

**Assessing opinion leadership strategies used to communicate Adaptive Climate Change Information among Residents of Kitui Central Constituency in Kenya**

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**ABSTRACT**

The purpose of this study was to assess the effectiveness of opinion leadership strategies used to communicate adaptive climate change information (ACCI) among residents of Kitui Central Constituency (KCC) in Kenya. A sample of 564 respondents was surveyed. The study had two specific objectives (1) to evaluate attributes of opinion leaders who communicate ACCI among residents of KCC (2) to examine opinion leadership strategies used to communicate ACCI among residents of KCC. The study found that various community leaders in KCC were opinion leaders (OLs) of ACCI. They were rated highly if they were knowledgeable, social and trustworthy. They used various strategies to reach the residents with simple, applicable and therefore understandable messages. The study concluded that opinion leadership remains a highly rated method of simplifying the complex climate change discourse and recommended that it be embraced by experts who seek to enhance the climate change adaptive capacity among Kenyan ASAL residents.

**Keywords:** opinion leadership strategies, communicating adaptive climate change information, climate change, Kitui Central Constituency, opinion leaders, arid and semi arid lands, interpersonal communication.

## 1.0 Introduction

Climate change, a global challenge, is a huge threat to persons living in Kenyan ASALs not only because of their high dependency on climate-sensitive natural resources and high poverty rates (Ketiem et al, 2012) but also because of the status of adaptive capacity of the people and institutions (GoK, 2012). ASAL farmers and pastoralists, as well as policy makers, development and humanitarian programmes are searching for the best ways to adapt to the impacts of climate change (Percy, 2013). Improving development outcomes such as social networks and access to information services is critical to building adaptive capacity (GoK, 2012).

Although to access climate change information communication plays a key role, lack of proper communication mechanisms has led to inadequate climate change adaptation among ASALs' residents (KCCWG, 2013). In a bid to resolve this, interpersonal communication methods which are rated as rich media for communicating change (Lengel and Daft, 1988) have started being used among Kenyan ASAL residents (KCCWG, 2013; Nderitu, 2013; Shaka, 2013). This is especially because, like many other publics, residents of Kenyan ASALs are increasingly distrustful of both news and advertising from mass media, preferring instead recommendations from friends, family, coworkers, and peers (Keller & Berry, 2003); these recommendations are what opinion leadership communication is all about. Worse still, Kenyan ASAL residents have long been marginalized politically, socially and economically (FAO, 2013) so much so that very few ASAL districts in Kenya to date receive radio and television coverage even after the liberalization of the airwaves in the 1990s (UNDP, 2007) and the number of ASAL residents who can afford or have literacy skills to benefit from newspapers, magazines and other publications remains limited. Literacy levels in ASAL districts of Kenya are as low as 3% compared with a national average of 79.3% (UNDP, 2007). Therefore, OLs are being engaged to help play the important and constructive role of enabling public engagement with climate change.

OLs help to increase the low knowledge levels on adaptive climate change information by communicating in ways that are understandable, accessible, and acceptable to the end users (Nderitu, 2013). The assumed goal of most communication on climate change is not only to reach an audience but to actively engage people i.e. ensure that people grapple mentally with and gain understanding of the issue; experience an emotional response such as interest, concern or worry; and actively respond by way of changes in climate-relevant behavior or political action (Moser & Dilling, 2012). Climate change OLs help achieve this goal by serving as influential go-betweens who receive and pass on to their peers information, news, resources and requests to get involved (Nisbet, 2011). In this 'two-step flow of information', OLs do not necessarily hold formal positions of power or prestige, but rather serve as the connective communication tissue that alerts their peers to what matters (Leiserowitz et al. 2010; Nisbet and Kotcher 2009).

However, the question that remains to be resolved is how effective these OLs have been. Therefore, this study sought to assess the effectiveness of strategies used by opinion leaders to communicate adaptive climate change information among residents of Kitui Central Constituency, which is one of the ASALs of Kenya.

## 1.1 Objectives

- (i) To evaluate attributes of opinion leaders who to communicate adaptive climate change information to residents of Kitui Central Constituency.

- (ii) To examine effectiveness of opinion leadership strategies used to communicate adaptive climate change information to residents of Kitui Central Constituency.

## 1.2 Research questions

- (i) What are the attributes of opinion leaders who communicate adaptive climate change information to residents of Kitui Central Constituency?
- (ii) How effective are the opinion leadership strategies used to communicate adaptive climate change information to residents of Kitui Central Constituency?

## 1.3 Justification of the study

The importance of climate change awareness is enshrined in Article 6 of the UNFCCC, which calls upon its parties to, among other things, develop and implement educational and public awareness programmes on climate change and its effects (HBF, 2010). This study could therefore help the Kenya Government to meet its obligation to UNFCCC to which it is party. Secondly, policy makers, development and humanitarian workers, as well as farmers and pastoralists of KCC have a well evaluated communicative tool (opinion leadership) at their disposal which they can then use in more effective ways to enhance adaptive capacity to climate change. Thirdly, successful adoption of the findings, conclusions and recommendations of this study in KCC can form a model that can be copied by other ASAL constituencies in Kenya in a bid to increase their climate change adaptive capacities.

## 2.0 Research design

In evaluating opinion leadership strategies used to communicate adaptive climate change information to residents of Kitui Central Constituency, *the survey research design* was adopted. Using Fisher et al formula, a sample of 384 households was determined as representative out of the target population of 131,715 residents of Kitui Central Constituency spread among 38,377 households according to the 2009 Kenya National Census. However, this was oversampled to 573 households to cater for non-response rate in view of past empirical studies carried out in KCC. Multistage sampling technique was used to select the 573 households. First, out of the five wards of KCC two wards were randomly selected. Secondly, simple random sampling was again used to select any two sub-locations to survey in each of the two selected wards. Thirdly, using systematic random sampling every 8<sup>th</sup>-13<sup>th</sup> household was selected in each of the four sub-locations and a questionnaire was given for completion to any one literate adult member of the household.

