



‘Facing the facts’
Report on Knowledge,
Attitudes and Perceptions on
Climate Change in Nairobi
County, Kenya.

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List of Acronyms

ASALs	Arid and Semi-Arid Lands
CCA	Climate Care Africa
FGD	Focus Group Discussion
GoK	Government of Kenya
IPCC	Intergovernmental Panel on Climate Change
KARA	Kenya Alliance of Resident Associations
KAP	Knowledge, Attitudes and Perceptions
KII	Key Informant Interviews
M&E	Monitoring and Evaluation
NA	Not Applicable
NEP	National Environment Policy
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
PLWD	Persons Living With Disabilities
UN	United Nations
UNDP	United Nations Development Programme
UNWCED	United Nations World Commission on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
WASH	Water, Sanitation and Hygiene

Definition of Key Terms

Adaptation	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects. (IPCC 2022 ¹)
Baseline	The state against which change is measured. It might be a current baseline, in which case it represents observable, present-day conditions. It might also be a 'future baseline', which is a projected future set of conditions excluding the driving factor of interest. Alternative interpretations of the reference conditions can give rise to multiple baselines (IPCC 2007 ²)
Exposure	The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected (IPCC 2022 ¹)
Impacts	The consequences of realized risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather and climate events), exposure and vulnerability. Impacts generally refer to effects on lives; livelihoods; health and well-being; ecosystems and species; economic, social and cultural assets; services (including ecosystem services); and infrastructure. Impacts may be referred to as consequences or outcomes, and can be adverse or beneficial (IPCC 2022 ¹).
Mitigation	A human intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC 2022 ¹)
Resilience	The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure. Resilience is a positive attribute when it maintains capacity for adaptation, learning and/or transformation (IPCC 2022 ¹)
Risks	The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. In the context of climate

¹https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Annex-II.pdf.

²<https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg2-app-1.pdf>.

	change impacts, risks result from dynamic interactions between climate-related hazards with the exposure and vulnerability of the affected human or ecological system to the hazards (IPCC 2014 ⁴ ; IPCC 2022 ¹)
Vulnerability	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (IPCC 2022 ¹)



Executive Summary

1 Executive Summary

After the just concluded United Nations Climate Change conference (Cop 27), held from 6 November until 20 November 2022 in Sharm El Sheikh, Egypt, Climate Care Africa (CCA) and The Kenya Alliance of Resident Association (KARA) commissioned a survey on Knowledge, Attitudes and Perceptions (KAP) on Climate Change in Nairobi County. The objective of the survey was to ascertain information on the knowledge, attitudes and behavioral practices regarding climate change among Nairobi residents. A KAP study is usually useful because it evaluates and measures the knowledge, attitude and practice of people. Further, The KAP Survey was conducted to inform the development of a communication strategy on climate change targeting the general public. The KAP results will assist in identifying gaps in knowledge, attitudes and behaviors that can be targeted as well as priority target groups, messages and channels that should be included in the strategy.

The KAP measured respondents general knowledge on climate change including their understanding of what climate change is, what causes climate change and how climate change is impacting their city residents. It also measured respondents attitudes to climate change, specifically, their level of concern about the issue, their perceptions on the importance of various actions that can be taken, perception on actions being taken at all levels and their willingness to take action to address climate change. The survey also attempted to identify actions being taken by the city residents to address climate change as well as barriers to action. Finally, the KAP survey measured media use, prominence of climate change stories in the media and most effective ways to reach communities with messages.

The study was conducted in the 17 sub-counties of Nairobi utilizing a mix of quantitative and qualitative methodologies. The survey was conducted in 17 sub-counties across Nairobi County using stratified random sampling and a quota sampling scheme to identify targeted 300 households. Additionally, Focus Group Discussions were held in the selected 17 sub-counties.

The survey targeted households across the County. The survey focussed specifically on the following areas:

- i. General Environmental Awareness
- ii. Awareness of Climate Change
- iii. Knowledge of and Attitudes towards Climate Change
- iv. Behaviours and Attitudes towards Adaptation and Mitigation
- v. Media Preferences and their level of interest in receiving information on Climate Change

This report provides a detailed overview of the current level of climate change knowledge, attitudes and practices among Nairobi County residents as well as the knowledge gaps, cultural beliefs, and behavioural patterns that may identify needs, problems, and barriers to help plan and implement Climate Change interventions. Additionally, this report provides a variation in knowledge, attitudes and practices by different demographic groupings in the Nairobi County population and generates a guiding baseline levels and measures changes that will result from intended interventions. Finally, the report documents findings and analysis that will be instrumental in informing comprehensive policy recommendations and interventions

The key findings from the KAP survey include:

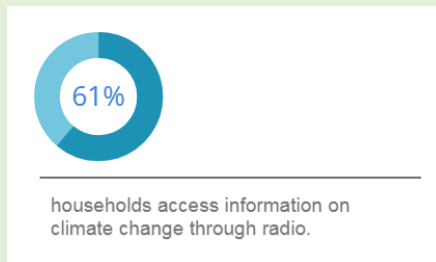
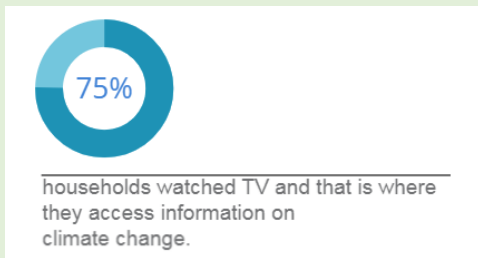
1.1 Key findings:

- In the course of carrying out this study, 59% of the respondents interviewed were male while 41% were female. Gender representation was integrated in the findings as shown by the gender statistics.
- 50.71% of the respondents were aged between 21 and 30 years, 27.73% were between 31 to 40 years of age and 12.09% were between 41 to 50 year of age. 5.92% were below 20 years of age while 2.61% were between 51-60 years. 0.95% were above 61 years. This confirms that the majority of the city dwellers are of youthful and working age.
- The results further revealed that most respondents had secondary education and above although few had postgraduate education (i.e. masters or PhD). The study also revealed most respondents could read very well and only 0.25% could not read at all.
- The study revealed that roughly about 20% of the respondents sampled were very well informed on climate change issues that is what causes it, its effect, mitigation measures etc. This therefore calls for the need for rigorous sensitization of Nairobi residents on climate change as well as adaptation and mitigation measures to put in place.

Awareness of climate change:

- The study assessed whether households were aware of climate change. The results revealed that 90% had heard of climate change and this was through local TV and radio stations.
- Interestingly, most households were found to be aware and could associate factors such as change in weather, frequent rains, increase in surface temperature, floods, droughts, increase in insects and decrease in fish stock to climate change.

- The study revealed that most households watched TV (75%) and that is where they access information on climate change followed by radio at 61%. A good proportion (58%) also accessed such information from the internet. This is attributed to the higher access to mobile phone ownership in the country.



Knowledge and attitudes towards climate change

- The study shows that on average, most Nairobi resident perceive climate change to be serious with a rating of 6 out of 10. With the scale of 10 being very serious, it is worth noting that most respondents rated the seriousness of climate change between 5 and 8. This indication shows that most households in Nairobi feel that climate change is a serious issue that needs to be addressed in one way or another.
- It is interesting to note most respondents are for the opinion that countries in Africa should work collaboratively together in dealing with climate change issues and that people need more information and advocacy on climate change. Most respondents also alluded to the fact that children should be taught about climate change in schools.
- 17% of the respondents interviewed however disagreed that we were too small to do anything about climate change and that African countries are not responsible for climate change. 13% believe that climate change is not affecting Kenyans., and 19% further believe that persons engaged in climate change are making a big deal out of nothing.
- As per the study, 16% of the respondents do not know the causes of climate change while 61% somewhat know the causes of climate change. Only 22% reported to know the cause of climate change. Additionally, 16.5% of the respondents are not aware of the possible effects of climate change whereas 63% are somewhat aware of the possible effects of climate change. Only 20% of the respondents reported to be aware of the possible effects of climate change.

Behaviour and attitudes towards adaptation and mitigation

- The study revealed that about 20% of the respondents are not aware of what can be done to reduce climate change while 61% are somewhat aware of what can be done to reduce climate change. Only 18% of the respondents confirmed to be aware of what can be done to reduce climate change

- The study found that only 33% of households in Nairobi had put in place measures to protect themselves from drought or floods which is still quite low. In addition, 25% did not even know if they had put in place measures.
- An interesting finding is that only 15% of the respondents were aware of organizations active in dealing with climate change while 22% of the respondents agreed that government was doing something to reduce effects of climate change. However, a major concern was that a higher proportion were not aware of organizations dealing in climate change.
- 23% of the respondents believe that the government is already doing all it can to avert the effects of climate change and nothing more can be done. On the same breath, 53% propose that the government should provide more information on climate change and increase public awareness. Remarkably, 20% of the respondents recommended that the government should conduct more research on climate change, enforce existing laws as well as create new environmental laws that protect the environment.
- The study revealed that 54% often talked about energy savings due to the high cost of energy and not due to the effects on the environment, while 39% talked about it sometimes and 5% rarely talked about it.
- The study also revealed that 86% of respondents interviewed used Liquefied Petroleum Gas (LPG) gas for cooking while, 23% used charcoal. 11% used electricity and this could be attributed to the high cost of electricity. On the other hand, only 2% used solar energy and 5% use firewood while a good proportion still used kerosene (21%)

Information sources and media preferences

- 60% of the respondents affirmatively agreed that they are willing to receive information on climate change with an additional 32% also agreeing that they may be willing to receive information on climate change. This shows that most households in Nairobi would be willing to receive information on climate change given their fears of the effects of climate change. Its clear thatthis may help them plan adequately and put in place appropriate measures to cushion them.
- When asked about the mode of receiving information, 69% of respondents preferred text messages while 70% preferred television, 79% preferred email and only 50% preferred getting information from the internet while 35% preferred newspapers.
- Importantly, the study revealed that there was highest interest on TV news reports (72%), radio news reports (46%), and TV advertisements (42%) among others. This shows that climate change topics should be included in the mainstream media news.

- 69% of the respondents reported to watch TV between 7pm and 10pm. This shows that to sensitize the public on climate change, it is important to target prime time news as this is when family members are all in the house. On the other hand, when it comes to listening to radio, most respondents interviewed listened between 6am and 10am during weekdays with 37% listening to radio at day time while 34% listened to radio in the evenings from 7pm-10pm.
- An assessment of the newspaper reading patterns also revealed that daily nation newspaper (print media owned by nation media group) was more read at once a week, every other week and every so often. This shows that nation newspaper is the most prominent newspaper. However, other papers like the standard newspaper and the star newspaper as well as business daily newspaper were also read by a relatively good proportion of respondents.
- In terms of internet usage, the study revealed that 62% of the respondents used Internet every day, this can be attributed to the low cost of data in Kenya and high access to mobile phone nationally. Additionally, the study revealed that 75% of the respondents use the Internet to search for climate news.

1.2 Recommendations

The KAP survey came up with the following recommendations:

- i. Climate change education programmes should be initiated in conjunction with schools, colleges and resident associations to educate the city population on the science behind climate change, the effects of climate change and both the individual and collective actions of the population that would reduce the effects of climate change.
- ii. The 'Face the facts' project should seek to link climate change issues with the emerging issues such as unemployment, and poverty as part of its awareness creation on introduction of green jobs and development of the economy through green jobs.
- iii. It would be important to create special programmes for school's (primary, secondary as well as colleges and universities) outreach and where possible lobby for climate change topics to be introduced to school forums as well as during outdoor school activities such as games.
- iv. Curriculum developers should not overlook the complex nature of climate change and should work with teachers when designing climate change knowledge for primary schools to ensure that the content developed is simple and easy to understand.
- v. Specially targeted messages for the groups of persons who do not believe in climate change should be initiated.
- vi. TV, radio and social media are still the major information sources, and preferred medium for the residents of Nairobi and must be utilised heavily in order to reach the majority of audiences.

The usage of social media has the potential to enhance technological and innovative data collection and decision making to help address gaps in climatic response.

- vii. The project should ensure such persons who do not either watch TV, listen to radio or have internet enabled phones are still reached through their alternative preferred information sources.
- viii. Journalists should be well trained on comprehensive climate change reporting.
- ix. Personalities whom people trust should be used to pass messages on climate change adaptation and mitigation.
- x. The project should employ a multi-media approach to its education and awareness initiatives that also embraces a multitude of local stakeholders and promotes community participation.
- xi. The education campaigns should seek to improve conservation habits in water and energy sectors.

Introduction- Background and Context



2 Introduction- Background and Context

Climate change constitutes one of the 21st century key challenges to development the world over (UNDP, 2007). As such, climate change and global warming have become issues of global concern in the recent decades. This is evidenced by the flurry of conferences, campaigns, reports and researches on this subject since the Rio Earth Summit in 1992. While there are natural causes of climate change, the current warring trend has been largely blamed on human activities mainly the burning of fossil fuels, industrial pollution, deforestation, and land use changes (IPCC, 2007; Canadel et al., 2010; Weart, 2010). All these anthropogenic activities either increase the concentration of greenhouse gases in the atmosphere (Canadel et al., 2010), as is the case of combustion of fossil fuel and industrial pollution, or interfere with the absorption of carbon by terrestrial sinks (IPCC, 2007), as is the case of deforestation and land use changes, leading to global warming.

