agreed that community food security projects are implemented in time; 69(28.2%) agreed with the statement, 3(1.2%) were neutral, 3(1.2%) disagreed while only 1(0.4%) strongly disagreed with the statement that community food security projects are implemented in time. The mean for the statement was 4.64, and the standard deviation was 0.615 suggesting that most respondents agreed that community food security projects are implemented in time.

Item ICF'SP2 sought information from the respondents on the extent to which they agreed that community food security projects are completed in time. Out of 245 respondents who responded to the item 161(65.7%) strongly agreed that community food security projects are completed in time., 75(30.6%) agreed with the statement, 5(2.0%) disagreed, 3(1.2%) were neutral while only 1(0.4%) strongly disagreed with the statement. The mean for the statement was 4.59 and the standard deviation was 0.663, suggesting that most respondents agreed that community food security projects are completed in time.

Item ICF'SP3 sought information from the respondents on the extent to which they agreed with the statement that stakeholders are satisfied with the implementation of food security projects. Out of 245 respondents who responded to the item 154(62.9%) strongly agreed that stakeholders are satisfied with the implementation of food security projects, 99(40.4%) agreed with the statement, 5(2.0%) disagreed, 5(2.0%) were neutral, while 0(0.0%) strongly disagreed with the statement. The mean for the statement was 4.49 and the standard deviation was 0.644, suggesting that most respondents agreed that stakeholders are satisfied with the implementation of food security projects.

Item ICF'SP4 sought information from the respondents on the extent to which they agreed with the statement that community food projects are cost effective. Out of 245 respondents who responded to the item 152(62.9%) strongly agreed that that community food projects are cost effective, 74(30.2%) agreed with the statement, 10(4.1%) were undecided, 10(4.1%) disagreed, while 5(2.0%) strongly disagreed with the statement. The mean for the statement was 4.55 and the standard deviation was 0.644, suggesting that most respondents agreed that community food projects are cost effective. The mean for the statement was 4.52 and the standard deviation was 0.744, suggesting that most respondents agreed that community food projects are cost effective.

Item ICF'SP5 sought information from the respondents on the extent to which they agreed with the statement that community food security projects promote environmental sustainability. Out of 245 respondents who responded to the item 152(62.0%) strongly agreed that that community food security projects promote environmental sustainability, 79(32.2%) agreed with the statement, 7(2.9%) were undecided, 5(2.0%) disagreed, while only 2(0.8%) strongly disagreed with the statement. The mean for the statement was 4.53 and the standard deviation was 0.644, suggesting that most respondents agreed that community food projects are cost effective. The mean for the statement was 4.52 and the standard deviation was 0.727, suggesting that most respondents agreed that community food security projects promote environmental sustainability.

Table 2. Descriptive Statistics of Stakeholder Involvement on Implementation of Community Food Security Projects

Sub-Variabes	SD	D	UD	A	SA	Total	Mean	SD
ICFSP1 - Stakeholder involvement enhances timely implementation of sustainable community food security projects	1 0.4%	3 1.2%	3 1.2%	69 28.2%	169 69.0%	245 100.0%	4.64	0.615
ICFSP2 - Stakeholder involvement enhances timely completion of sustainable community food projects	1 0.4%	5 2.0%	3 1.2%	75 30.6%	161 65.7%	245 100.0%	4.59	0.663
ICFSP3 - Involved stakeholders are satisfied with the performance of the sustainable community food security projects	0 0.0%	5 2.0%	5 2.0%	99 40.4%	136 55.5%	245 100.0%	4.49	0.644
ICFSP4 - Stakeholder involvement ensures that sustainable community food security projects are cost effective	2 0.8%	5 2.0%	10 4.1%	74 30.2%	154 62.9%	245 100.0%	4.52	0.744
ICFSP5 - Stakeholder involvement improves sustainability of sustainable community food security projects	2 0.8%	5 2.0%	7 2.9%	79 32.2%	152 62.0%	245 100.0%	4.53	0.727

3.2. Analysis of Stakeholder Involvement on Implementation of Community Food Security Projects

The study sought the perspectives of the respondents on the extent to which stakeholder involvement is associated with implementation of sustainable community food security projects. Five positively worded statements on the association between stakeholder involvement and implementation of sustainable community food security projects were assessed using a 5-Likert scale.

Table 2 presents the descriptive statistics of the respondents' perspectives on the association between stakeholder involvement and implementation of sustainable community food security projects in the Nyando basin. Item ICFSP1 sought information on the extent to which they agreed that stakeholder involvement enhances timely implementation of sustainable community food security projects. Out of 254 respondents, 169(69.0%) strongly agreed that stakeholder involvement enhances timely implementation of sustainable community food security projects, 69(28.2%) agreed that stakeholder involvement enhances timely implementation of sustainable community food security projects, 3 (1.2%) were neutral, 3(1.2%) disagreed with the statement and only 1(0.4%) strongly disagreed with the statement that stakeholder involvement enhances timely implementation of sustainable community food security projects. The mean and the standard deviation for item ICFSP1 was 4.64 and 0.615, suggesting that the most respondents strongly agreed that stakeholder involvement enhances timely implementation of sustainable community food security projects.