## 2.1 Questionnaire return rate

Out of the 573 issued questionnaires, 564 were completed and returned and this represented 98.4% response rate. The questionnaires had mostly close-ended questions spread in three sections: Section A which focused on the general information of the respondents and sections B and C catered for objectives (i) and (ii) respectively.

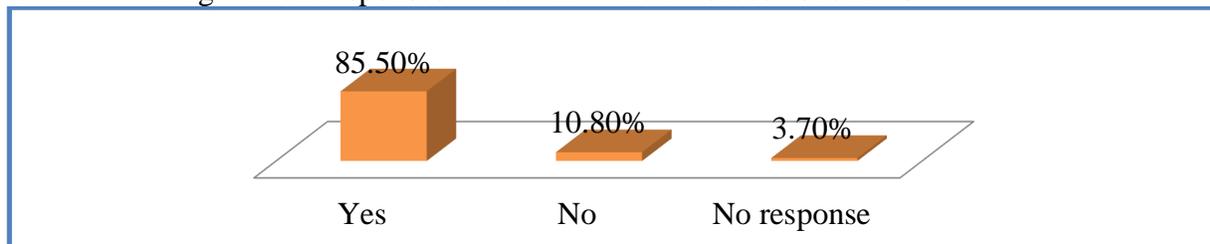
## 3.0 Findings of the study

### 3.1 Attributes of opinion leaders

The first objective for the study was:

- (i) *To evaluate attributes of individuals who use opinion leadership strategies to communicate adaptive climate change information to residents of Kitui Central Constituency.*

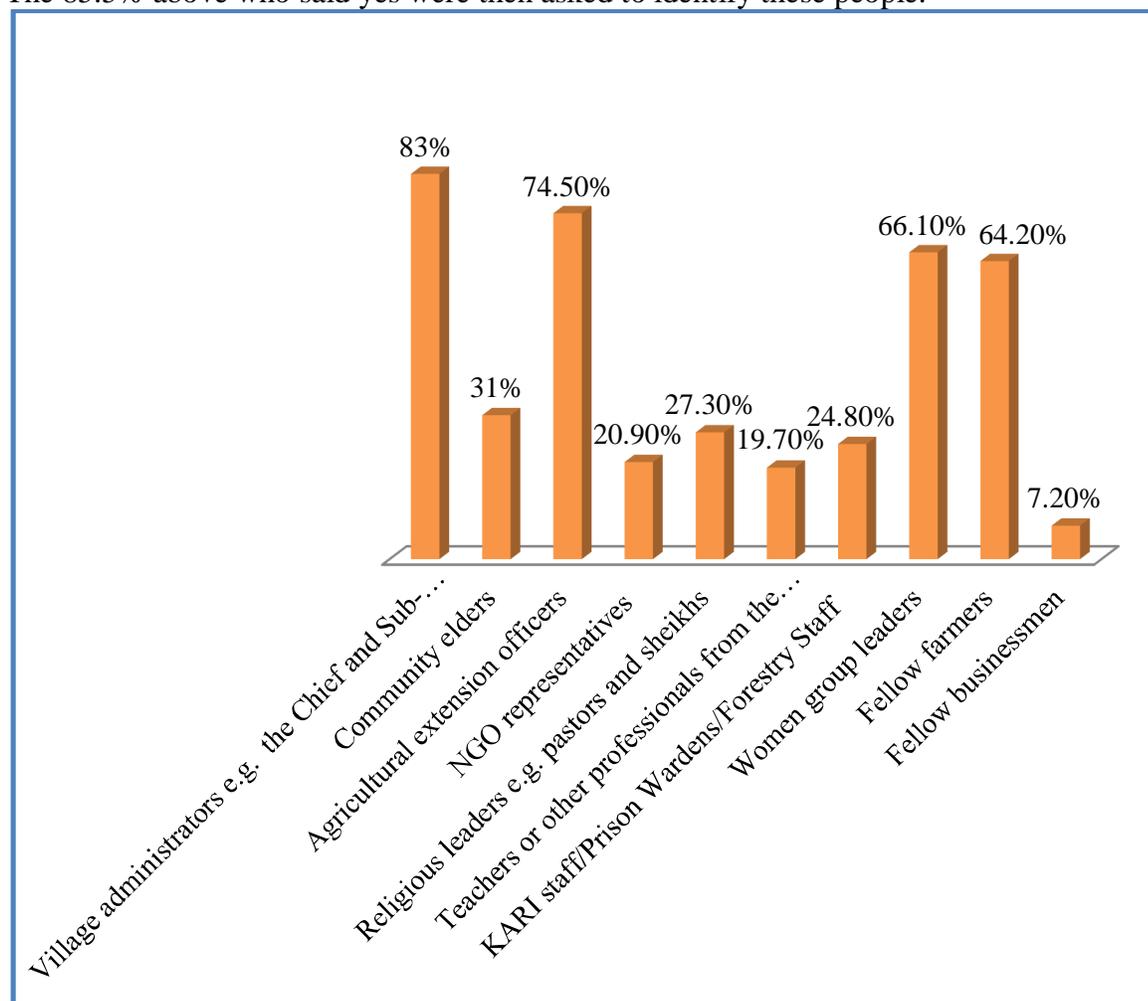
In order to know who the opinion leaders who communicated ACCI really were, the respondents were asked whether there were any people in their community who informed them about adapting to climate change. Their responses were tallied and recorded as follows:



**Figure 1: Presence of OLs in KCC**

A majority (85.5%) of respondents acknowledged that there were people in the community who informed them about adapting to climate change while 10.8% of respondents did not recognize whether there were such people in the community as shown in figure 4.10. Therefore, there were OLs who communicated ACCI in KCC.

The 85.5% above who said yes were then asked to identify these people.

