

## Role of Communication and Public Participation in Provision of Health, Food Security and Water Security in Kenya

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### Abstract

Climate change refers to significant, long-term changes in the global climate. The global climate is the connected system of sun, earth and oceans, wind, rain and snow, forests, deserts and savannas, and everything people do as well. This paper discusses climate change and the effects it posits. The paper specifically looks at food security, water security and health which are sustainable development goals 2, 6 and 3 respectively. This paper therefore argues that communication and public participation are independent variables and key players in ensuring people have needed information that may translate to the provision of food security, water security and health, all of which are dependent variables. The paper makes use of the media framing theory in bringing out pictures as a media communication strategy in explaining the adverse effects of climate change in order to call for intended action. The sustainable development goals discussed in this paper are among the socio-economic rights of every person as stipulated in article 43 of the Constitution of Kenya 2010. The constitution of Kenya 2010 allows for communication and public participation. The constitution of Kenya gives provision for public participation and leaders in Kenya need to give room for people to give their input in making key decisions on sustainable ways of dealing with climate change. Policies and key decisions that have stakeholders' input are more sustainable and pragmatic in implementation. The paper concludes by giving viable suggestions on how everyone can be involved in the conversation of climate change in order to make the environment and the world a better place to live in.

**Keywords:** Climate change, communication, Constitution of Kenya, public participation, sustainable development goals

### Introduction

Climate change is a shift in the weather patterns, for instance, it may get too hot, too rainy, or too cold. The global climate is the connected system of sun, earth and oceans, wind, rain and snow, forests, deserts and savannas as well as human activities. The climate of a place is reflected in different weather change. Sometimes it may be rainy, hot, cold and at other times, the rain can be so intense that it may cause havoc to human beings and plants. Other times it might be too hot for a long period of time and this may affect crops negatively. Whatever the case, public participation and communicating to the public in advance about weather changes is paramount in ensuring that people are weather informed for readiness in development matters or adjusting accordingly.

Shifts in climate change can be natural or manmade. Activities that man engages in day by day can be one of the major causes of climate change. For instance, deforestation happens in many parts of the world for different reasons. Harvesting trees for purpose of making charcoal and other

types of fuel typically reduces the number of trees. Harvesting trees can also be done in order to extract timber for multipurpose, for instance timber for constructing houses. Most houses are made of timber roofing glazed with iron sheets. Furniture such as seats, beds, stools are mainly made out of timber. When we consider the commercialization of timber and being a factor of production, it becomes overwhelmingly clear that timber harvesting is likely to happen. Where trees are harvested and not replaced, the land becomes bare and vulnerable to soil erosion during heavy downpour. Soil erosion is a big challenge to healthy farming.

Before discussing communication strategies in climate change conversation, this paper presents some data that gives a glimpse on the effects of climate change and hence justification for intervention by relevant authorities. Water security refers to a society's capacity to have enough water of sufficient quality for survival and to carry out different productive activities. The society is therefore in a position to reduce poverty and improve living conditions in a situation where there is sufficient water. The water security governance data helps to assess the performance of service delivery systems as they work toward the UHC targets and the SDGs. Proper water security management enhances a multiplier effect to possibility of addressing effectively the issue of food security.

The United Nations Development programme (1998) gave summarised scientific audits that showed the state of the planet by then. 20 countries suffered from water stress, having less than 1000 m<sup>3</sup> per capita per year, and total water availability having dropped from 17000 to 7000 m<sup>3</sup> per capita per year. This evidence had accumulated over the past 20 years, with acid rain damaging 60% percent of Europe's commercial forests and reducing crop yields by 25 percent in East Asia. There were 500 million people living on marginal lands which could not feed them; overfishing leading to lack of adequate fish protein; fast extinction of wild species, 50-100 times; and falling of world forest drastically.