Global attention on climate change was sort for the first time by the Brundtland Report, Our Common Future, which stated that the unsustainable development practices of humankind have pushed the world's climate to a warming trend (UNWCED, 1987). On the contrary, the public's concern on climate change was not triggered by the Brundtland's report, but by the unusual northern hemisphere heat wave and drought of the summer 1988 (Christianson, 1999). Numerous studies conducted since then reveal that the vast majority of people across the world, especially in developing countries, are still unaware of climate change despite their high vulnerability to the impacts of climate change (Bostrom et al., 1994; Bord, Fisher and O'Conner, 1998; Pew Research Centre, 2006; Pugliese and Ray, 2009; Godfrey et al., 2009).

Despite their awareness of changing weather patterns, people in Africa, are poorly informed about global climate change (Godfrey et al., 2009; Taderera, 2010). The low level of awareness on climate change across sub-Saharan African countries is attributed to limited awareness campaigns on one hand and the fact that African countries have got too many problems ranging from poverty to political conflicts on the other hand hence climate change is never a priority issue (UNFCCC, 2007; UNDP, 2007).

Just like awareness, perception of climate change varies across regions in the world. Various studies show that people in developing countries are more likely to perceive climate change as a threat (GlobeScan, 2006; Pew Research Centre, 2006; Godfrey et al., 2009). Contrary results were, however, reported by Pugliese and Ray (2009) who states that climate change is more likely to be perceived as a serious problem in the developed world than in developing countries, despite developing countries being the most vulnerable to climate change impacts. Nevertheless, perception

of climate change as threat has been increasing over the years thanks to the severity and increased frequency of climate change impacts (UNDP, 2007).

At the national level, the majority of Kenya's population is unaware of climate change, notwithstanding climate variability being experienced in the country (Otieno, Pauker and Maina, 2009; GoK, 2010b). Nevertheless, the Kenyan government is aware of and concerned about climate change as a development issue. In this regard, the government has developed the National Climate Change Response Strategy – 2010 and its implementation plan, the National Climate Change Action Plan 2013-2017, which outlines actions to be taken to mitigate and build resilience to the impacts of climate change.

Even as resources are put together to mitigate climate change, there is need to educate people on what climate change really is. Increasing people's awareness on climate change through education is an important measure to persuade people at all levels in the community to play an active role in mitigating and adapting to climate change. Consequently, Kenya is considering a revision of its school curricula to include climate change knowledge at all levels as demonstrated in the NCCAP 2013-2017. Before, integrating climate change knowledge into school curriculum, especially at primary school level, it is paramount to assess the teachers' level of awareness on climate change since the teachers' level of awareness is likely to influence how they conduct climate change knowledge transfer in the classroom. Whereas attempts have been made to assess the level of climate change awareness among Kenyans in general, as documented in RoK (2013), GoK (2010b) and Otieno, Pauker and Maina (2009), very little, if any, have been done to investigate the level of climate change awareness among teachers.

Rationale of the KAP



3 Rationale of the KAP

Climate change is real and its impacts have become obvious in Kenya (GoK, 2010b; RoK, 2013) necessitating the need for adaptation and mitigation at the country level. However, adaptation to and mitigation of climate change require the public to be fully aware and perceive climate change as a problem of global concern. Yet, the vast majority of Kenyans is unaware of climate change, but is at least concerned about the changing weather patterns in the country (Otieno, Pauker and Maina, 2009; GoK, 2010b). Consequently, the government expresses intent of integrating climate change knowledge into Kenya's school curricula right from primary school level, as documented both in the NCCRS - 2010 and NCCAP 2013 – 2017, to improve nationwide awareness on climate change.

The government of Kenya and non-governmental organizations thus have a critical role to play in the national climate change awareness campaign to mitigate the adverse effects of climate change in the country. However, as indicated by RoK (2012), less than twenty percent of issues related to climate change are either addressed directly or indirectly by the government and the non-state agencies (NSA). As a result, a greater proportion of Kenyans may have limited understanding of climate change and these affects climate change adaptation. This study therefore sought to examine the level of climate change awareness among Kenyans living in the capital city of Nairobi with the aim of improving climate change adaptation and mitigation.

3.1 Why a KAP survey?

KAP Surveys provide critical baseline material that help inform the knowledge levels of a community or group of people and further aid in the development of communication strategies and shape activities in awareness campaigns. In this regard, seeking their levels of knowledge, has mutual benefits. It will help CCA and its partners to use evidenced based data to address gaps in knowledge and awareness levels, while also arming the public with information and tools to cope with possible implications of climate change on their livelihoods, their resources and on their county and nation at large. This KAP survey will form the bedrock to inform policy recommendations in Nairobi County.

3.2 Objectives of the KAP

Specifically, the KAP survey seeks:

- a) To assess and quantify the level of climate change knowledge, attitudes and practices among Nairobi County residents as well as key stakeholders;

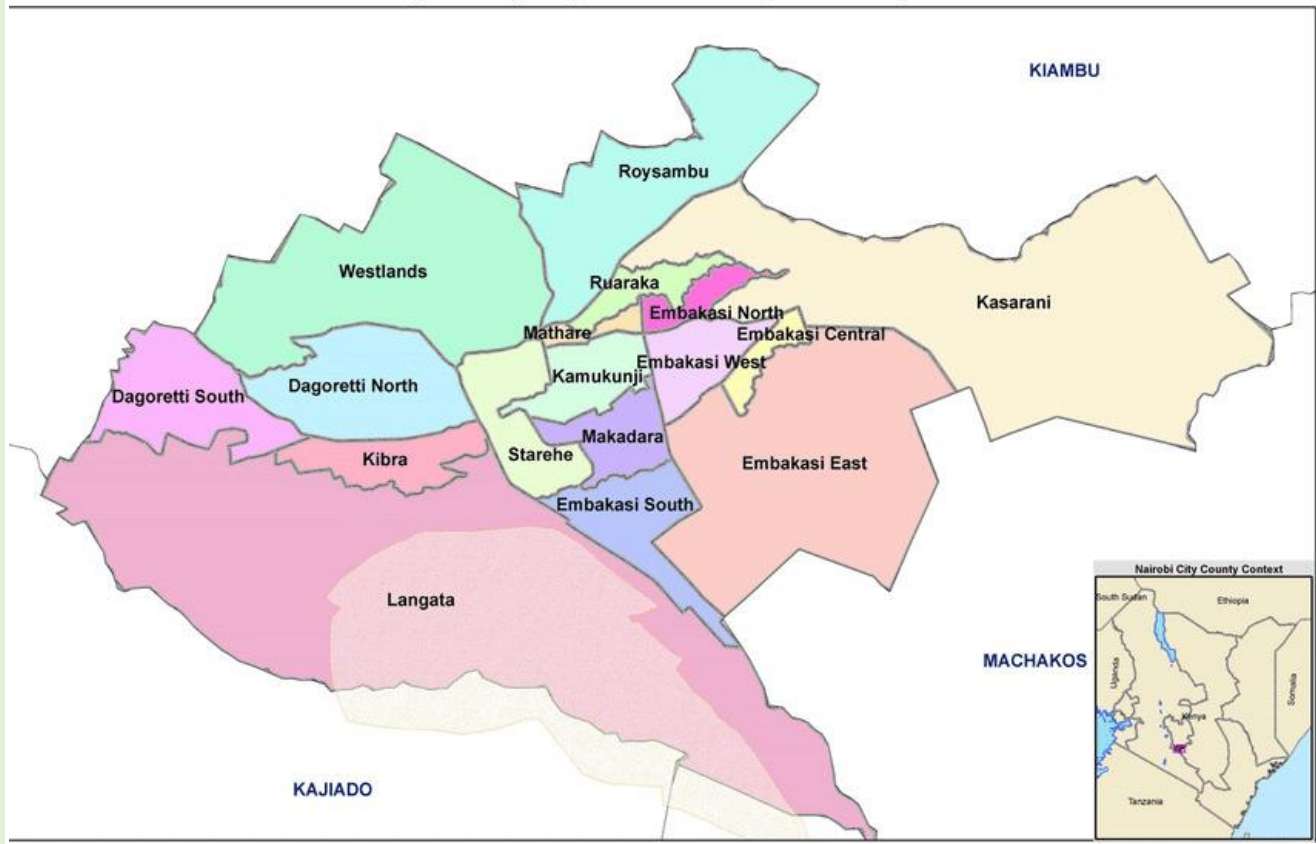
- b) To identify knowledge gaps, cultural beliefs, and behavioral patterns that may identify needs, problems, and barriers to help plan and implement Climate Change interventions
- c) To generate baseline levels and measure changes that will result from intended interventions
- d) to determine variation in knowledge, attitudes and practices by different demographic groupings in the Nairobi County population and by various sectors, etc
- e) to explore the County situation in the context of international trends and best practices in improving KAP; and
- f) To use the findings and analysis to inform policy recommendations.

3.3 Survey scope and geographical coverage

The scope of the KAP Survey was:

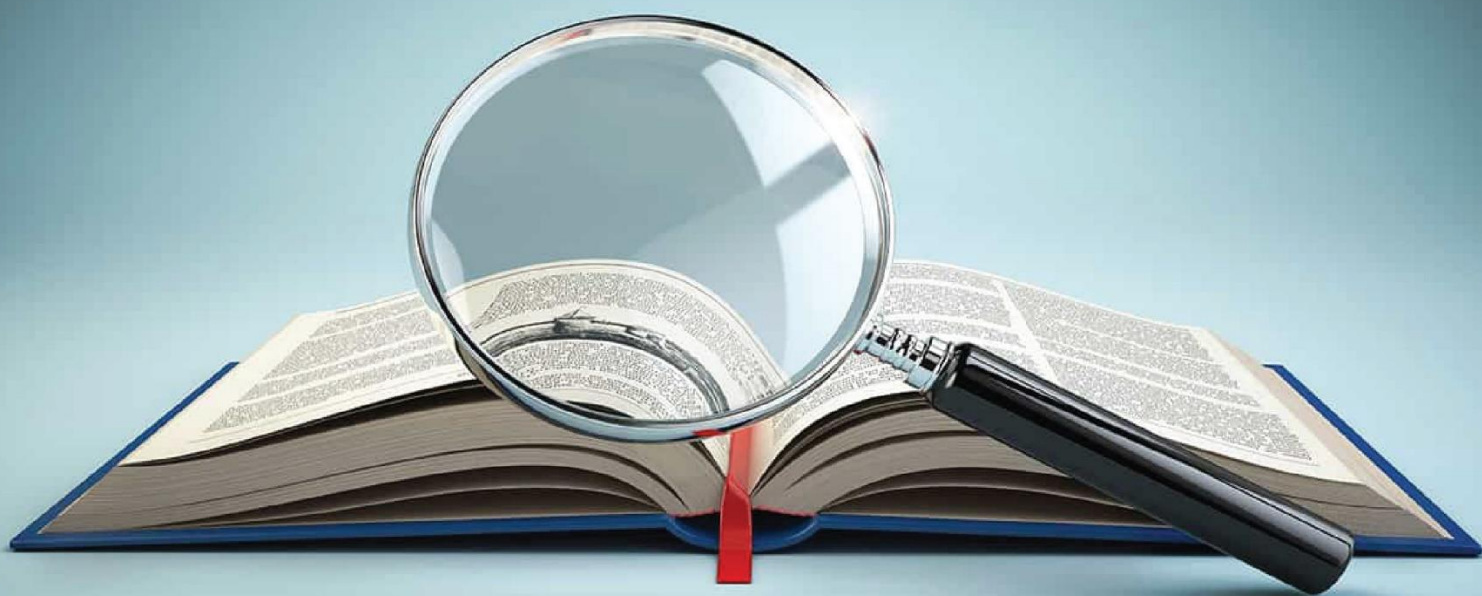
- a. **Geographically-** The survey covered the whole of Nairobi County:
 - i. Westlands
 - ii. Dagoretti North
 - iii. Dagoretti South
 - iv. Langata
 - v. Kibra
 - vi. Roysambu
 - vii. Kasarani
 - viii. Ruaraka
 - ix. Embakasi South
 - x. Embakasi North
 - xi. Embakasi Central
 - xii. Embakasi East
 - xiii. Embakasi West
 - xiv. Madaraka
 - xv. Kamkunji
 - xvi. Starehe
 - xvii. Mathare

Nairobi City County Map - Constituency Boundary



- a. **Thematically:** The study focused on climate change knowledge, attitudes and practices; their level of concern about the issue as well as media use, and the most effective ways to reach the city residents with messages
- b. **Target population:** The assessment focussed on diverse population groups including Men, women, PLWDs, youth, the elderly, etc

Literature Review



4 Literature Review

4.1 Level of Climate Change Awareness

Studies on climate change awareness studies conducted in the developed world reveals that climate change awareness level is high in developed countries (Bostrom et al., 1994; Bord, Fisher, and O’Conner, 1998; Pew Research Centre, 2006; Pugliese and Ray, 2009), but still not a priority environmental issue in most of these countries (Leiserowitz Kates and Parris, 2005; Leiserowitz, 2006; Pew Research Centre, 2013). Global public opinion on climate change has been extensively explored by research companies mainly Gallup and Pew Research Centre. Results from their studies shows that awareness of climate change is high in developed than in developing countries. According to Pew Research Centre Global Attitudes Project survey conducted in 2006, people from developed countries are increasingly aware of climate change compared to those in developing countries. Similar findings were revealed by Gallup’s global opinion poll conducted between 2008 and 2009 in 128 countries around the world, which shows that people in Europe and America are more aware of climate change than those in Africa, Asia, and Middle East regions (Pugliese and Ray, 2009). While the Gallup and Pew Research Centre studies provide a global outlook, they are shallow studies based on opinion polls and hence reveal very little information on climate change awareness. A conclusion made based on such studies may be misleading hence the need to fill this gap with detailed empirical studies. Nevertheless, the low level of awareness in developing countries calls for attention as it might have serious implications for climate change policy implementation.