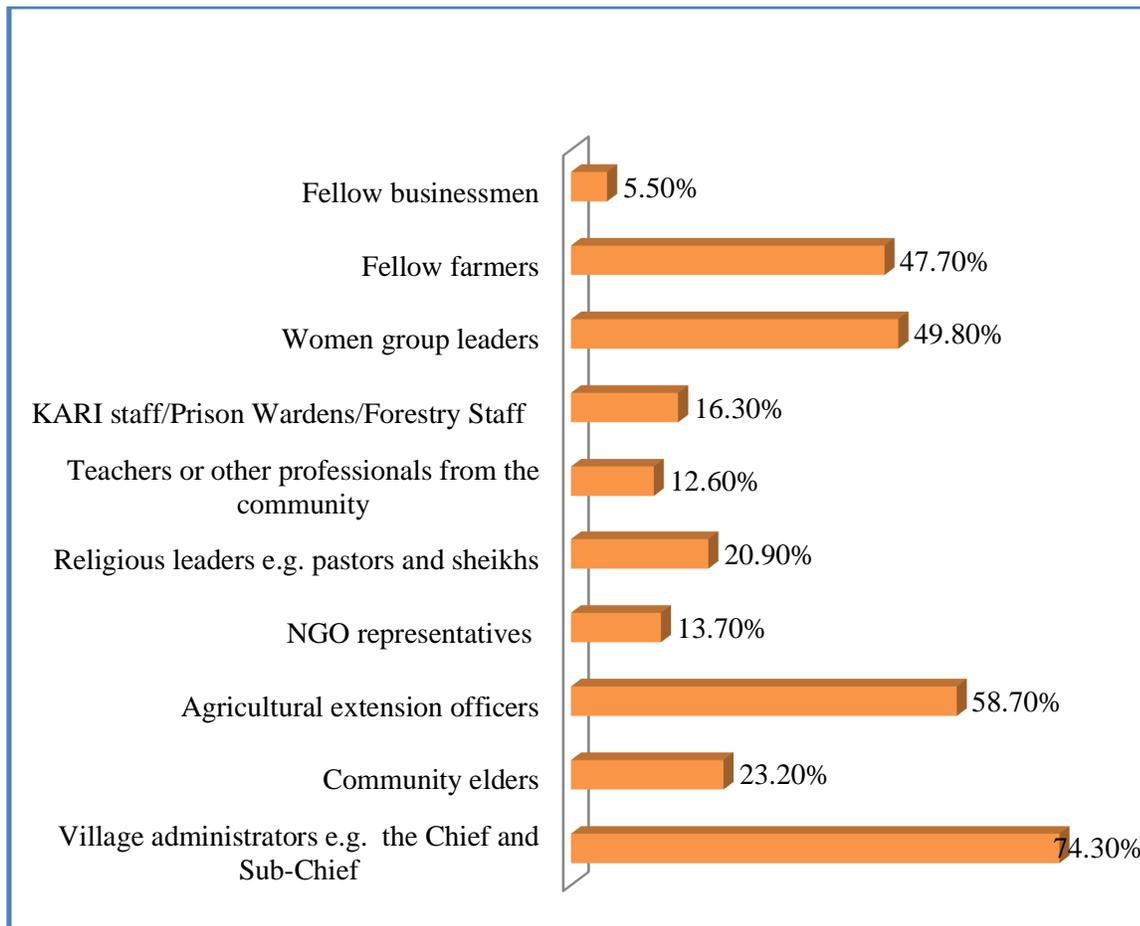


\*All the above responses were multiple responses

**Figure 2: Types of OLs in KCC**

Results indicated that village administrator's such as chiefs were the OLs that most (83%) informed the community about adapting to climate change while fellow businessmen least (7.2%) informed the community about adapting to climate change in KCC. Other OLs who informed the community about adapting to climate change included: Agricultural extension officers (74.5%); women group leaders (66.1%), fellow farmers (64.2%), community elders (31%) as well as religious leaders, government officials e.g. prison wardens, NGO representatives and professionals such as teachers. As Rodgers (2003) says, sometimes the task of identifying OLs in a social system is fairly straightforward in that highly influential persons can be named by members of the social system in a social survey.

So as to evaluate effectiveness of OLs in terms of information needs' fulfillment, respondents were asked to rate the identified OLs based on how best they met their climate change information needs.