Item ICFSP2 sought information on the extent to which they agreed that stakeholder involvement enhances timely completion of sustainable community food projects. Out of 254 respondents, 161(65.7%) strongly agreed that stakeholder involvement enhances timely completion of sustainable community food projects, 75(30.6%) agreed that stakeholder involvement enhances timely completion of sustainable community food projects 3 (1.2%) were neutral, 2(2.0%) disagreed with the statement and only 1(0.4%) strongly disagreed with the statement that stakeholder involvement enhances timely completion of sustainable community food projects. The mean and the standard deviation for item ICFSP1 was 4.59 and 0.663,

respectively, suggesting that the most respondents strongly agreed that stakeholder involvement enhances timely completion of sustainable community food projects.

Item ICFSP3 sought information on the extent to which they agreed that involved stakeholders are satisfied with the performance of the sustainable community food security projects. Out of 254 respondents, 136(55.5%) strongly agreed that involved stakeholders are satisfied with the performance of the sustainable community food security projects, 99(40.4%) agreed that involved stakeholders are satisfied with the performance of the sustainable community food security projects, 5 (2.0%) were neutral, 5(2.0%) disagreed with the statement and 0(0.0%) strongly disagreed with the statement that involved stakeholders are satisfied with the performance of the sustainable community food security projects he mean and the standard deviation for item ICFSP1 was 4.49 and 0.644, suggesting that the most respondents strongly agreed that involved stakeholders are satisfied with the performance of the sustainable community food security projects.

Item ICFSP4 sought information on the extent to which they agreed that stakeholder involvement ensures that sustainable community food security projects are cost effective. Out of 254 respondents, 154(62.9%) strongly agreed that stakeholder involvement ensures that sustainable community food security projects are cost effective 74(30.2%) agreed that stakeholder involvement ensures that sustainable community food security projects are cost effective, 10 (4.1%) were neutral, 5(2.0%) disagreed with the statement and only 2(0.8%) strongly disagreed with the statement that stakeholder involvement ensures that sustainable community food security projects are cost effective. The mean and the standard deviation for item ICFSP4 was 4.52 and 0.744, suggesting that the most respondents strongly agreed that stakeholder involvement ensures that sustainable community food security projects are cost effective.

Item ICFSP5 sought information on the extent to which they agreed that stakeholder involvement improves sustainability of sustainable community food security projects. Out of 254 respondents, 152(62.0%) strongly agreed that stakeholder involvement improves sustainability of sustainable community food security projects. 79(32.2%) agreed that stakeholder involvement improves sustainability

of sustainable community food security projects. 7 (2.9%) were neutral, 5(2.0%) disagreed with the statement and only 2(0.8%) strongly disagreed with the statement that stakeholder involvement improves sustainability of sustainable community food security projects. The mean and the standard deviation for item ICFSP5 was 4.53 and 0.727, suggesting that the most respondents strongly agreed stakeholder involvement improves sustainability of sustainable community food security projects.

3.3. Correlation Analysis

Pearson Product Moment Correlation Coefficient was computed to establish the existence or non- existence of significant relationship as well as the degree or strength of association between Stakeholder involvement and Implementation of Sustainable community food Security Projects, based on the perspectives of the research participants.

Table 3. Pearson Correlations Statistics

		Stakeholder Involvement	Implementation
Stakeholder Involvement	Pearson Correlation	1	0.409**
	Sig. (2-tailed)		0.000
	N	245	245
Implementation of Sustainable community food Security Projects	Pearson Correlation	0.409**	1
	Sig. (2-tailed)	0.000	
	N	245	245

Note: ** Correlation is significant at the 0.01 level (2-tailed) i.e. 99% level of significance

Table 3 presents correlation statistics of the perceived relationship between stakeholder involvement and implementation of sustainable community food security projects. The data shows a significant positive relationship between stakeholder involvement and implementation of sustainable community food security projects ($r = 0.409$ and $p = 0.000$; thus, p value of $0.000 < 0.05$ is significant). The findings of this study are consistent with the reviewed empirical studies that suggest a relationship between stakeholder involvement and of implementation of sustainable community food systems (Hassanein 2003; Kloppenburg et al. 2000; Lang 1999b).

3.4. Regression Analysis

To find the amount of variation in the implementation of sustainable community food security projects, which explains its association with stakeholder involvement, the coefficient of determination (R^2) was computed. The coefficient was also computed to help in understanding or explaining the amount of variation in the implementation of sustainable community food security projects.

Table 4. Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.409 ^a	0.167	0.164	0.44158

Note: ^a Predictors: (Constant), Involvement

Table 4 presents the model summary of the association between stakeholder involvement and the implementation of sustainable community food security projects. The coefficient of determination $R^2 = 0.167$ (16.7%) suggest that the amount of variance in implementation of sustainable community food security projects is explained by the involvement of stakeholders in the food security projects. The model results are consistent with the reviewed empirical studies that suggest a relationship between stakeholder involvement and of implementation of sustainable community food systems (Hassanein 2003; Kloppenburg et al. 2000; Lang 1999b).