According to a research conducted by Africa Talks Climate in 2009, most Kenyans are unfamiliar with the concepts of climate change and global warming, but are aware and concerned about frequent droughts and food scarcity in the country (Otieno, Pauker and Maina, 2009). The authors observed that there is eminent confusion among Kenyans on the true meaning of climate change even though they live with the impacts of climate change. Similar concerns are expressed in GoK (2010b) and RoK (2013), which state that the vast majority of Kenyans are unaware of climate change, despite their knowledge of changing weather patterns, but the authors also recognize the fact that data on climate change awareness is scanty in the country. The low level of climate change awareness among most Kenyans is confounded by the apparently lack of a uniform translation of climate change as a concept into the various vernacular languages in the country (RoK, 2012). GoK (2010b), in particular, calls for in-depth studies to examine the level of climate change awareness, and how this perceived low level of awareness can be improved in all age groups across the country. The report also recommends education as a potential avenue for dissemination of climate change knowledge to various groups in Kenya.

4.2 Knowledge and attitudes towards climate change

The debate of anthropogenic (human caused) climate change has become a highly infected issue in modern society. Despite the growing accumulation of scientific evidence that points towards a strong need for action to be made, there is a lack of unity in what actions are needed and an outspread passivity and skepticism amongst both establishments and the public. These issues relate to forces that drive climate concerns into cultural landscapes of conflicting political and ideological views. It also relates to uncertainty in what behavioral change is needed and how one can stay committed to that behavior. The nature of the subject as one instilled with conflict polarize a great deal of people. The apathic relation one can interpret relates to the fact that most people do not feel motivated to get engaged in the process of creating a better (climate) future (Dunlap, 2013). These types of issues are common themes in the modern society and can be seen as root issues concerning most factions of progress, concerning both the individual and societies as a whole (Stoknes, 2015).

A popular approach to explaining the lack of concern and the existence of skepticism and uncertainty amongst the public is through the knowledge deficit model (Sturgis & Allum, 2004). The knowledge deficit model assumes that gaps between scientists and the public are a result of a lack of knowledge amongst the public. Furthermore, the model attributes skepticism and hostility towards science to a lack of understanding, which is based in a lack of knowledge acquiring. However, it does not seem probable that the lack of concern and engagement amongst the public is solely caused by a lack of information. Even though information can help people update their beliefs, if they lack knowledge, it does not seem probable to help in cases where people already consider themselves as holding a fair share of knowledge. Kellstedt, Zahran and Vedlitz (2008) found that members of the public with a higher degree of science literacy and technical reasoning capacities were among those whose cultural polarization was the highest. This suggests that the debate over climate change is not solved by simply feeding the public with more information. Furthermore, the political and ideological orientation of the person tends to affect their beliefs and attitudes regarding climate change. Kahan, Jenkins-Smith and Braman (2011) explained these findings by something they referred to as “cultural cognition”. This theory refers to the tendency of individuals to fit their perceptions of risk and related beliefs to the shared moral evaluations of the cultural group they belong to. Furthermore, the ability to justify these beliefs and attitudes seems to be connected with their ability to create seemingly reasonable justifications for their opinions, which relates to a theory known as “motivated reasoning”. This is an effect that has been found amongst conservatives when it comes to climate change, where scepticism and uncertainty is much higher than amongst the average person, and where their ability to justify their beliefs and attitudes relates to how strongly they hold them and how well informed they consider themselves to be.

According to Estrada, Schultz and Silva-Send (2017) an important factor for which beliefs and attitudes one hold relates to a socializing process, which induces people's beliefs, attitudes and behaviours. Normative beliefs and behaviours seem to be strong indicators of how the public thinks and acts. So, to penetrate conflicting beliefs, attitudes and behaviours, one should look at using the power of normative influence. In a study by van der Linden, Leiserowitz and Maibach (2018) they found that by presenting participants to a normative belief, in the shape of the following scientific consensus statement: "97% of climate scientists have concluded that human-caused global warming is happening", they found that it reduced polarization between higher educated liberals and conservatives by roughly 50%, and subsequently caused the participants to update their beliefs to more closely fit the norm. They found that by just stating a normative belief, in the shape of a scientific consensus, it affected conservatives to update their beliefs and attitudes from being more skeptical to closer fit the scientific consensus. If the scientific consensus effect found by van der Linden et al. (2018) can be replicated, it might have a strong effect on the person's re-evaluation of not just their beliefs but also their attitudes and subsequent behaviors. However, since one of the strongest socializing processes regarding beliefs and attitudes is that of political belonging (Kahan et al (2011), it is possible that a consensus that would state pro-environmental beliefs and attitudes across the political divide, could entail even stronger effects. If the same normative beliefs were expressed by the public, across the political divide, it seems probable that it would affect the subject in a similar vein. But that might entail that the societal consensus needs to be expressed in such a way that it does not conflict with values developed amongst those political groups.

4.3 Government intervention

The Government of Kenya has responded to various national and international challenges through institutions. Despite this shortcoming, however, concerns about the possible impacts of climate change triggered strong support for policies, this led to the establishment of the first climate change unit in the Office of the Prime Minister in 2008. The office provided high-level political support to climate change activities, leveraged financial support and harmonized ongoing and future activities on climate change and integrated them into different government departments. The office, which is now under the Ministry of Devolution and Planning, is still faced with the challenges of sufficient funding and qualified staff. Other environment-related policies are similarly weak.

In particular, the energy policy, forest policy and ASAL (arid and semi-arid lands) policy are heavy on environmental management, but issues with climate change go beyond environmental management. The impacts of these policies on the vulnerability of society and ecosystems to climate change and

their potential to contribute to global carbon sequestration are reviewed in detail below, along with an analysis of the interactions between these policies.

4.3.1 National climate change response strategy (NCCRS) and national climate change action plan (NCCAP)

The national communication paper formed the basis for initiating the development of the NCCRS. The strategy is the framework that guides the integration of climate concerns into development priorities, government planning and budgeting (MoEMR 2010). The processes of formulating the NCCRS and its implementation action plan were participatory and consultative, and all the key sectors of the economy were addressed; climate change was viewed as a challenge that cuts across all sectors and segments of society in Kenya, hence the need to have inputs from diverse stakeholders. The stakeholders comprised development partners, and representatives from the private and public sector and parliamentary committee dealing with climate change.

The NCCRS highlights various measures for adaptation and mitigation to the impacts of climate change in all sectors of the economy (MoEMR 2010). In agriculture, the strategy proposes the application of a range of innovative technologies such as irrigation, early maturing and high yielding crop varieties, drought and pest-resistant crop varieties, and disease-resistant livestock. The NCCRS also advocates diversification of livelihoods; adaptation of agricultural technologies from analogue environments; and enhancing early warning systems with drought monitoring and seasonal forecasts for better food security. In the environment and water sectors, the action plan gives priority to protection and rehabilitation of water towers and increased forest cover through farm forestry and afforestation.

4.3.2 National environment policy

The draft national environment policy (NEP) of 2008 treats climate change and disaster management as emerging environmental issues. In this policy document, the government seeks to adopt mitigation and adaptation approaches to deal with climate change. This policy recognizes that many of the natural disasters in Kenya, such as floods, drought, landslides and fires, are climate related and that their negative impacts cut across all key sectors of the economy. The policy anticipates that as the climate changes further, the frequency and intensity of these extreme weather events will increase.

4.3.3 Energy policy

The objective of the energy policy is to help in the mitigation of climate change by encouraging the use of energy efficient equipment as well as renewable energy sources. The policy, contained in Sessional Paper No. 4 of 2004, focuses on all forms of energy, which include bioenergy. Article 103, Part V of the Energy Act 2006, which came into force on 7 July 2007, covers renewable energy sources, efficient use of energy and conservation of key renewable energy sources. The vision outlined in the sessional paper is to “promote equitable access to quality energy sources and services at least cost while

protecting the environment". It covers renewable energy extensively, with one-third of the paper dedicated to renewable energy, and it outlines short-, medium- and long-term energy strategies.

4.3.4 Forest policy

In Kenya, forestry issues were guided by the forest policy which as contained in Sessional Paper No. 1 of 1968 until 2007, when the Forests Act 2005 was enacted by the then Ministry of Environment and Natural Resources through Sessional Paper No. 1 of 2007 on the forest policy (GoK 2007). The national assembly has never passed the policy, however, it has noble objectives supporting the management of the environment.

The aims of the Sessional Paper No. 1 of 2007 on forest policy was to address the threats to Kenya's forests as well as increase the forest cover to 10% which is the acceptable international standards. The sessional paper espouses the critical role of citizens in management of forest resources through enabling communities to actively participate in forest management through the formation of 'community forest associations' to manage or co-manage public and community forests, by granting user rights to local communities over forest resources. The policy gives prominence to the role of farm forestry to provide tree products and services and encourages integration of trees on farms through provision of incentives, technical extension services, entrenching market-based principles and supporting the development of out-grower schemes. Additionally, the policy aims to achieve sustainable management of natural and riverine forests within farmlands, through application of soil and water conservation technologies. The policy also recognizes the role of forest in poverty alleviation and protects the rights of customary rights of local communities to sustainably use forest resources. The Kenya Forest Service, introduced PELIS3 to replace the *Shamba* system, and this was welcomed by local communities but it has failed to meet its desired objectives due to administrative failures. If the system is streamlined, it has the potential to improve the livelihoods of the local people (by increased food security and cash income). Additionally, the policy recognizes the role of forests in provision of ecosystems services (provisioning, regulating, supporting and cultural and spiritual functions).

The law enacted from this draft policy – the Forests Act 2005 – has guided forestry development in the country to this day. It is currently undergoing revision to conform to the new political dispensation under the New Constitution of Kenya. The Forests Act 2005 provides an elaborate process of excision of public forest and must involve public participation. Additionally, the Act provides for public consultation and broader community participation in the formulation of forest management plans. An important feature of the Act is its recognition of the potential contribution of sustainable forests to poverty reduction, and to the maintenance of vital environmental services. It provides for broad-based collaboration with forest communities, recognizing their traditional cultures and values (Section 46

(1&2)). Furthermore, it takes a comprehensive approach to forest ecosystems management, using environmental impact assessments and multiyear result-oriented forest management agreements. More specifically, this particular law provides for the introduction and adoption of climate change mitigation strategies.

4.3.5 Rangelands Management Policy

The rangelands management policy provides guidance for the nearly 80% of the country that is classified as arid and/or semi-arid land (ASALs). Attempts to develop a rangelands management policy started in 1979, but it was not until 2004 that the draft national policy for the sustainable development of ASALs was completed. The main objective of this policy is to provide a coherent and practical framework for the implementation and realization of a new vision for ASAL development in Kenya.