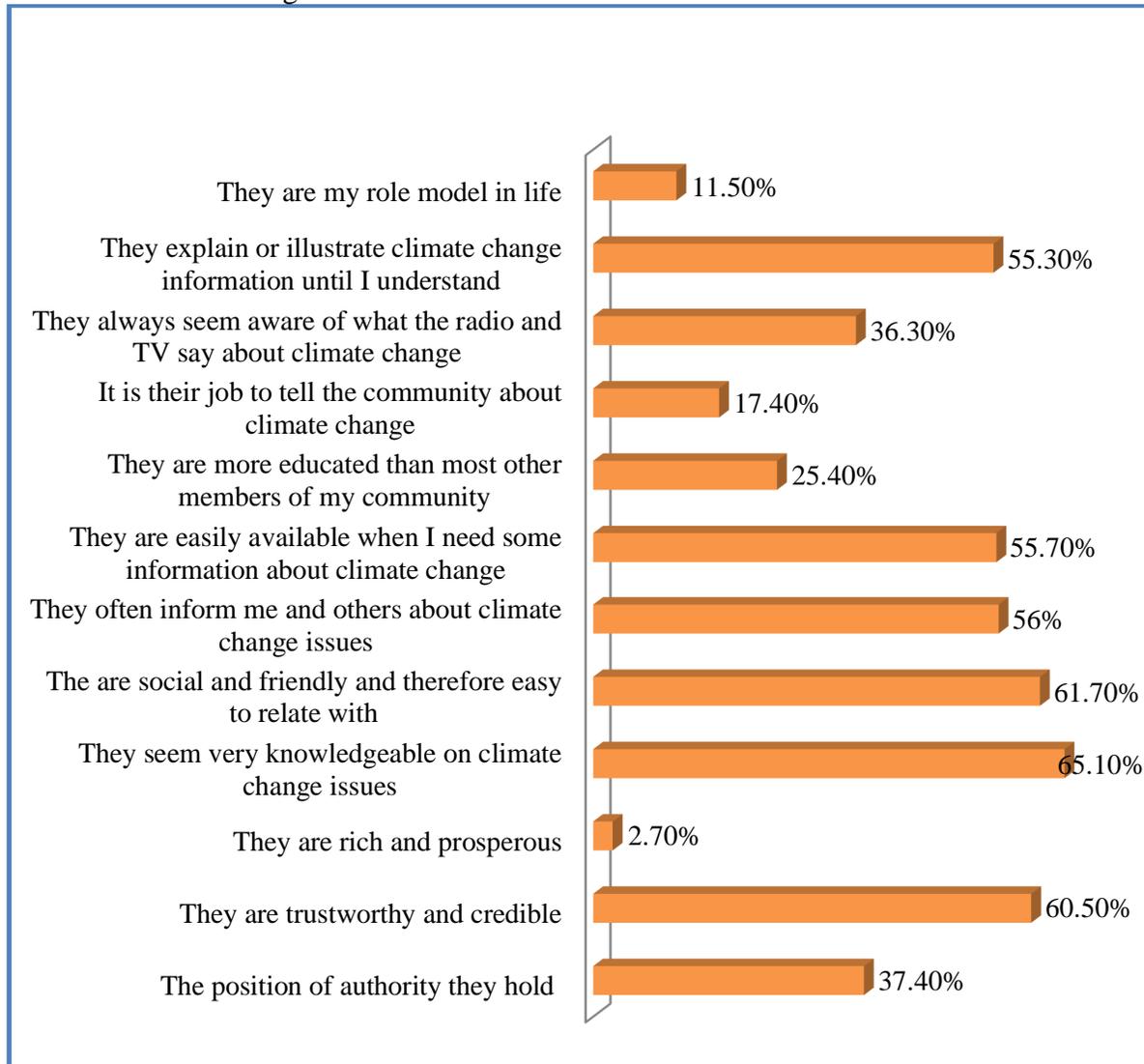


\*All the above responses were multiple responses

**Figure 3: Rating of effectiveness of OLs by residents of KCC**

Results indicated that village administrator's best (74.3%) met the respondents' climate change information needs while fellow businessmen least (5.5%) met the respondents' climate change information needs. Others who best met the respondents' information needs and in that order were agricultural extension officers (58.7%), women group leaders (49.8%) and fellow farmers (47.7%).

The study then sought to understand from respondents what qualities in identified OLs made them rated as more effective in meeting the respondents' climate change information needs and results were as indicated in Figure 4 that follows.



\*All the above responses were multiple responses

**Figure 4: Rating of qualities that make OLs effective**

Findings indicated that the respondents rated their climate change leaders highest if they thought that the leader seemed very knowledgeable on climate change issues (65.1%), was social and friendly and therefore easy to relate with (61.7%) and was trustworthy and credible (60.5%). On the other hand, the respondents rated an OL dismally if the leader was rich and prosperous (2.7%), was their role model (11.5%) or because that it was his/her job to tell the community about climate change (17.4%).

The findings were congruent to findings by scholars who have established that OLs are individuals who pay close attention to an issue, frequently discuss the issue, and consider themselves more persuasive in convincing others to adopt an opinion. When compared to their peers, OLs tend to be more exposed to all forms of external communication (Flodgren et al, 2011) and as such are more

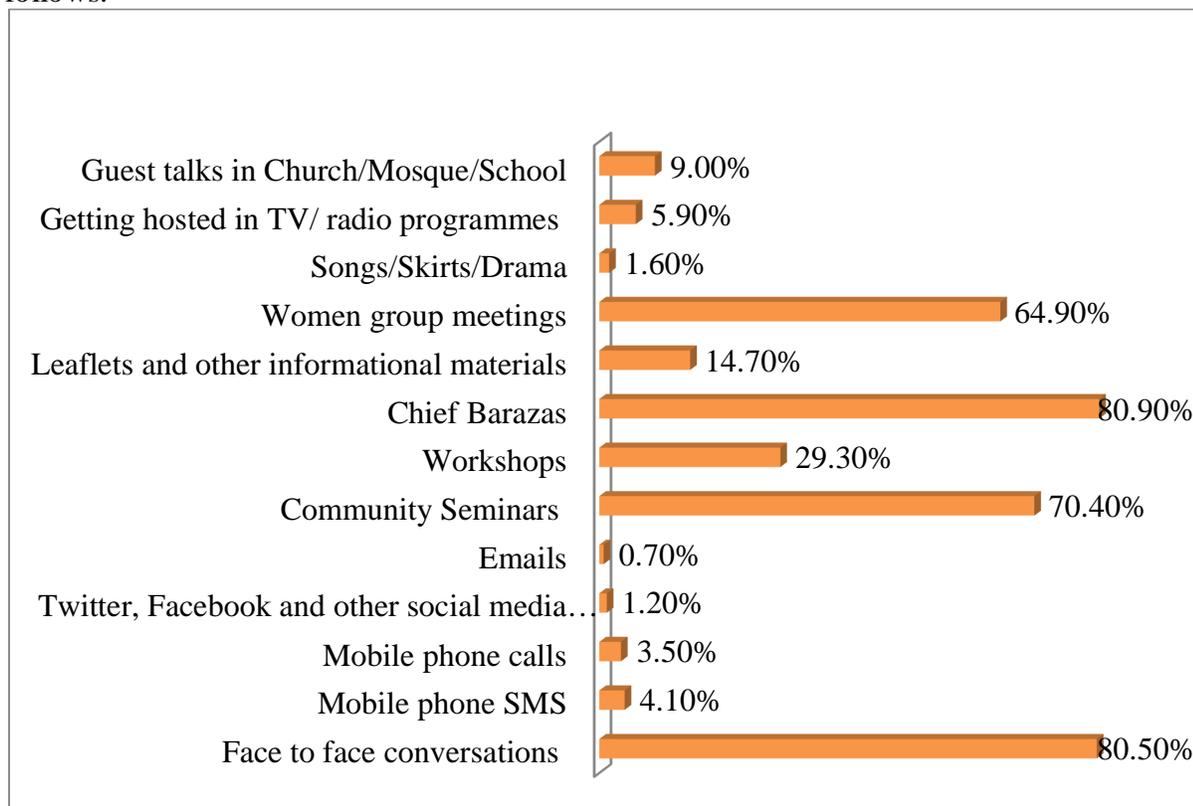
knowledgeable on the issue of concern. OLs are people who are seen as likeable, trustworthy and influential (Flodgren et al, 2011). The Social Learning Theory hypothesizes that such individuals are likely to be persuasive agents of behavioural change. OLs are more gregarious than non-leaders (Loudon & Britta, 1979). Individuals with strong personality traits of confidence, leadership, and persuasiveness are found to be socially connected to a greater number of other community members and more likely to influence the opinions of others (Weimann, 1994). OLs are better educated and more affluent than the average person and it is their interest and belief that they can make a difference in the world around them that makes them influential (Nisbet & Kotcher, 2009).