A population consisting of 30 percent in developing countries lacked access to safe drinking water and 2 million died yearly from associated diseases; 90 percent of all wastewater was untreated in the developing countries. Nearly 30 percent of domestic solid waste was uncollected in third world cities. The mangrove swamps were not spared either and the world economic activity grew by 3 percent per year since 1950; and thus, would require a second planet to accommodate it if ecological burdens remain the same. To add trouble to water security, there was the issue of 2.2 million people who died every year from indoor pollution, mostly in rural areas. There was air pollution from cars and industrial exhausts.

Crosson (1997) states that about 500 children per day died because of lack of food, water, sanitation and basic healthcare. About 900 million people lived in circumstances where established means of producing food, gathering fuelwood and accessing clean water were no longer sufficient for bare subsistence basic level. Some 15 million people had been displaced from their homelands and there was loss of protective soil cover together with forest cover. This scenario was estimated to be summarised by land degradation annual loss of productivity at 0.1 percent and cumulative loss of around 4.5 percent since 1945. The population was growing rapidly, there was compulsory migration and landlessness were forced people to move. Omboto and Arogo (2013) on the dynamics of water resource management for socio-economic development in Kenya found that one major factor constraining access to water resource management information was attributed to low economic status. They noted that ways of enhancing water resource information in Kericho and Uasin Gishu Districts was mostly through education at 44.8 percent and 34.8 percent respectively.

Malabo (2018) states that climate change has caused extended droughts and increased erratic rainfall in Africa. The author further states that 62 percent of Africa's crops are currently rain-fed. The climate smart initiative seeks to improve the productivity of the country's farmers by providing access to water year-round. Price (2019) states that farmer production of smallholders increased by up to 75 percent in Mozambique as a result of bolstering their climate resilience with the establishment of irrigation and storage infrastructure; the Baixo Limpopo climate resilience pilot project (BLCRPP). South Africa has committed to increase the area of irrigated land by 50 percent over the next 10 to 20 years. This policy has already supported 32,000 smallholders to irrigate their fields.

### **Effects of Climate Change on Food Security**

Changes in the climate and increases in extreme weather events are among the reasons behind a global rise in hunger and poor nutrition. Fisheries, crops, and livestock may be destroyed or become less productive. In many parts of the world including Kenya, farmers since time immemorial are able to predict when the heavy rains begin, short rains begin and the long dry spell seasons. For this matter, they prepare their lands accordingly so that when the rains are descending on the land, this find when farmers have tilled the land and planted their seeds. Farmers also are able to predict the appropriate time to weed their land and when to harvest. In some parts of Kenya like Vihiga and Kakamega, farmers are able to plant maize twice a year. This being the case, farmers can make a decision on which harvest to sell and meet their daily needs as well as other needs. They can also decide which harvest to store for family future use. In other parts of the country farmers are able to plant and harvest maize only once a year.

Currently, farmer predictions are no longer reliable because of the adverse climate change. The abrupt climate change has led to farmers wasting a lot of time, energy and capital on their land thus being disappointed and frustrated. It is therefore important for farmers to get appropriate information when the rains are about or if there are going to be any delays. Poor prediction of rains by farmers have led to great losses. A point in case; farmers in Lugari experienced frustration when they prepared their land anticipating that the rains would pour as usual. Some farmers planted their seeds only to be disappointed when there were no drops of rain for about three weeks. This had financial implications in that farmers had to replant when the seeds they earlier planted did not germinate.

How then can public participation be used to ameliorate such situations? Having farmers' associations in the counties and calling farmers for periodic meetings concerning weather forecasting can go a long way in ensuring that farmers are adequately prepared. Such meetings if well-coordinated can help in getting farmers talk about their fears, frustrations as well as thoughts. County governments need to have field officers working together with meteorologists in ensuring appropriate information is disseminated to farmers. During these meetings, farmers can be sensitized on food security and ways of diversifying in farming in order to have adequate food for their household(s).