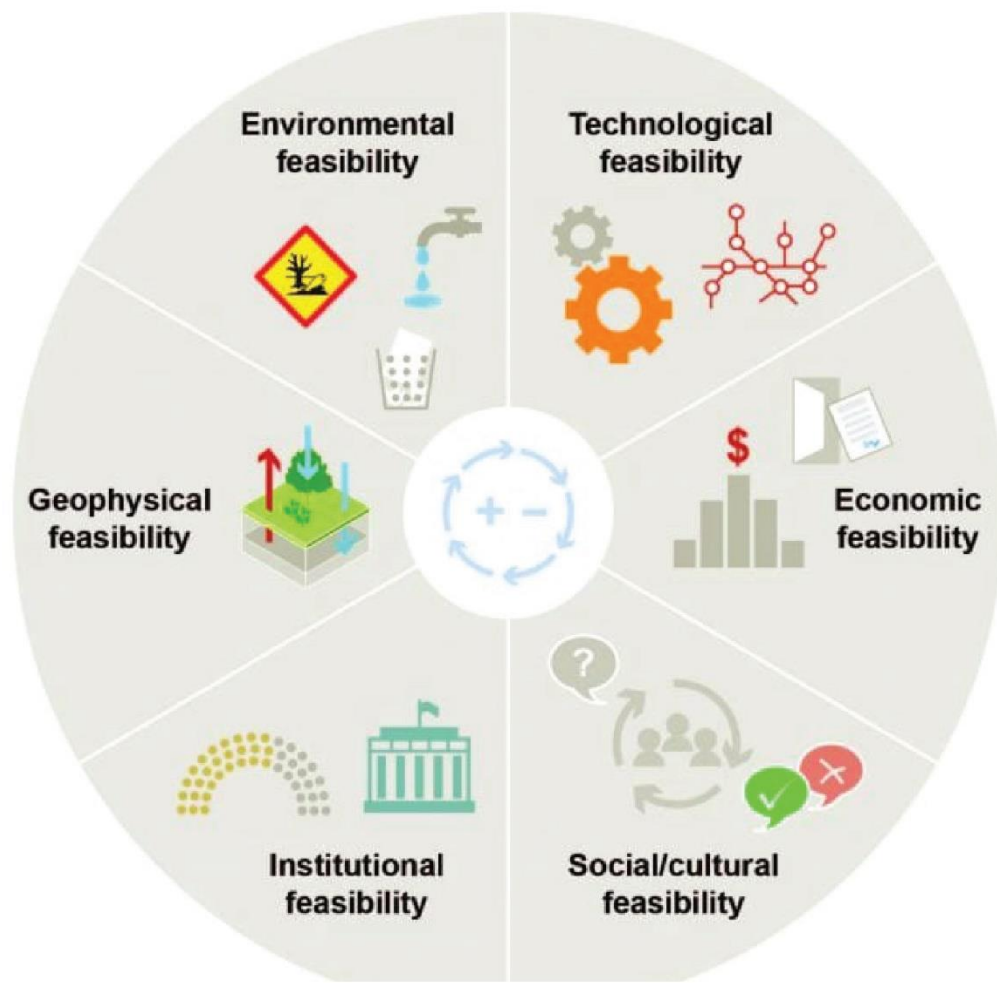
4.3.6 The Constitution of Kenya - 2010

In 2010, Kenya promulgated a new Constitution, which provides for a participatory system of government. The Constitution establishes a two-tier parliamentary system, comprising a national assembly and a senate, responsible for national and regional representation, respectively. Article 42 of the Constitution deals with issues related to the environment, and claims the right to a clean and healthy environment for all citizens. This includes the right to have an environment protected for the benefit of the present and future generations through legislative and other measures.

In addition, Articles 69 and 70 of the Constitution deal with environmental issues such as climate change mitigation. For example, Article 69 emphasizes the sustainable use, management and conservation of the environment and natural resources in order to ensure equitable sharing of the accruing benefits. It also encourages the people of Kenya to achieve and maintain a tree cover of at least 10% of the land area. The article further encourages the public to participate in the management, protection and conservation of the environment.

Article 70, on the other hand, enforces the right to a clean environment and recognizes actions that may be taken by responsible people in order to ensure a clean and healthy environment. It states that the government may compensate citizens who are deprived of their right to a clean and healthy environment.

Methodology



5 Methodology

The overall aim of the study was to assess and quantify the level of climate change knowledge, attitudes and practices among Nairobi County residents and in so doing, identify knowledge gaps, cultural beliefs, and behavioural patterns that may identify needs, problems, and barriers to help plan and implement Climate Change interventions. The study also aimed to generate baseline levels and measure changes that will result from intended interventions and use the findings to inform policy recommendations.

In realising its goals, this study adopted a descriptive research design. This is a method for gathering data through the measurement of some items or through socialization from other people or documents. According to Mugenda and Mugenda (1999), a descriptive research design is used when subjects are observed in their natural set up without manipulation of the environment. Kerlinger (1969) on the other hand points out that descriptive studies are not only restricted to fact findings, but may often result in the formulation of important principles of knowledge and solution to significant problems. They are more than just a collection of data. They involve measurement, classification, analysis, comparison and interpretation of data.

Specifically, the study employed the following methodologies to carry out the assessment.

- 1. Household Survey:** The ICG team developed a well-structured survey questionnaire that included both open and closed questions to interview household head and where the household head was not there an adult was interviewed.

The interviews were conducted by trained enumerators, through face-face administration using a convenience sampling frame. A total of 10 enumerators assisted with data collection spread out in the various sub-counties. The period of data collection spanned approximately 3 weeks. The sample population was based on the 2019 Kenya Population and Housing Census. 10% of the questionnaires completed were verified through call backs to respondents, who were picked randomly if their numbers were indicated on the questionnaire and based on their availability at the time of the call.

- 2. Observation:** The ICG team keenly observed and confirmed data and information provided by respondents especially pertaining to behavioural patterns and perception of the respondents.

- 3. Triangulation and storage:** All information collected during the study were triangulated for submission to Climate Care Africa at the end of the assignment.

5.1 Sampling Design

The study shall adopt a stratified random sampling design. The first stage will be to determine the total sample size for the whole study then use proportions to identify the sample for each sub-county then use the same approach further to the wards and to the lowest level.

5.2 Sample size determination

5.2.1 A study population refers to an entire group of persons or elements that have at least one thing common (Kombo& Tromp, 2006). The target population for the study were individuals residing in Nairobi. Purposive random sampling was used to sample 380 individuals living in various parts of Nairobi. Purposive random sampling is a sampling method where the researcher randomly selects specific subjects within the population to use participate in a research study. Purposive sampling was used with the aim of concentrating on people with particular characteristics who were in a better position to provide relevant research data and information.

First, the sample size must cater for the statistical significance (assumed at 95%, $Z=1.96$), margin of error ($e=5\%$), estimated variance in the population as decimal ($p=0.5$, $q=1-p$). Using the statistical sample size formula as proposed by Cochran (1963) ($n = \frac{Z^2pq}{e^2}$).

$$n = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384 \text{ households}$$

5.3 Data Entry, Analysis and Presentation

Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics provided information on how the data is dispersed. Descriptive statistics also provided a quick method to make comparison between different data sets. Inferential statistics enabled inferences to be made about the population using sample data. Tables, percentages and graphical representation for example pie graph, bar chart were used to present the data.

A methodological triangulation approach was adopted in this study where both the qualitative and quantitative tools were designed in line with the study indicators derived from the project log-frame to ensure that data collected through the two methods can support each other and therefore merged. In this regard, each of the theme-based consolidated and extracted data from the qualitative analysis served to provide explanatory notes for the reported indicator and sub-indicator levels as captured through quantitative analysis. Data was disaggregated at all important levels of analysis such as sex, age, region, project component etc. Finally, quantitative data was analysed using stata and excel.

5.4 Quality control procedures

A comprehensive training of enumerators and supervisors was conducted covering interview techniques, sampling procedure, inclusion, and exclusion criteria, standardising the questions in the questionnaire, levels of precision required in measurements. Pre-testing also involved familiarising survey teams with village/cluster entry; administering the questionnaire, sampling procedure, correct taking of measurements and documentation. After the field exercise, views were exchanged to address the difficulties identified; appropriateness of the questions reviewed, and necessary changes were made.

Quality of data was also ensured through

- (i) close monitoring of fieldwork by ICG teams,
- (ii) crosschecking of filled questionnaires on daily basis and
- (iii) daily review undertaken with the enumerators to address any difficulties encountered,
- (iv) progress evaluation was carried out according to the time schedule and progress reports shared with partners on regular basis,
- (v) continuous data cleaning after entry in the field that made it easy to detect any outliers/ mistakes and to replace or repeat households depending on magnitude of error and
- (vi) monitoring accuracy of equipment (weighing scales) by regularly measuring objects of known weight

Field Assessment Findings



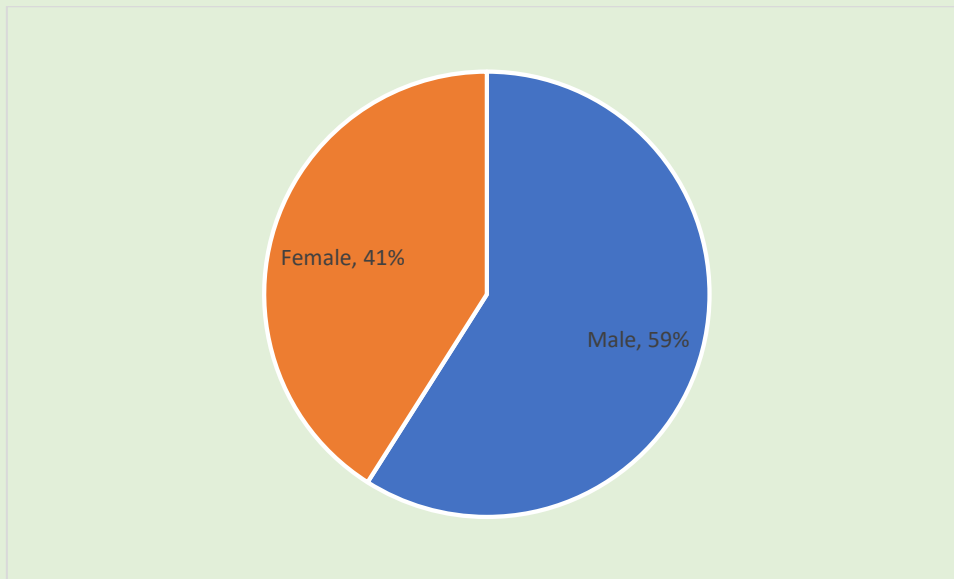
6 Field Assessment Findings

6.1 Socio-demographic profile of respondents

6.1.1 Sex of respondents

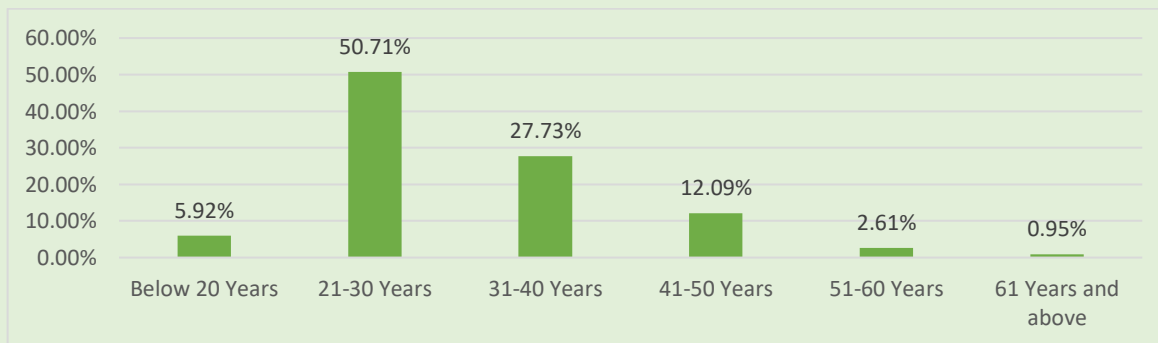
In terms of gender, the study revealed that 59% were male respondents while 41% were female respondents (Figure 1). This shows that the target exceeded the third gender rule.

Figure 1: Sex of respondents



On the other hand, the study revealed that most respondents were aged between 21 and 30 years this is expected since most residents of Nairobi are the youthful population who are still working in various firms. Those aged over 50 years were few since most have retired and already left the city (see Figure 2).