### 3.2 Examination of opinion leadership strategies

The second objective of the study was:

*(ii) To examine strategies used by opinion leaders to communicate adaptive climate change information to residents of Kitui Central Constituency.*

To achieve this, the study sought to establish the interpersonal communication methods used by OLs to communicate ACCI to residents of KCC. Results were as indicated in the Figure 5 that follows.



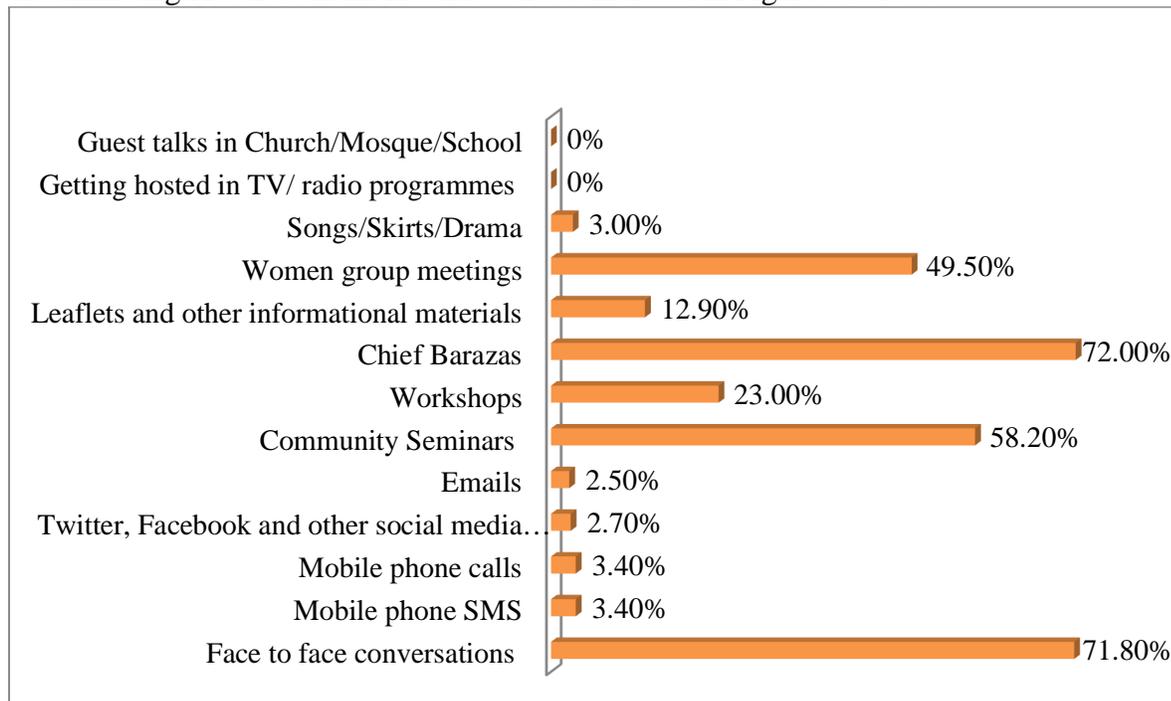
\*All the above responses were multiple responses

**Figure 5: Interpersonal communication methods used by OLs in KCC**

Results indicated that chief barazas (80.9%), face to face conversations (80.5%), community seminars (70.4%) and women group meetings (64.9%) were the most used methods by OLs when communicating ACCI to residents of KCC. Conversely digital methods including emails (0.7%), social media (1.2%), mobile phone calls (3.5%) and mobile phone sms (4.1%) were the least used methods – this could be explained by the socio-economic status of the residents that was however not explored in this study. Nevertheless, the findings agree with Doumit et al, (2007) who said that

informal one to one teaching, community outreach education visits and small group teaching are examples of strategies used by OLs for disseminating and implementing change. However, OLs also use formal strategies, such as delivering didactic lectures. Ryan (2002) says that whereas it is unclear whether information delivered by OLs in an informal way is more persuasive compared with formal strategies, it has been suggested that OLs may be less influential when their role is formalized through mail-outs, workshops or teaching rounds. No wonder the leaflets (14.7%) and workshops (29.3%) were found to be less popular compared to adoption of the more informal methods.

The study further sought to establish effectiveness of the identified interpersonal communication methods. As such, respondents were asked to rate the methods they felt were the best in disseminating ACCI to them. Results were as indicated in Figure 6 below.