Apart from the above scenario where farmers are uncertain of when to plant and harvest because of change in climate, many parts of the country witness the havoc that floods bring forth as a result of climate change. Sometimes people's houses and land are flooded and they are displaced. Displacement of families during such times have psychological distress on different family members. For instance, school children in affected areas are not able to go to school normally like their peers. Also, parents or household providers go through psychological distress especially when they are not able to provide for their families. People with disabilities in such

areas are more affected than everyone else, for instance, the visually impaired may not be able to see their way through. The wheelchair and crutch users may not be able to wade in the deep waters. The crawling persons may experience intense hardships and may be left to fate. Other than houses, there are instances when vehicles veer off the road and sink with people. In some cases, people die, others are brutally injured, and others acquire a disability. Some of these cases can be prevented when public participation is carried out before the heavy rains. People know too well the black spots and it is possible for county governments to get views from stakeholders on preventive measures, for instance, where to erect water drainage; which flood prone areas where people should be alerted to shift or helped to shift before the long rains and the floods. Public participation can also foretell which places need water harvesting, for instance, in social institutions and how this can be achieved for the common good of everyone else.

### **Climate Change Interventions and the Social Learning Theory**

Climate change conversations need to be everyone's conversation and especially in the developing countries because the effects are intense and are profoundly life threatening. One person cannot be effective in climate change but everyone can make a significant impact. Involvement of everyone needs to begin from the school level, community and all the way to the national level. The social learning theory can be used to explain this intervention.

According to the theory, which was proposed by a psychologist, Albert Bandura, people can learn from each other through observation, imitation and modelling. In the context of this paper then, an inference can be made that for man-made climate change interventions, various social interaction platforms can be used to create awareness, sensitize people and have people seeing, observing and practically getting involved in environmental conservation measures. Some of the social interaction sessions may involve schools, clubs, colleges, churches, community and national functions among many others. The ensuing discourse gives some ways in which climate change may be done to involve everyone.

Involving children in climate change can begin as early as possible. For instance, the culture of tree planting can be introduced and nurtured in the learners during their formative years. This is because during the formative years, children's development occurs based on the child's response and the interaction between genetics, environment and experience. Planting of trees needs to be introduced in schools from an early age. As part of conserving the environment, tree planting can be taught as a topic in environment studies. Learners learn best through observation. For instance, in Kenya, the Competency Based Curriculum (CBC) can be used to engage learners in practical sessions that seek to conserve the environment. Practicals may involve learners being given time to plant trees, water trees until they are fully grown. They can also be taught practically on digging trenches to avoid floods.

County governments can be a great stakeholder in making climate change interventions in local areas. For instance, every county government needs to have an environment department with key objectives of addressing climate change issues. This department needs to also have a core department that is fully funded and charged to deal with communication, public participation and environmental conservation. Officers working in this department need to reach out to people and do sensitization on water harvesting, planting trees digging trenches. It is usually the case that when heavy rains set in, most people are ill prepared for the rains and instead of rains becoming a blessing, they cause a lot of havoc to people. People need to be sensitized on how to harvest rain water that can sustain them up to the next heavy rain period. County governments need to also ensure that well-built water drainage trenches are erected at water points to prevent soil erosion

and road floods. County governments can engage the public by ensuring that they are part of the key decision makers in the projects taking place in their designated areas. For instance, local labour can be sourced in situations where trees are being planted and trenches dug.