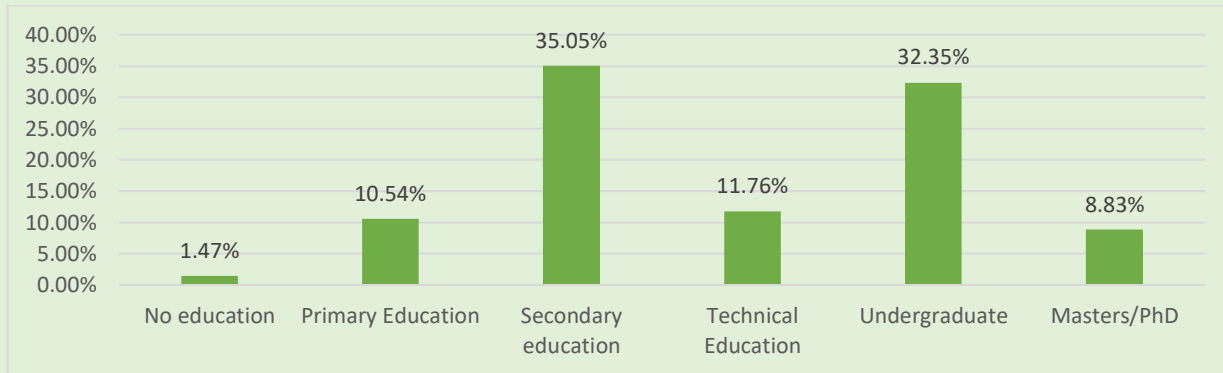
Figure 2: Age of the respondent



6.1.2 Highest level of formal education

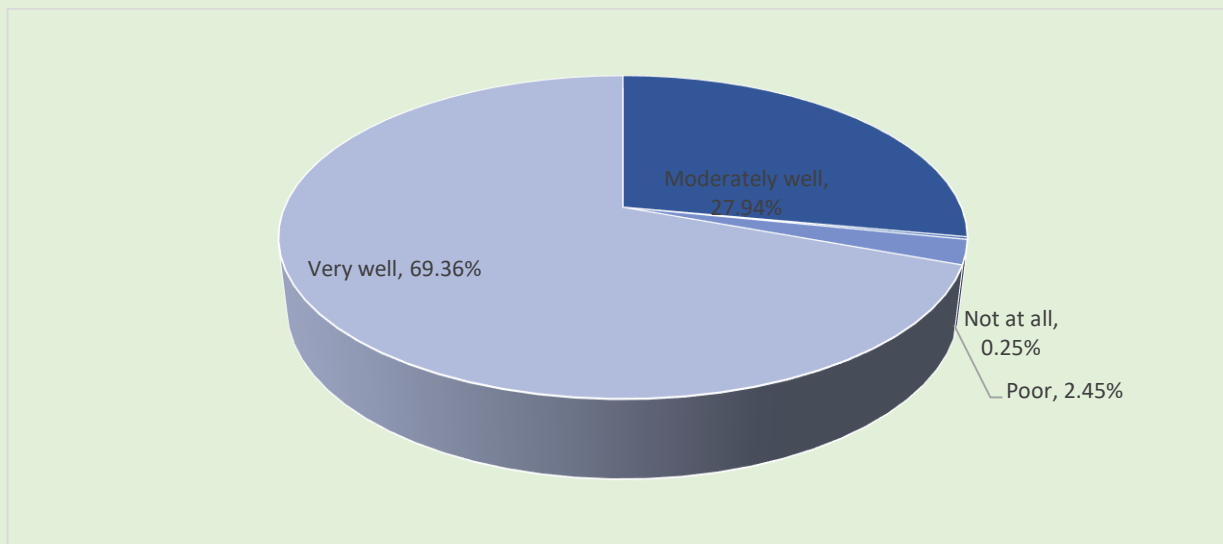
The results further revealed that most respondents had secondary education and above although few had post graduate education (i.e. masters or PhD) as shown in Figure 3. This also confirms the distribution by age that revealed more residents were above 20 years.

Figure 3: Highest level of education



The study also revealed most respondents could read very well and only 0.25% could not read at all as shown in Figure 4.

Figure 4: Reading

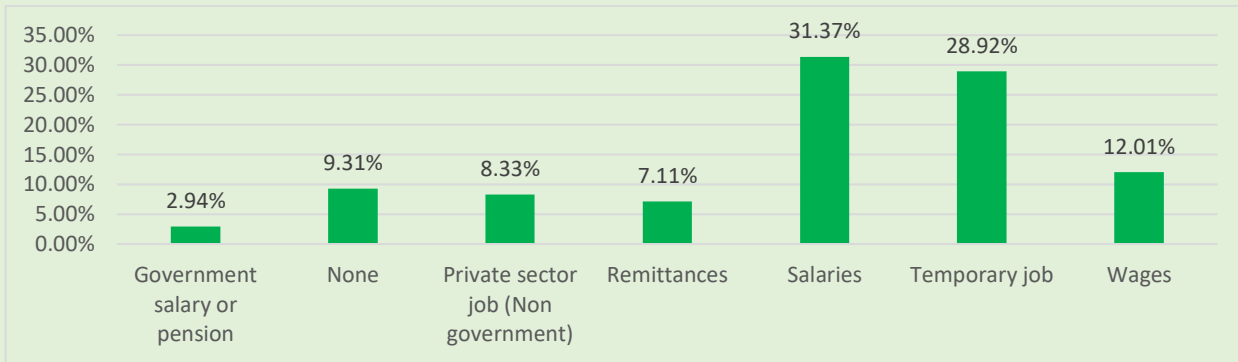


6.1.3 Household income

Sources of household income

The study also sought to understand the sources of income of various households. The results revealed that most households depend on salary and temporary jobs see Figure 5.

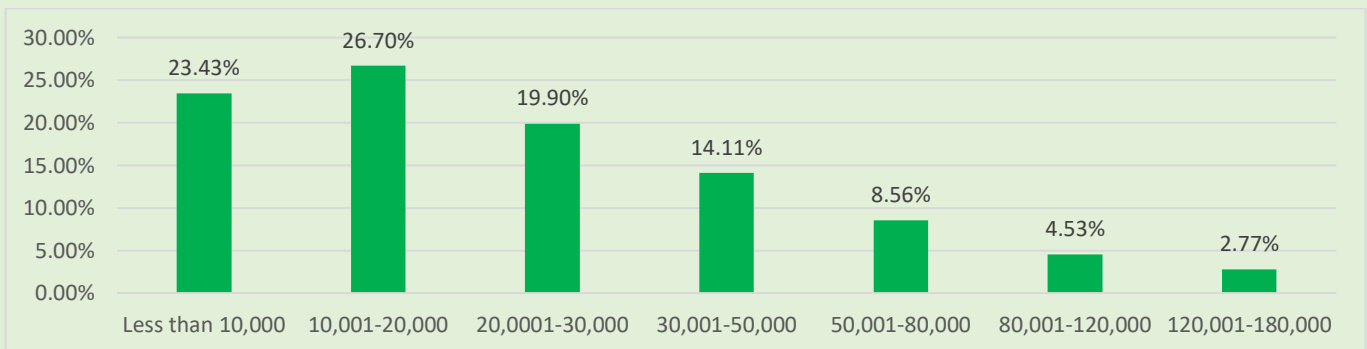
Figure 5: Primary source of income



6.1.4 Household Income

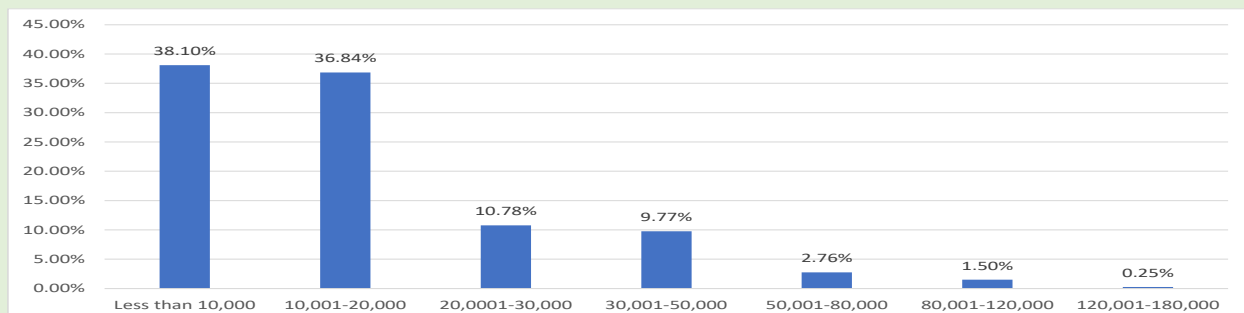
In terms of income level, the study revealed that 27% of the respondents earned between Ksh.10,000 and Ksh.20,000 per month and only 33% earned above Ksh. 120000. Moreover, a good proportion earned less than Ksh. 10,000. It thus implies that most households had low income level as shown in Figure 6.

Figure 6: Monthly Household income



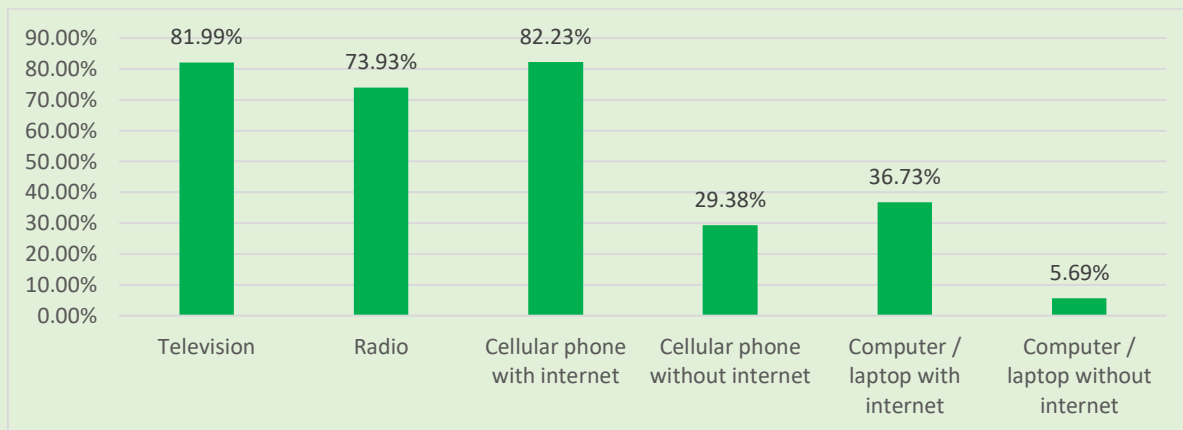
On the other hand, monthly expenditure was also found to be in line with the income level as 38% ad expenditure below Ksh. 10,000 and 37% with expenditure between Ksh.10,000 and Ksh. 20,000 (Figure 7).

Figure 7: Average monthly expenditure



The average rent paid by households interviewed was found to be about Ksh. 7,651. However, in terms of asset ownership, the study revealed that 82% of households owned Television sets and mobile cell phones while 74% owned radios and only 6% owned computers without internet as shown in Figure 8. This shows that to share any climate related information the three avenues would be the best means of communication.

Figure 8: Household Assets



6.2 Climate change awareness

The study assessed whether households were aware of climate change. The results revealed that 90% had heard of climate change (Figure 9). Most of those who had heard of climate change in local TV and radio stations (See Figure 10 below).

Figure 9: Heard of climate change

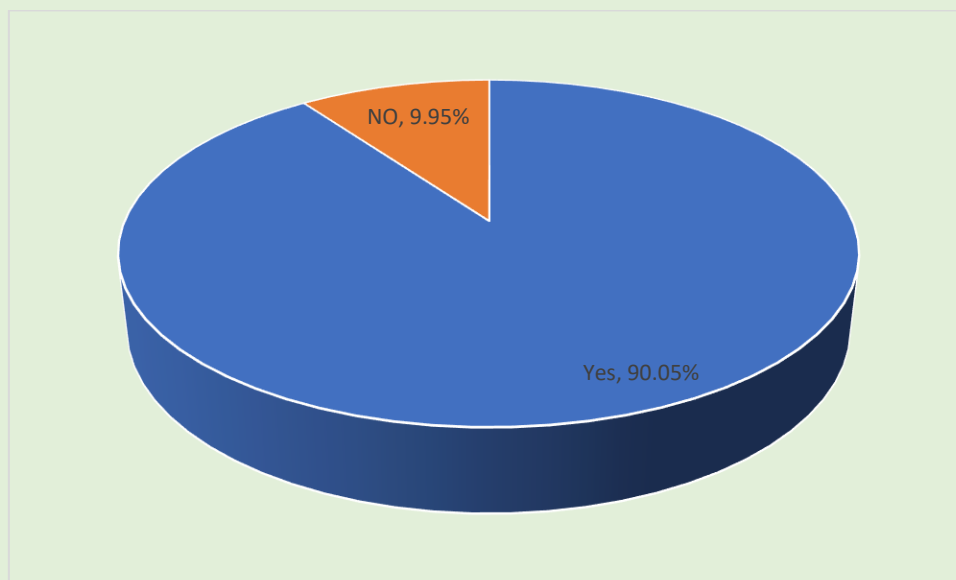
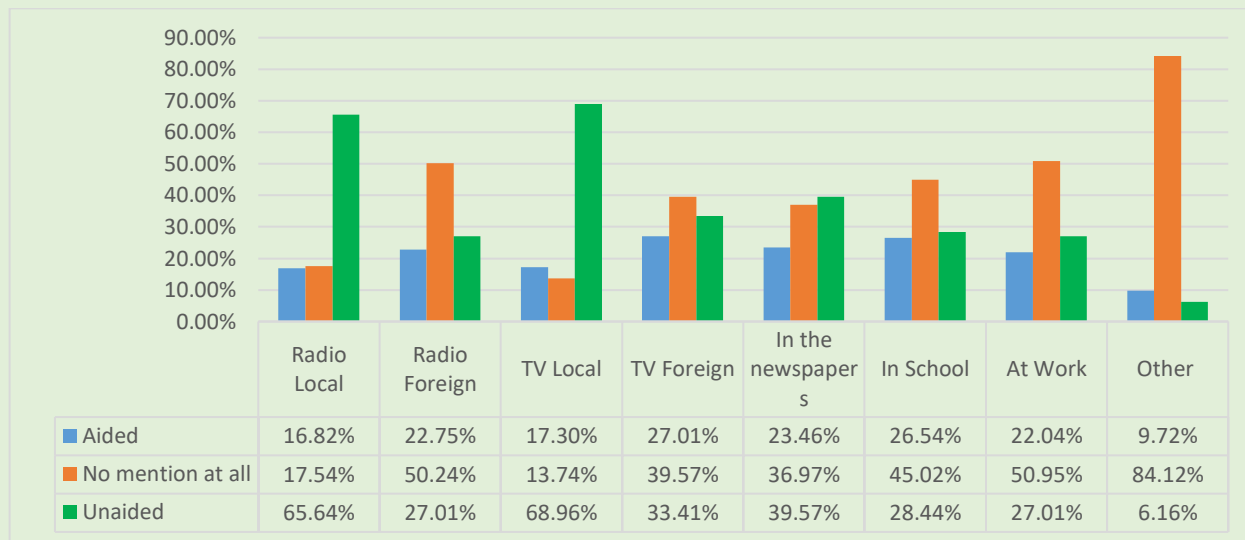