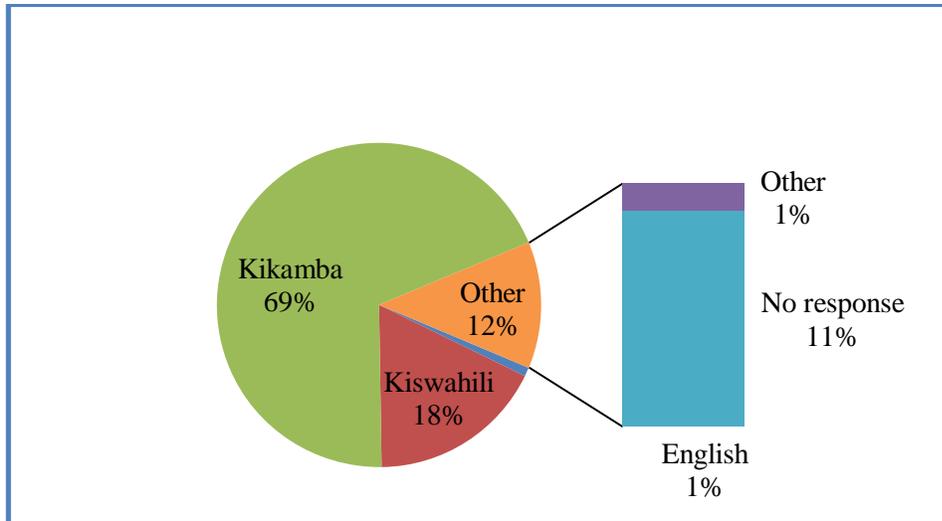


\*All the above responses were multiple responses

**Figure 6: Rating of effectiveness of interpersonal communication methods**

Results indicated that chief barazas (72%), face to face conversations (71.8%), community seminars (58.2%), women group meetings (49.5%) were the most preferred methods of communicating ACCI among KCC residents. These findings agreed with scholars who established that although OLs use a range of interpersonal communication methods to achieve desired behavioural change, face-to-face recommendations are still overwhelmingly preferred over digital sources of information among many publics (Berry & Keller, 2006; Carl, 2006; Xue & Phelps, 2004). A study from ASALs of Kenya among the Mbeere farmers, rated face to face access as their preferred method for accessing weather forecast information that enabled timely decisions and action for on-farm operations (Njuki, 2013: 5).

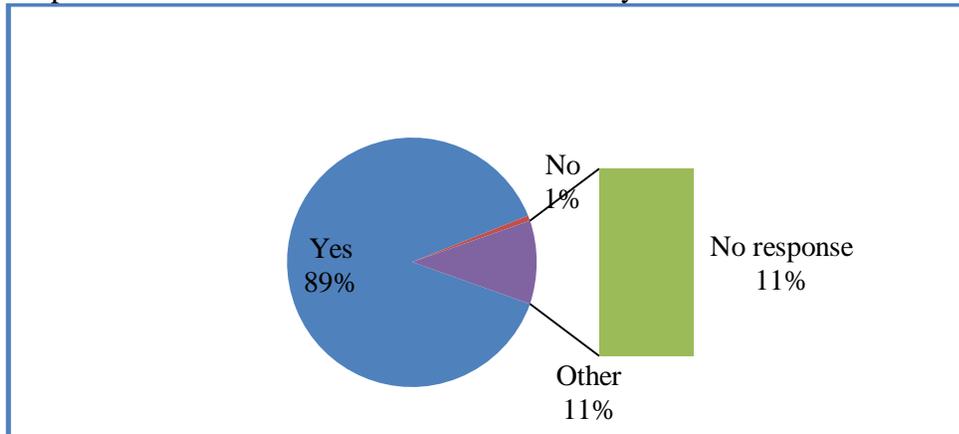
In order to further examine effectiveness of the opinion leadership strategies, the study sought to establish the language most used by OLs to communicate ACCI.



**Figure 7: The Most used language by OLs**

Results showed that Kikamba (69%), the vernacular language of KCC residents, was the most used language by OLs; Kiswahili (18%), the national language of Kenya, came second while other languages took up the remaining 13%. The OLs used the most common language in the community which was good in view of the literacy levels of most ASAL residents in Kenya.

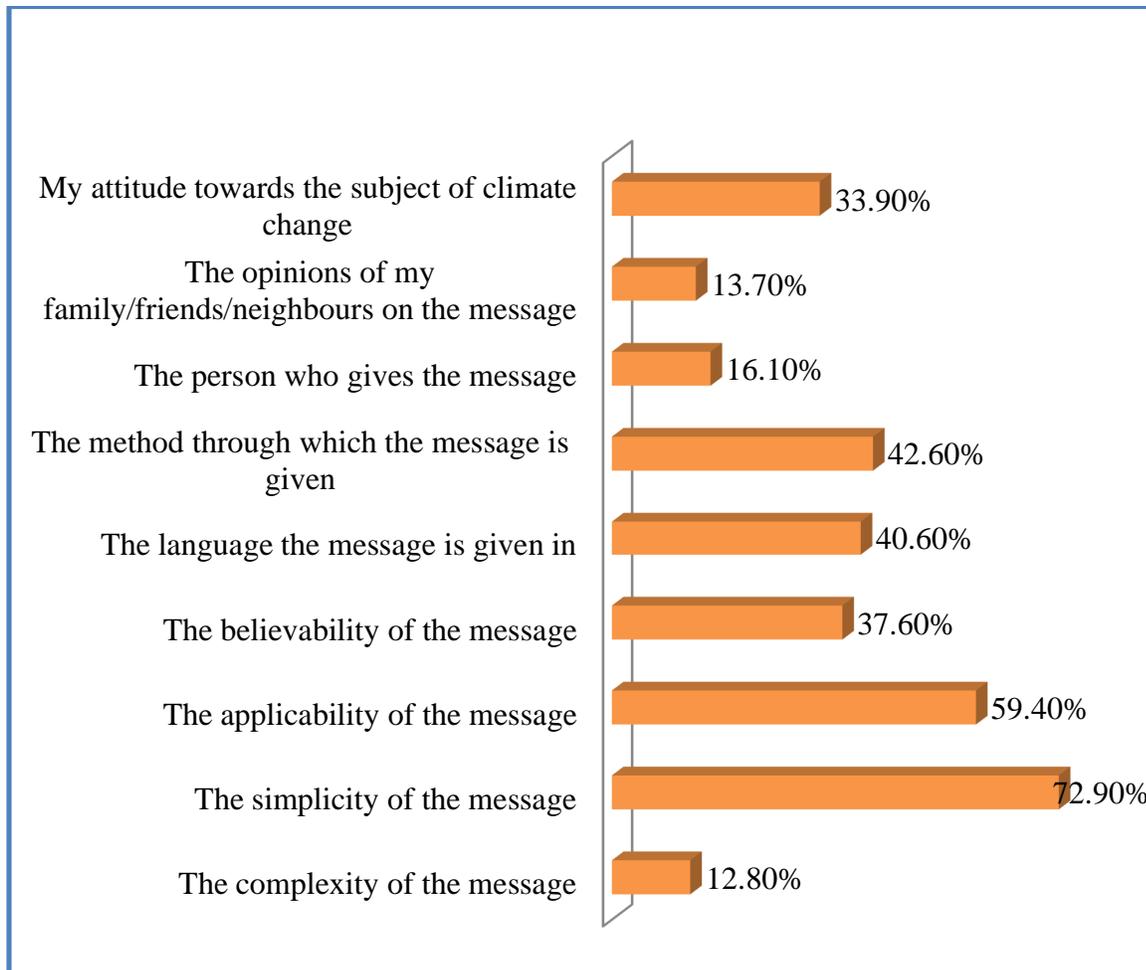
Respondents were then asked whether or not they understood the ACCI shared by OLs.