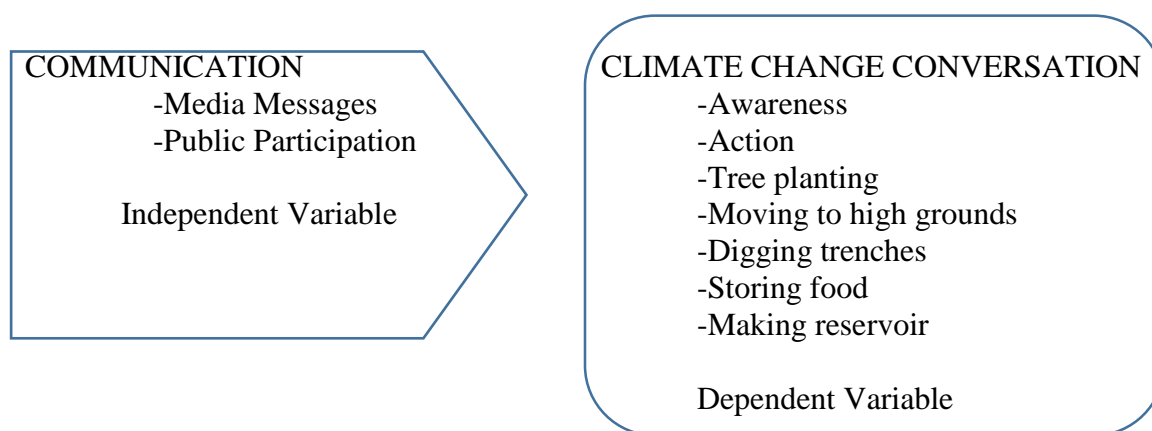
### Communication Strategies in Climate Change Conversation

According to UNICEF (2019), communication is a prerequisite to development in communities. This then implies that there is a clear connection among community development and community communication. When adequately supported, engagement improves the likelihood that communities will take the lead on issues that affect them, access and use services, improve their well-being and build resilience to environmental change. Community suggestions on ways of adapting to climate change can help key decision makers come up with needful policies that address the impacts of climate change effectively. For this to be effective, there is need to come up with communication strategies that can help in reaching out to communities and people. This discussion leads us to the conceptual framework.

### The Conceptual Frame Work

In this paper, the independent variable is communication, which has the attributes of media messages and public participation. The manner in which information on climate change is communicated and the way information is framed in the media has an impact on mitigating the adverse effects of climate change. The media can be used as a communication strategy to relay messages effectively. The effectiveness of media is explained by the media framing theory which states that rhetorical devices can be used to convince people of the value of any given position. In the same wave, the media can be used to sensitize people on awareness of conserving the environment and participating in climate change conservation. The diagram below shows the relationship between the independent and dependent variables:

### Conceptual Framework



As depicted in the conceptual framework, the independent variable is communication which has the attributes of media messages and public participation. The dependent variable is climate change conversation. Through media messages, the public can be enlightened on salient issues regarding climate change. This can lead to awareness on the weather factors hence people can take action from informed perspectives. For instance, people living in low lands that are prone to be affected adversely with heavy rains can move or be helped to move to higher grounds. The

public can also be enlightened to take part in digging trenches to avoid stagnant water. Public participation can also be done as a communication strategy so that people are enlightened on ways of storing food for consumption during the dry spells.

### **Triangulation of Media and Public Participation as a Strategy of Communication**

Media has a salient role to play in the society. They educate, inform, and entertain through news, features and analysis in the press. They also produce documentaries, dramas, current affairs programmes, public service announcements, magazines and other forms of programming for radio and television. The media acts as a gate-keeper for the society as well as watch dog. There are issues of concern that the media chooses to bring to the public eye. There are a number of theories that give an explanation on the public use of media.

From the onset of climate change conversation and media as a communication strategy, it needs to be clear that this paper evokes the theory of media framing. The theory of media framing states that rhetorical devices can be used to convince people of the value of any given position. Frames select certain aspects of a perceived reality to make them more noticeable, and often simplifying the message to mobilize support. The framing theory suggests how something is presented to the audience (called ‘the frame’) influences the choices people make about how to process that information. The pictures below are some depictions of how media has been used as a strategy of communicating the adverse effects of climate change.