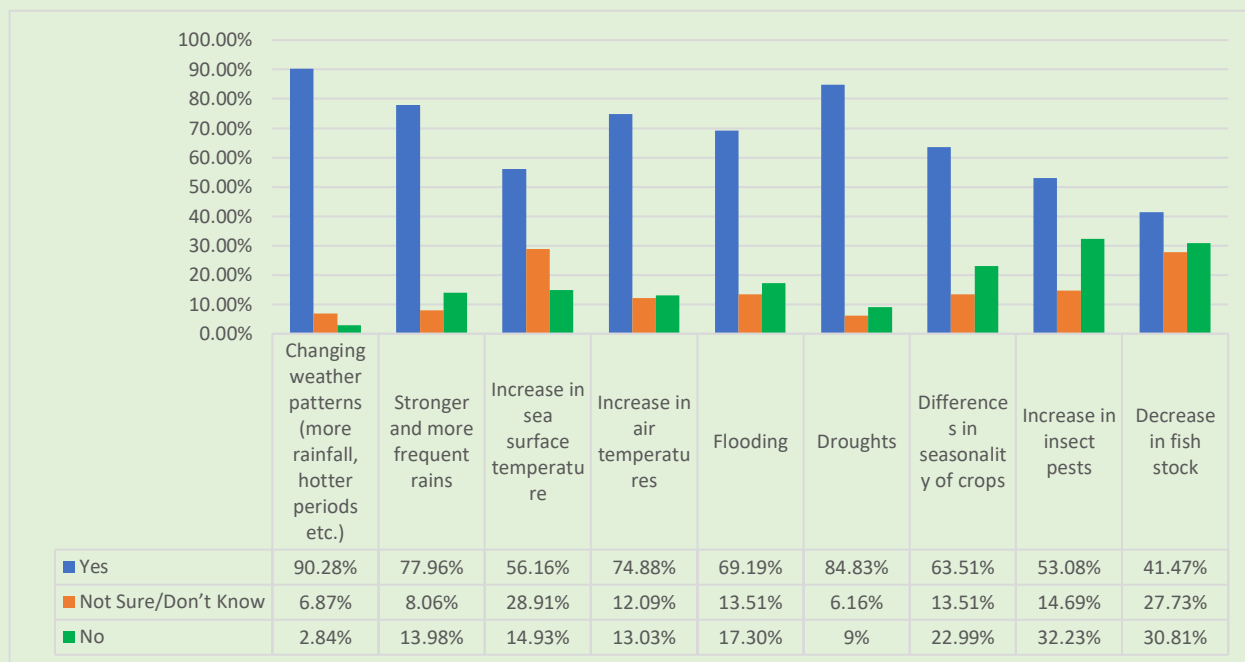
Figure 10: Source of information on climate change



6.2.1 Factors associated with climate change

Households were also asked factors that they associate with climate change. Most households were found to be aware and could associate factors such as change in weather, frequent rains, increase in surface temperature, floods, droughts, and increase in insects and decrease in fish stock to climate change as shown in Figure 11.

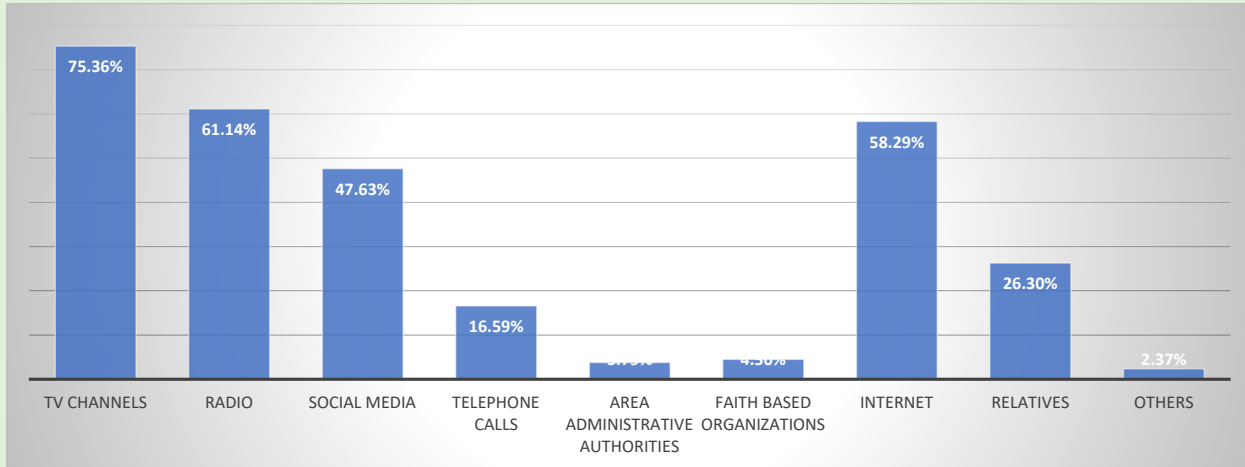
Figure 11: Factors associated with climate change



6.2.2 Sources of information on climate change

On sources of information on climate change, Figure 12 shows that most households watched TV and that is where they access information on climate change followed by radio at 61%. A good proportion (58%) also accessed such information from the internet. This is attributed to the higher access to mobile phones in the country.

Figure 12: Sources of information on climate change

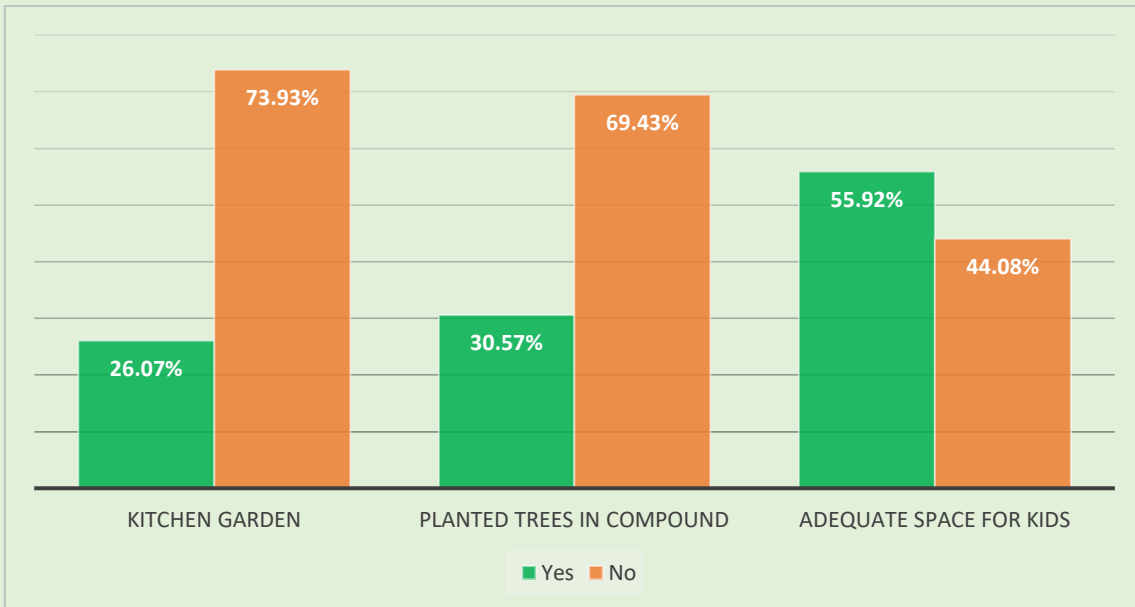


Several actions were also found to be taken by households to cushion them against the effects of climate change. Some of the actions noted were: Use of cleaner cooking techniques; Avoiding air pollution; Use of power saving bulbs; Built a shade within the compound; Buy more warm clothes and shoes; Buying water storage tanks; Cleaning of drainage; Conserve water and tree planting; No use of charcoal; Tree planting; Use solar power; and Installing lightening arresters

6.2.3 Climate change mitigation actions

In return, households were found to mitigate against effect of climate change through use of kitchen gardens to get vegetables (26%) planting trees in the compound (31%) and about 56% providing adequate space for children to play (see Figure 13).

Figure 13: Actions towards adaptation to climate change

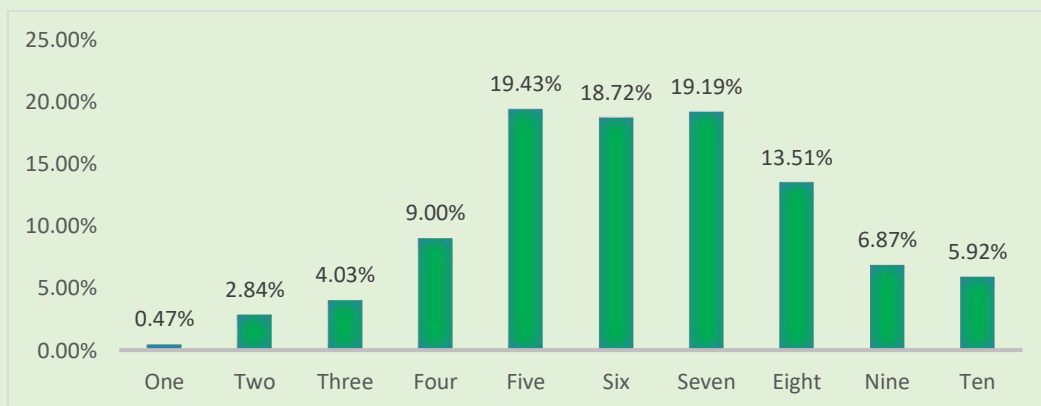


6.3 Knowledge and attitudes towards climate change

6.3.1 Perception on seriousness of climate change

On average, most Nairobi resident perceive climate change to be serious with a rating of 6 out of ten. With ten being very serious. Specifically, Figure shows the respondents proportion by scale. It is worth noting that most respondents rated the seriousness of climate change between 5 and 8 showing that most households in Nairobi feel that climate change is a serious issue that need to be addressed in a way.

Figure 14: Scale of seriousness of climate change

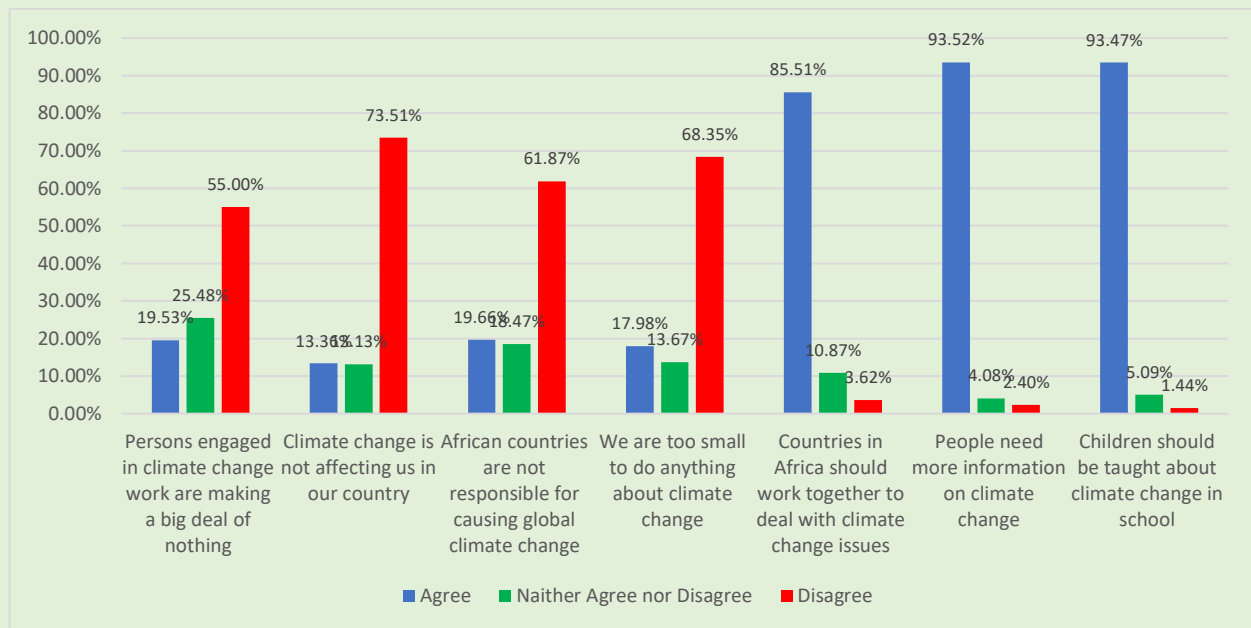


6.3.2 Statements on climate change

Further to assess the perception of Nairobi residents on climate change, respondents were asked whether they agreed with some statements that were read to them. The results in Figure 15 shows

that most respondents agreed that; countries in Africa should work collaboratively together in dealing with climate change issues, people need more information on climate change and that children should be taught about climate change in school. However, they also disagreed that; they were too small to do anything about climate change and that African countries are not responsible for climate change. In addition, there were also indication from responses that climate change is not affecting Kenyans, and that persons engaged in climate change are making a big deal out of nothing.