**Figure 8: Understanding of shared ACCI**

89% of respondents acknowledged as understanding the information while 1% of the respondents opined that they did not understand the information. The rest of the findings are as shown in figure 8. According to Nisbet (2010), for many members of the public, climate change is likely to be the ultimate ambiguous situation given its complexity and perceived uncertainty. That is why one cannot assess effectiveness of strategies used by OLs to communicate ACCI without finding out whether the audience understands the shared messages or not.

To further assess understandability, the study sought to find out features of communicated messages enhanced understandability. Results are as indicated in Figure 9 that follows.

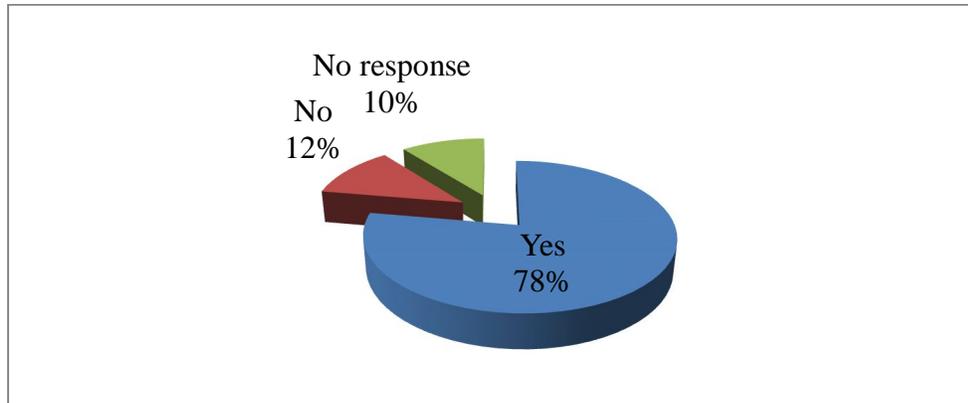


\*All the above responses were multiple responses

**Figure 9: Features that influenced understandability of messages**

Results indicated that simplicity of the message (72.9%), applicability of the message (59.4%) and the method through which the message was given (42.6%) were the features that most influenced understandability. On simplifying the message and method of communication, Nisbet (2009), when exploring framing of climate change messages argues that to break through the communication barriers of human nature, partisan identity, and media fragmentation, messages need to be tailored to a specific medium and audience, using carefully researched metaphors, allusions, and examples that trigger a new way of thinking about the personal relevance of climate change. On message applicability, Nisbet adds that one way to reach audiences is to recruit their influential peers to pass on selectively framed information about climate change that resonates with the background of the targeted audience and that addresses their personal information needs.

To further assess effectiveness of the opinion leadership strategies, respondents were asked to state whether or not OLs were willing and available to explain communicated ACCI further or clarify any arising issues.



**Figure 10: OLs willingness and availability to further discuss ACCI**

78% acknowledged that this was the case while 12% felt that this was not the case as shown in Figure 10 above. This indicated that the more effective OLs are those who establish two way communicative interactions with their followers by being available and willing to clarify any arising issues further. By so doing, they not only make the communication process complete but also keep the dynamic adaptive climate change discourse ongoing.

#### 4.0 Conclusions

These findings of the study concurred with other research findings on communication of climate change information using interpersonal methods. According to Nisbet and Kotcher (2009), specific kinds of barriers to adaptation to climate change can be softened by strategic use of OLs because people do not feel they are being tricked into thinking a certain way about something when they get it from someone they know. According to Campbell (2011), the high trust given to friends and families as well as to religious leaders allows opportunities for appropriate messages to be disseminated.

The study concluded that effective OLs must be knowledgeable, social, credible and trusted. Trust in the messenger is particularly important in the context of a problem like climate change that is invisible, uncertain, seemingly remote in time and space, scientifically and morally complex, and which may pose significant demands on citizens' scientific literacy and their behaviors (Marx et al. 2007). However, according to Moser and Dilling (2012) care must be taken, however, that trusted messengers are also knowledgeable messengers.

The study also concluded that effective opinion leadership strategies that enhance engagement on adaptation to climate change, are those that enable crafting and packaging of this rather complex issue into simpler specific messages that connect to the day to day activities of the recipients (Nisbet and Kotcher, 2009). Communication of simple, applicable messages in the local language of target audience using informal interpersonal methods cannot therefore be underscored. It is more effective to use one-to-one or one-to-many (e.g. chiefs barazas or women group meetings) face to face interactions to communicate ACCI and according to Moser & Dilling (2012), several aspects make face-to-face communication more salient and effective: it is more personal; non-verbal cues can allow the communicator to gauge how the information is being received in real time and respond accordingly; direct communication allows for dialogue to emerge; and the trust between individuals participating in a two-way exchange goes a long way towards engaging and convincing someone.

Finally, the study concluded that effective opinion leadership is not only earned and sustained by possession of required attributes by the opinion leader and his/her strategic and communication

pro prowess but also by his/her social accessibility (Nisbet and Kotcher, 2009) to frequently engage the target audience in the ACCI discourse.