**Fig. 1: A Livestock Herder Counting His Loss as a Result Of Drought In Kajiado County in Kenya**

Source: The Star Newspaper

From figure 1, it is clear that the media has a salient role in communicating happenings that need attention. The media sets the agenda for public dialogue. In so doing, the media plays its watch dog role of obligating leaders and concerned authority to take necessary action. The fact that the media highlighted the drought issue in Kajiado then makes a solid statement that county governments need to engage more with the public in order to know how to effectively mitigate such occurrences. The fact that the water pans used for irrigation had dried out implies that there is need of coming up with sustainable water pans and that more needs to be done by the county government.

On the issue of water security, it is notable that there are parts of Kenya that are water insecure. The northern part of Kenya experiences long spells of real time drought. Pastoralists are

most affected by drought. Their livestock lack green pasture during drought and many livestock die. This takes the owners back to the poverty line. Many herders find themselves moving hundreds of kilometres away from their homes in search of pasture. Some herders helplessly watch as their livestock succumb to death. Other herders get desperate and sell off their livestock at a cost as low as Kes. 2,000 for fear of seeing them dead as a result of starvation. When media highlight such incidents, it creates awareness and agenda for public discourse. Public discourse catapults civil society and human rights organizations to voice and drum the issues of public concern further. This participation is important because it causes governments and concerned authorities to address the issues.

In as much as the media is a persuasive strategy of communication concerning the adverse effects of drought as has been depicted, public participation is also important in climate change conversation. This is because it can help in getting the views of citizens from different parts of the country regarding the nature of climate change, effects and the appropriate intervention measures they think may work in their region.

Figure 2 shows media coverage depicting the adverse effects of climate change.



**Fig. 2: A Health Facility in Nyando Sub County in Kenya Submerged in the Floods**

Source: Citizen Television

This was a news item by the Citizen Media station. The dispensary in Nyando sub county was flooded. The implication of the floods was that patients could not be treated in this hospital at that particular time thus compromising service delivery. Figure 2 is a testimony that media can be used as a strategy for communicating issues of climate change in a way that is clear and impactful. In communicating such salient issues that need immediate intervention, the media framed this story as a news item and it was covered during prime news at 7pm and 9pm EAT. Covering information at such times catches the attention of key decision makers and other actors interested in voicing human rights issues. It also obligates leaders to act and deliver. In so doing, the media acts as a watch dog of the society. When the media uses pictures of real situations as they are on the ground, it helps in making people see the intensity of an issue and therefore the urgency of the matter to be resolved. Pictures speak louder than words and since they are visual, they are easier to remember and act on.

### **The Place of Communication and Public Participation in the Constitution of Kenya**

The Constitution of Kenya (2010) is very clear on the position of communication. In article 33 (1a), everyone has the right to freedom of expression which includes freedom to seek, receive or impart information or ideas. The constitution of Kenya (2010) encourages citizens to have a say in issues of governance and decision making. This then has implication that peoples' voice in legislation needs to take the centre stage.

COK (2010) article 37 further empowers citizens to communicate by stating, 'Every person has the right, peaceably and unarmed, to assemble, to demonstrate, to picket, and to present petitions to public authorities'. It is clear that the constitution of Kenya encourages citizens to communicate even on issues that are unpleasant before them. For instance, where citizens feel that service delivery is wanting in any public office, they can petition and also have a right to be heard. In this case, they can do it directly hence becoming the source of information or they can do it indirectly through their democratically elected leaders. Concerning the impact of climate change, citizens can petition directly or through their democratically elected leaders where climate change has adverse impact(s). Like in the flood prone areas, citizens can petition county governments to act appropriately before the heavy rains. Making water drainages in the black spot areas is apposite county intervention. Shifting citizens who live in risky areas and looking for sustainable ways of harvesting water are some of the commendable intervention measures. Support for communication in the context of sustainable development therefore involves promoting dialogue in which power-holders listen to, consider, respect and use the knowledge and views of the poor.