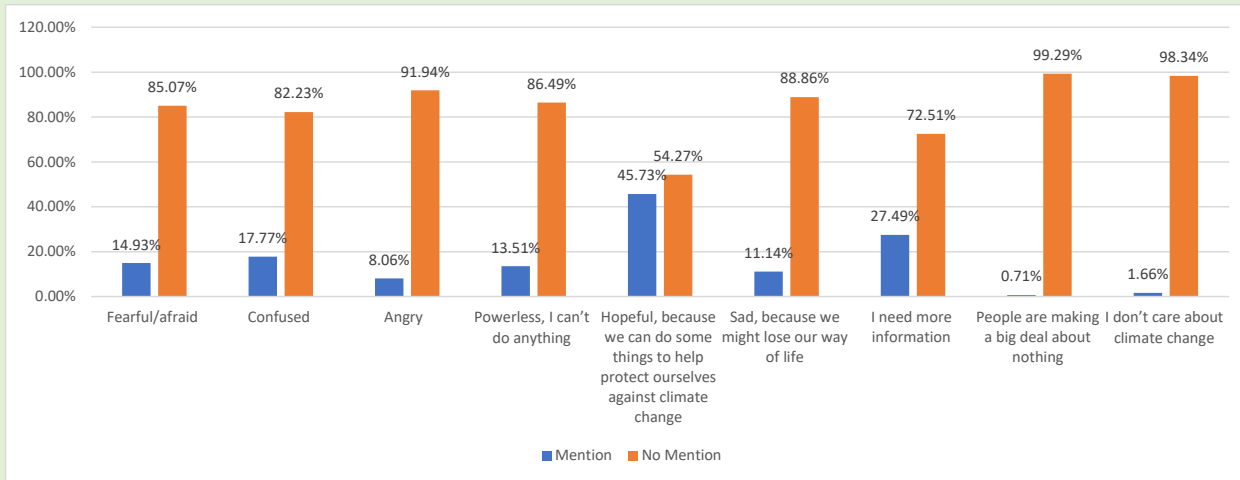
Figure 15: Agreement with statements on climate change



6.3.3 Feeling about climate change

In terms of how respondents feel about climate change, Figure 16 revealed that most never mentioned whether they feel angry, confused or fearful among other factors.

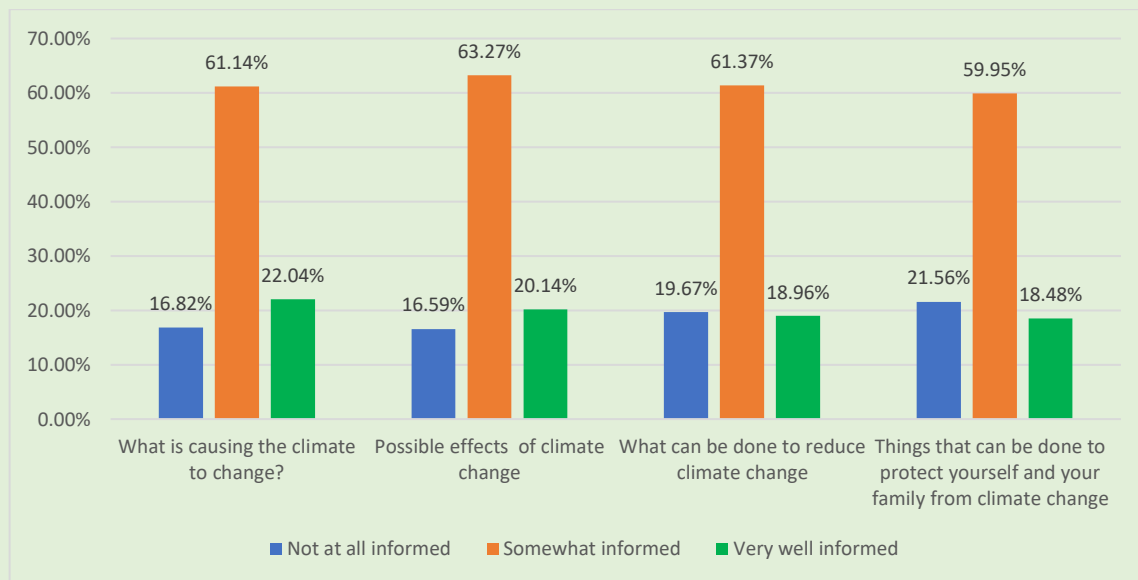
Figure 16: Feeling about climate change



6.3.4 Information on climate change

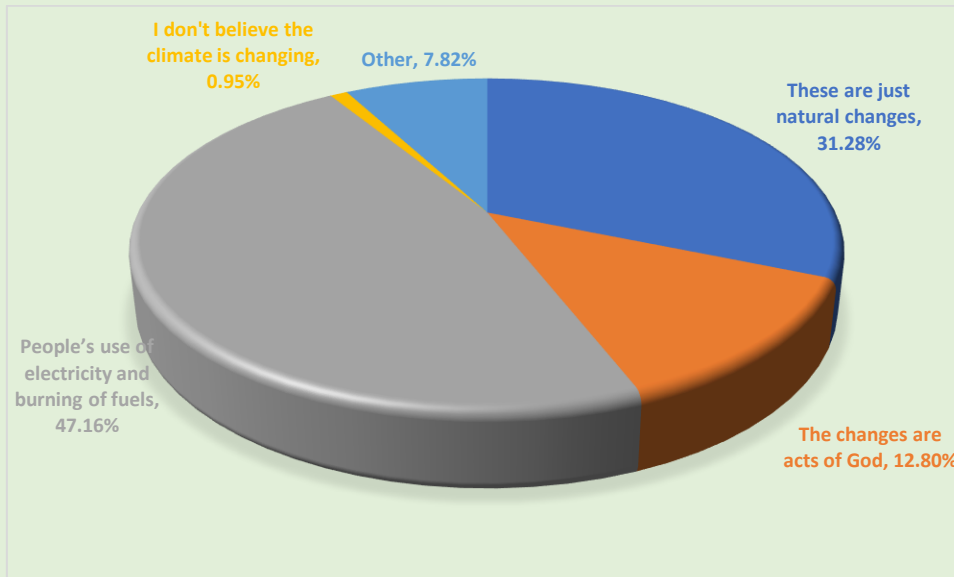
The study revealed that roughly about 20% of the respondents sampled were very well informed on climate change issues, what causes it, its effect, mitigation measures etc (Figure 17). Therefore, this implies that there is need for rigorous sensitization of residents of Nairobi on climate change as well as adaptation and mitigation measures to be put in place.

Figure 17: Level of information on climate change



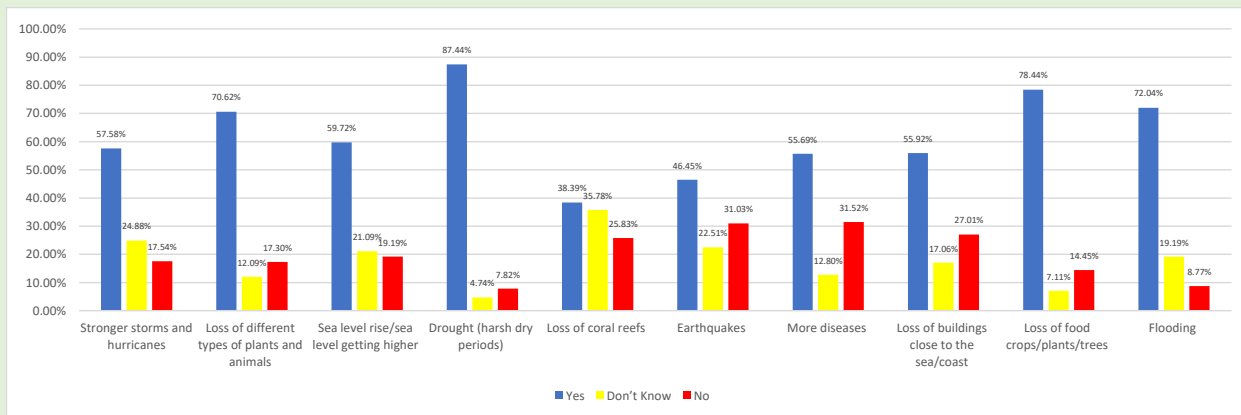
Further, an assessment of the main reason for climate change also strengthened the findings on lack of information on climate change as per Figure 17 above. Figure 18 below shows that some respondents felt that peoples use of electricity and burning of fuels were the cause (47%) while some felt that they are just natural changes (31%) and an act of God (13%).

Figure 18: Main Reason for climate change



When asked the effects of climate change, some of the effects that most responded highlighted were: stronger storms and hurricanes; loss of different types of plants and animals; sea level rise; droughts; flooding among others (see Figure 19).

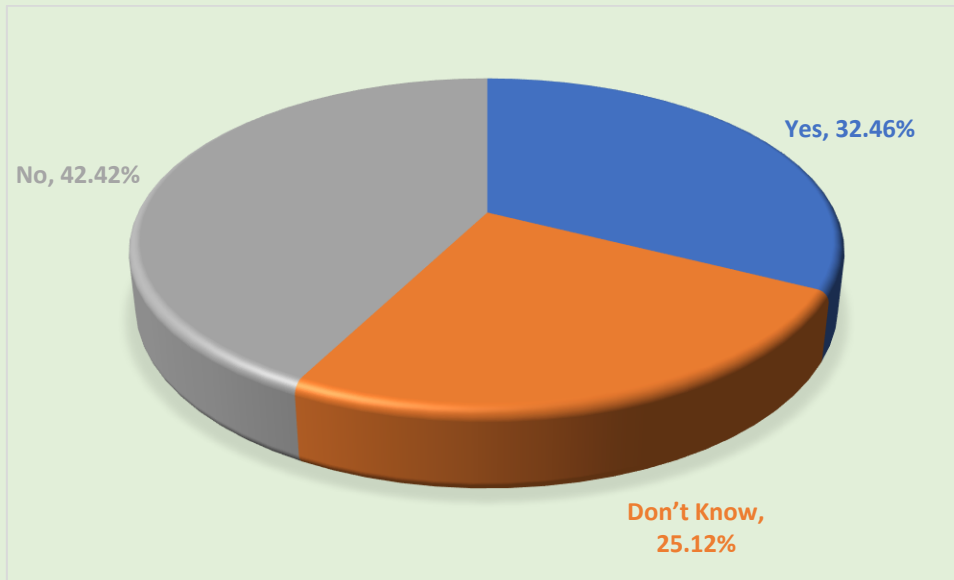
Figure 19: Effects of climate change



6.3.5 Behaviour towards adaptation and mitigation

The study also looked at behaviours towards adaptation and mitigation measures, the study found that only 33% of households in Nairobi had put in place measures to protect from drought or floods which is still quite low. In addition, 25% did not even know if they had put in place measures (Figure 20).

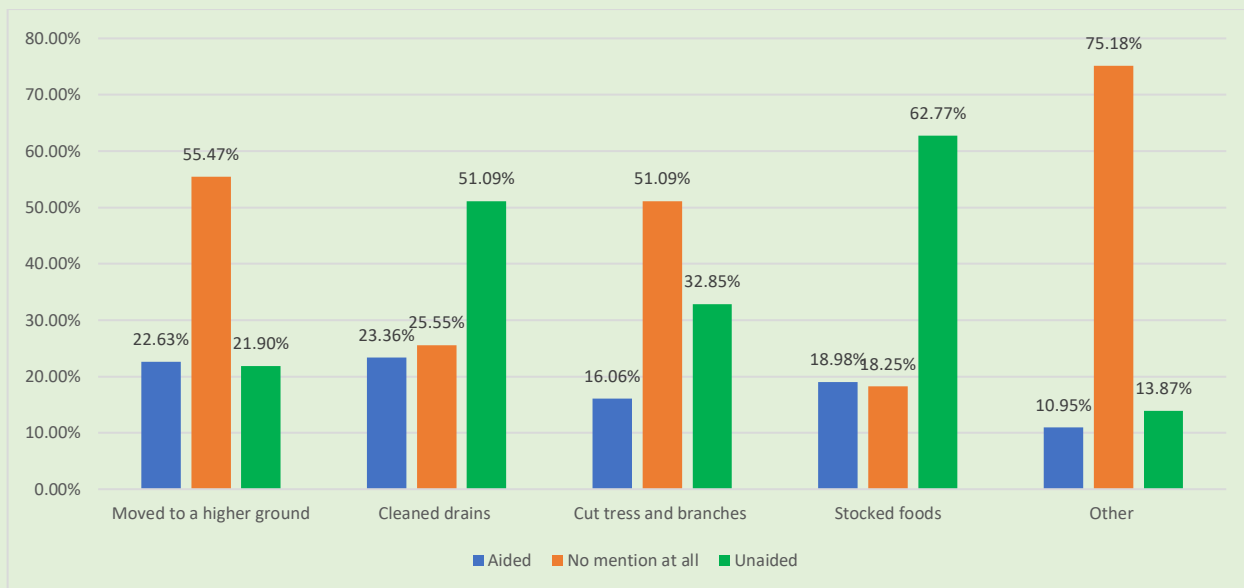
Figure 20: Intervention to protect from drought or floods



6.3.6 Household coping mechanism

Some of the coping mechanisms that most households had taken were; moving to higher ground, cleaned drainage, cut trees and branches, and stocked food (see Figure 21).