## 5.0 Recommendations

The study made the following two recommendations:

Use of opinion leaders that are knowledgeable, social, trustworthy and accessible remains at the top of interpersonal communication that can help simplify the climate change rhetoric in cognitive and affective ways among ASAL residents in Kenya and other regions of Sub-Saharan Africa.

Climate change experts in Kenya need to appreciate and employ opinion leadership strategies more in their quest to enhance the climate change adaptive capacity of ASAL residents because these remain highly rated for communicating the rather complex issues surrounding climate change. These issues are even more complex to the marginalized residents of ASALs, most of whom remain marginalized.

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**APPENDIX: HOUSEHOLD SURVEY QUESTIONNAIRE**

QUESTIONNAIRE SERIAL NO \_\_\_\_\_

**QUESTIONNAIRE FOR ASSESSING OPINION LEADERSHIP STRATEGIES USED IN COMMUNICATING ADAPTIVE CLIMATE CHANGE INFORMATION TO RESIDENTS OF KITUI CENTRAL CONSTITUENCY**

NAME OF RESEARCH ASSISTANT \_\_\_\_\_

WARD \_\_\_\_\_

\_\_\_\_\_

SUBLOCATION: \_\_\_\_\_

HOUSEHOLD S.N. \_\_\_\_\_

DATE \_\_\_\_\_

TIME \_\_\_\_\_

**FILL IN YOUR ANSWER OR TICK THE APPROPRIATE****SECTION A: DEMOGRAPHIC INFORMATION**

Name of respondent (optional) \_\_\_\_\_

Mobile phone number (optional) \_\_\_\_\_

Place of Birth \_\_\_\_\_

Age (in years) \_\_\_\_\_

Gender: [  ] Male [  ] Female**1. For how many years have you lived in your sub-location? (Tick one)**

1. [  ] Below 1 year
2. [  ] 1-5 Years
3. [  ] 6-10 Years
4. [  ] 11-20 Years
5. [  ] Above 20 Years

**2. What is your highest level of education? (Tick one)**

1. [  ] Never been to school
2. [  ] Ngumbaru
3. [  ] Primary education
4. [  ] Secondary education

5.  College education
6.  University education

**3. What is your occupation? (Tick one)**

1.  Farmer
2.  Livestock keeper
3.  Livestock and farming
4.  Business
5.  Other (specify)\_\_\_\_\_

**4. For how many years have you practiced this occupation? (Tick one)**

1.  Below 1 year
2.  1-5 Years
3.  6-10 Years
4.  11-20 Years
5.  Above 20 Years

**SECTION B: ATTRIBUTES OF OPINION LEADERS**

**5. Are there people in your community who inform you about adapting to climate change? (Tick one)**

1.  Yes
2.  No

**6. If Yes in Q12 above, who among these people have been informing you about adapting to climate change? (Tick as many as appropriate)**

1.  Village administrators e.g. the Chief and Sub-Chief
2.  Community elders
3.  Agricultural extension officers
4.  Oxfam staff and other NGOs
5.  Religious leaders e.g. pastors and sheikhs
6.  Teachers or other professionals from the community
7.  KARI staff
8.  Fellow farmers
9.  Fellow herders
10.  Fellow businessmen

11.  Other (specify)\_\_\_\_\_

**7. Who among them would you say meet your climate change information needs BEST?**  
(Arrange starting with the most preferred using no.s 1-10 as given in Q13 to identify each)

**8. What qualities in the people you have listed in Q14 above makes you rate them as more effective in meeting your climate change information needs? (Tick as many as appropriate)**

1.  The position of authority they hold
2.  They are trustworthy and credible
3.  They are rich and prosperous
4.  They seem very knowledgeable on climate change issues
5.  They are social and friendly and easy to relate with
6.  They often inform me and others about climate change issues
7.  They are easily available when I need some information about CC
8.  They are more educated than most other members of my community
9.  It is their job to tell the community about climate change
10.  They always seem aware of what the radio and TV say about climate change
11.  They explain or illustrate climate change information until I understand
12.  They are my role model in life
13.  Other (specify)\_\_\_\_\_

**9. How often do they inform you about adapting to climate change? (Tick one)**

1.  Weekly
2.  Once every month
3.  Once every 3-4 months
4.  Once every 6 months
5.  Once a year
6.  Only during rainy seasons
7.  Only when there is drought
8.  Other (specify)\_\_\_\_\_

**SECTION C: OPINION LEADERSHIP STRATEGIES****10. Through what methods do the people you identified in Section B communicate****adaptive climate change information to you? (Tick as many as appropriate)**

1.  Face to face conversations
2.  Mobile phone SMS
3.  Mobile phone calls
4.  Twitter, Facebook and other social media updates
5.  Emails
6.  Community Seminars
7.  Workshops
8.  Community Barazas
9.  Leaflets and other informational materials
10.  Getting hosted in local radio programmes
11.  School visits to give climate change lectures
12.  Other (specify)\_\_\_\_\_

**11. Which of these methods do you feel are the BEST for communicating adaptive climate change information to your community? (Arrange starting with the most preferred using no.s 1-12 as given in Q10 to identify each)**  
\_\_\_\_\_**12. Which language do they use MOST in communicating this information to you? (Tick one)**

1.  English
2.  Kiswahili
3.  Kikamba
4.  Other (specify)\_\_\_\_\_

**13. Do you understand the climate change information they share with you? (Tick one)**

1.  Yes
2.  No

**14. Which of the following features would you say make you either understand or not understand the climate change messages they communicate to you? (Tick as many as appropriate)**

1.  The complexity of the message
2.  The simplicity of the message
3.  The applicability of the message
4.  The believability of the message
5.  The language the message is given in
6.  The method through which the message is given
7.  The person who gives the message
8.  The opinions of my family/friends/neighbours on the message
9.  My attitude towards the subject of climate change
10.  Other (specify)\_\_\_\_\_

**15. Are they willing and AVAILABLE to explain what you do not understand or the messages they share further? (Tick one)**

1.  Yes
2.  No

**Thank you for your cooperation.**