The County Governments Act No.17 of 2012 is very clear about public participation. The Act gives a framework on how public participation can be effected. Sections 87 to 92 and 115 outlines the principles of public participation and the logistics of facilitating. The act empowers citizens to have a voice and obligates the duty bearers to expeditiously address citizens' concerns. The act also entrusts county governments with the responsibility of ensuring that citizens have information on devolution and governance. Additionally, the act mandates county governments to leverage on media availability and ensure citizens get information. This act emphasizes on people communication. County governments are not restricted on financial expenditure on public participation. It is therefore the onus of county assemblies to ensure that money is allocated by counties during the financial yearly budget to address issues of climate change. Planting of trees, making water drainages, harvesting of water and food security measures for households need to be a preserve of county governments.

In this article, communication is the centre that holds climate change information and interventions since one has to communicate in order to express themselves. One also has to seek and impart knowledge as long as the information is not propaganda, hate speech, incitement to violence or unconstitutional. There is therefore an open window for conversation on climate change to take place at all levels. This then can lead to public participation where leaders can deliberately work around communicating issues of climate to their constituents and seeking input from them as a way of public participation.

It is important to mention that public participation is enshrined in the 2010 constitution, which is the law of the land. It is also enshrined in the County Governments' Act of 2012. Kenya is a devolved government and therefore both the constitution of Kenya and the County governments acts need to be defended in order to achieve efficient service delivery to the people of Kenya. It is therefore obligatory that county governments include public participation in their yearly budget development plan and give it a costing. Information about climate change need to



be disseminated to the public, their views sought on the type of climate change and its effect(s). The views of the public also need to be heard concerning how climate change intervention measures may be done effectively. All this information can help in making key decisions that affect people in climate change. And this is a positive move in good governance.

For instance, residents of Northern Kenya may talk about long spells of drought which may in turn cause their livestock to starve and die, hence causing poverty among them. Among the pastoralists, livestock is a sign of wealth and a lack of it denotes poverty. Drought also implies that planting food in the area may not yield results that can lead to food security. Given that they are fully aware of the problems they go through during climate change, they are in a better position to make propositions that can be used to develop sustainable policies that can help in coming up with useful decisions on drought mitigation and food security in the area.

Residents of Nyando and Kano plains and some parts of Homabay may have different views to give on the issue of climate change. For instance, there are usually heavy and unbearable floods in some parts of the country during heavy rains. In some cases, people's homes, schools and even hospitals and churches are flooded and swept away. This causes people to migrate to higher grounds or non-flooding areas. Migrating is however the only option during times of heavy rains but it is unfortunate that there are people who end up being refugees in their own country because they have nowhere to migrate. Proper public participation in these areas can help county governments come up with policies that see to it that people are not living in such black spot areas. County governments can mark those areas as non-human settlement. Those already living there can be relocated and county governments can use the land for other projects. County governments can also make drainages much earlier so that when heavy rains pour, there should be no stagnant water.

### **Conclusion**

As this paper comes to a close, it is clear that climate change needs to be everyone's conversation. Everyone ought to participate in the conversation and adjust to climate change so that the effects are not hostile to mankind. This may happen if disaggregated information is communicated to people of different age brackets at the opportune time. For instance, in schools, it can be part of the lessons that learners get on environmental education, which then should be a core lesson in the school curriculum. Media can also deliberately have programmes that give information about climate change in form of prime news, televised programmes that are educative and sensitize viewers on how to conserve the environment. Apart from sensitizing people, media can also bring reality of the adverse effects of climate change in forms of pictures so that leaders are held accountable and take appropriate action to alleviate the sufferings that result in climate change. Most important, leaders need to take advantage of the constitutional provision of public participation and engage the public in disseminating information on climate change and getting views from the public on how the adverse effects of climate change can be avoided. Both levels of government, National and County governments should set money aside for public participation. Views from the public can be helpful in making key decisions on climate change mitigation and adaptations. Information from the public on climate change adaptations can help in coming up with policies that have stake holder input.

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