Table 5. Analysis of Variance - ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.523	1	9.523	48.838	0.000 ^b
	Residual	47.383	243	0.195		
Total		56.906	244			

Note: ^a Dependent Variable: Implementation of Sustainable community food Security Projects

^b Predictors: (Constant), Stakeholder Involvement

Table 5 shows the Analysis of Variance (ANOVA). Inference from the above table shows that the higher the F score, the lower the significance. The high F value of 48.838 which translates to a low significance p value is indicative of the significance of the association between stakeholder involvement and implementation of sustainable community food security projects, consistent with the findings of the correlation analysis. The findings of this study are consistent with the reviewed empirical studies that suggest a relationship between stakeholder involvement and of implementation of sustainable community food systems [6,7,8].

Table 6. Regression Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.275	0.327		6.947	0.000
	Involvement	0.500	0.072	0.409	6.988	0.000

Note: ^a Dependent Variable: Implementation

Table 6 presents the regression coefficients. The significance of both coefficients at 0.000 for constant and 0.000 for Implementation of sustainable community food security projects, both less than 0.005 ($0.000 < 0.05$) standard/recommended p value makes them valid for formation of an equation illustrating the relationship, thus validated. Stakeholder involvement thus has significant influence on implementation of sustainable community food security projects in the Nyando basin. The findings of this study are consistent with the reviewed empirical studies that suggest a relationship between stakeholder involvement and of implementation of sustainable community food systems [6,7,8].

Conclusion and Recommendations

The objective of the study was to examine the relationship between stakeholder involvement and

implementation of sustainable community food security projects. The study found statistically significant relationship between stakeholder involvement and implementation of sustainable community food security projects ($r = 0.409$ and $p = 0.000$; thus, p value of $0.000 < 0.05$). It is recommended that stakeholder involvement should be enhanced in sustainable community food security projects to promote timely implementation and completion of sustainable community food security projects, reduce the cost of implementation, ensure sustainable farming practices. It is also recommended that stakeholder involvement should be integrated in sustainable community food security policies and projects.

References

- [1] Kenya National Bureau of Statistics. Kenya Demographic and Health Survey 2008-2009: Kenya National Bureau of Statistics, 2010: 141-50.
- [2] National Food and Nutrition Policy (2011)
- [3] Tauber, M., and A. Fisher. 2002. A Guide to Community Food Projects. Venice ca: Community Food Security Coalition.
- [4] Dowler, E. and Caraher, M. (2003). Local food projects: The new philanthropy? *The Political Quarterly*, 74(1), pp. 57-65.
- [5] Campbell, D. C., Carlisle-Cummins, I., and Feenstra, G. (2013). Sustainable community food systems: Strengthening the research-to-practice continuum. *Journal of Agriculture, Food Systems, and Community Development*, 3(3), 121-138. <http://dx.doi.org/10.5304/jafscd.2013.033.008>.
- [6] Hassanein, N. (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies* 19 (1): 77-86.
- [7] Kloppenburg, J., Lezberg, S., De Master, K., Stevenson, G. W., and Hendrickson, J. (2000). Tasting food, tasting sustainability: Defining the attributes of an alternative food system with competent, ordinary people. *Human Organization* 59 (2): 177-86.
- [8] Lang, T. (1999b). Food policy for the 21st century: Can it be both radical and reasonable? In *for hunger-proof cities: Sustainable urban food systems*, edited by Mustafa Koc, Rod MacRae, Luc J. A. Mougeot, and Jennifer Welsh. Ottawa, Canada: International Development Research Centre.
- [9] Marsden, T., and Morley, A. (2010). "Current Food Questions and Their Scholarly Challenges: Creating and Framing a sustainable Food Paradigm" in *Sustainable Food Systems: Building a New Paradigm*. Terry Marsden and Adrian Morley (Eds.) 2010. Routledge.
- [10] Ericksen, P.J., (2007). Conceptualizing food systems for global environmental change research. *Global Environmental Change*.
- [11] Defries, R.S., Foley, J.A., Asner, G.P. (2004). Land-use choices: balancing human needs and ecosystem function. *Frontiers in Ecology and the Environment* 2, 249-257.
- [12] Schanbacher, W.D. (2010). The Politics of Food: The Global Conflict Between Food Security and Food Sovereignty. Praeger.
- [13] Alkon, A.H., & Mares, T.M. (2012). Food sovereignty in US food movements: Radical visions and neoliberal constraints. *Agriculture and Human Values*, 29(3), 347-359. <http://dx.doi.org/10.1007/s10460-012-9356-z>.
- [14] Anderson, M. D. (2008) Rights-based food systems and the goals of food systems reform. *Agriculture and Human Values*, 25: 593-608.
- [15] Heynen, N., Kurtz, H.E., & Trauger, A. (2012). Food justice, hunger and the city. *Geography Compass*, 6(5), 304-311. <http://dx.doi.org/10.1111/j.1749-8198.2012.00486.x>.



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