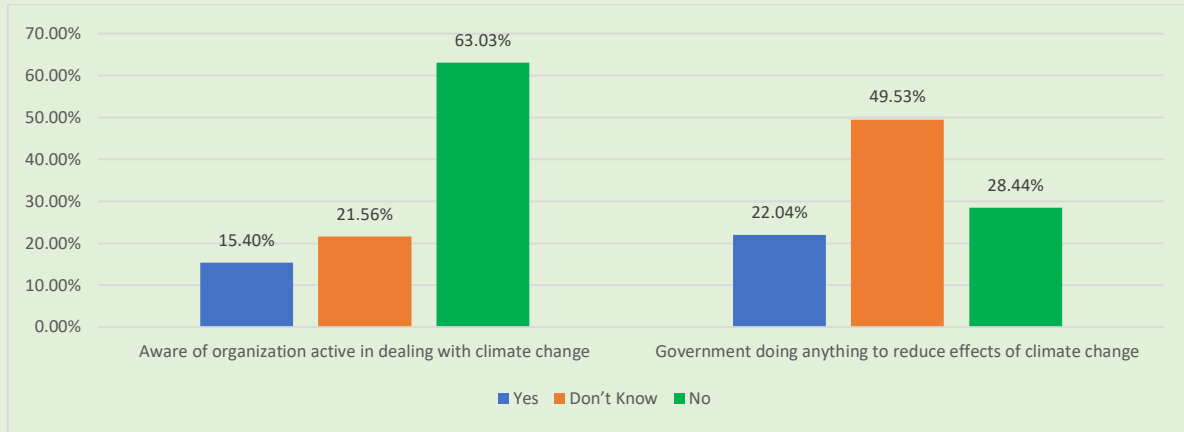
Figure 21: Household coping mechanism



6.3.7 Organizations dealing with climate change

The study also sought to understand whether households were aware of organizations dealing with climate change just in case they may need to consult on anything. The study revealed that only 15% were aware of organizations active in dealing with climate change while 22% of the respondents agreed that government was doing something to reduce effects of climate change. However, a major concern was that a higher proportion were not aware of organizations dealing in climate change.

Figure 22: Aware of organizations dealing with climate change



6.4 Proposed government intervention

Respondents were further asked some of the interventions that they felt the government could put in place. Figure 23-1 and Figure 23-2 shows that a good proportion could mention some both aided and unaided. Some of the interventions raised were: charge higher taxes on goods not environmentally friendly; give benefits for items that are environmentally friendly; give people more information; regular maintenance of drainages; not importing goods that damage the environment; replanting trees; promoting rain water collection; ensure waste garbage collection; more research; and enforce existing laws and regulations.

Figure 23-1: Government interventions

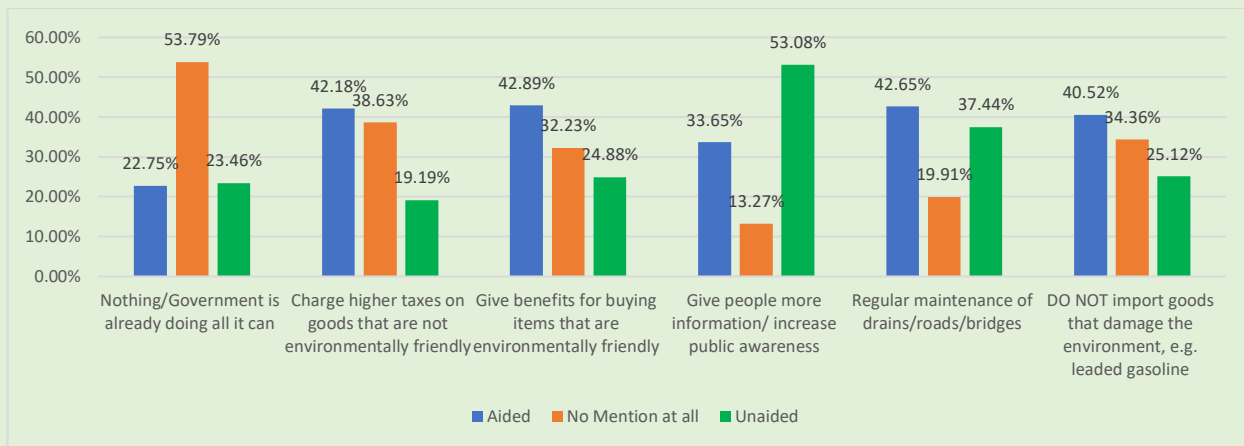
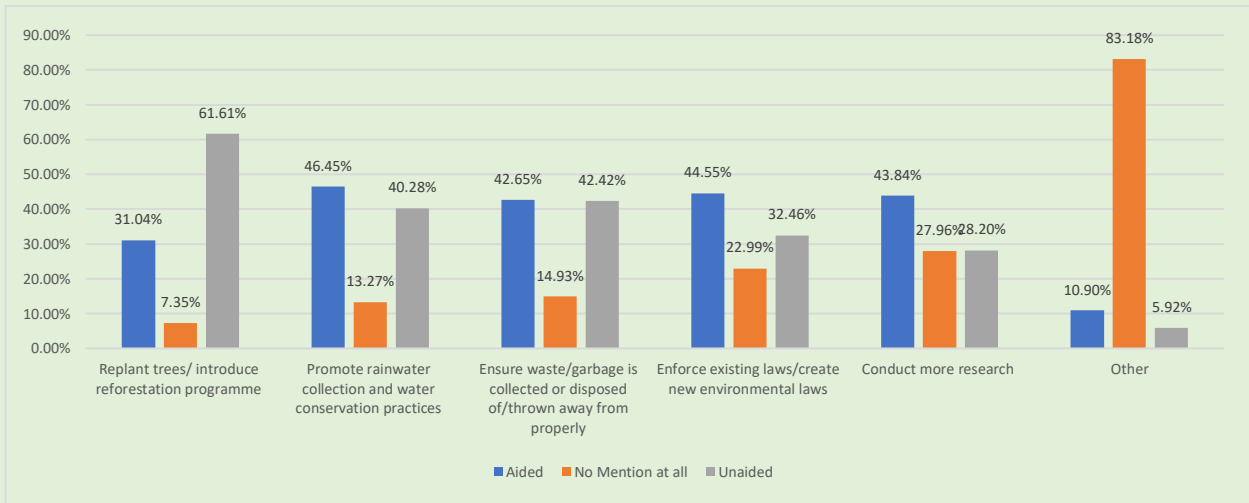


Figure 23-2: Government interventions



6.4.1 Interventions currently implemented by households

An assessment of efforts being taken by households also revealed that households were using energy saving lights (90%), turning off lights while not in use (95%), using energy saving appliances (66%) and using public transport to car save fuel (69%) among others as shown in Figure 24-1 and Figure 24-2.

Figure 24-1: Interventions currently implemented by households

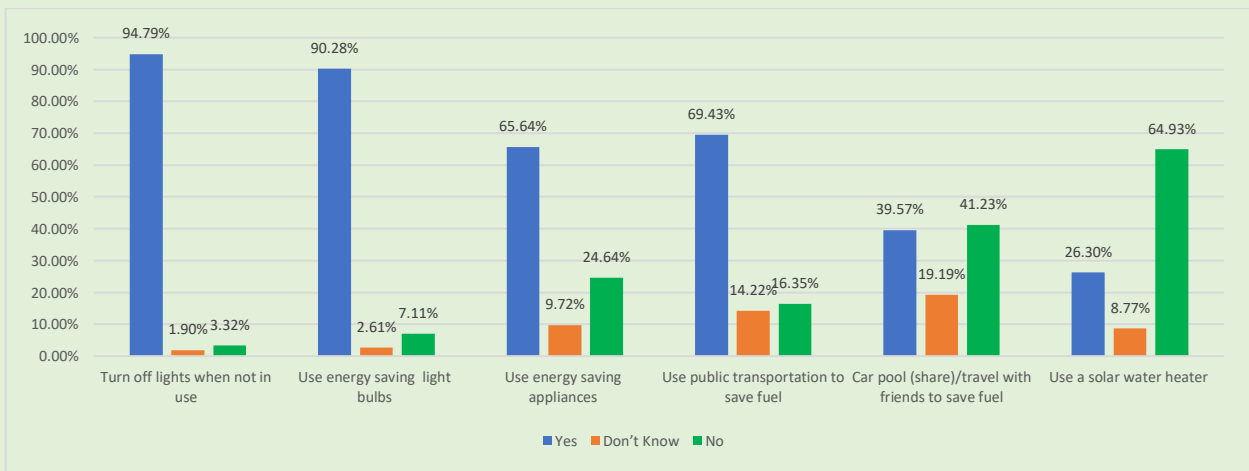
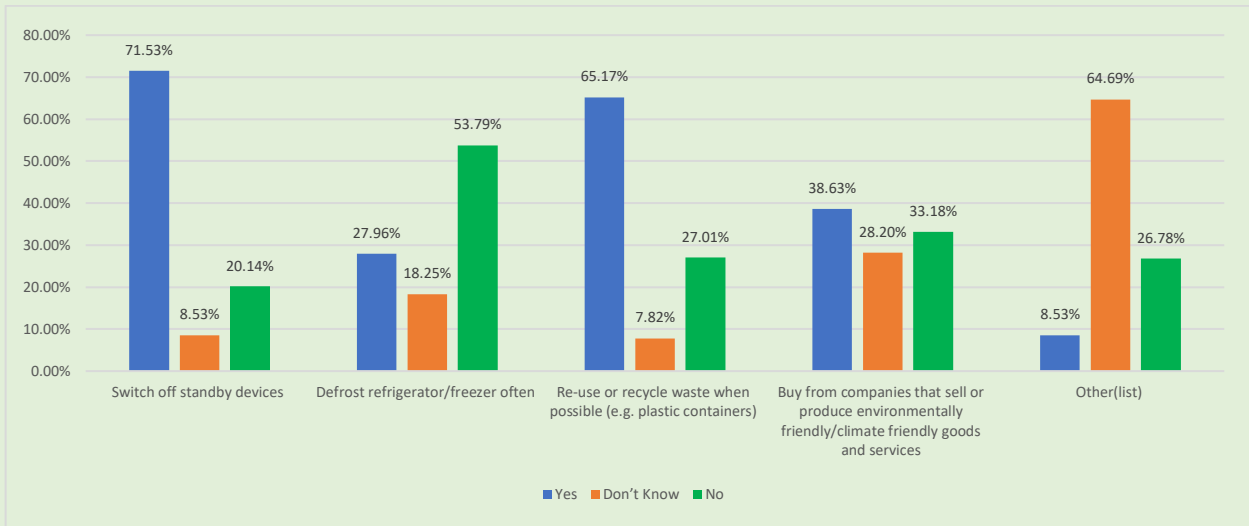


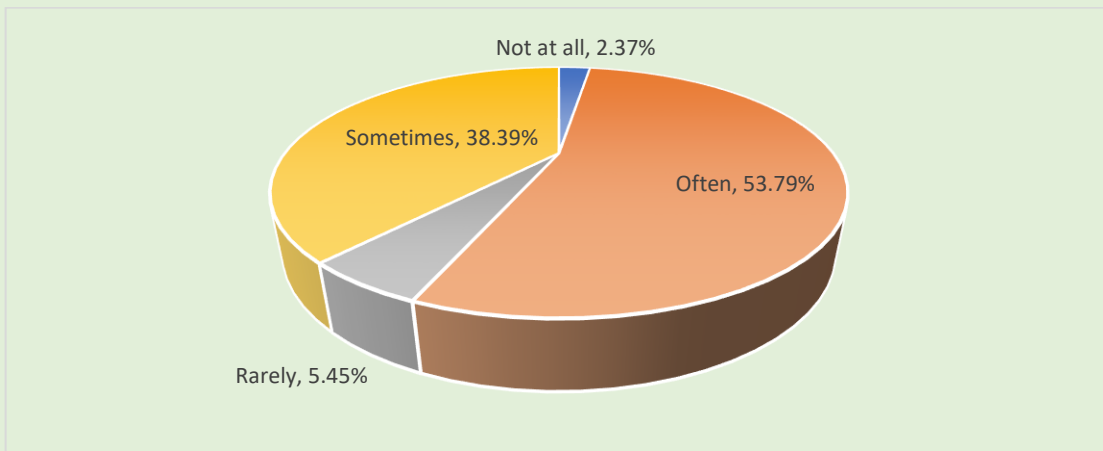
Figure 24-2: Interventions currently implemented by households



6.4.2 Discussion on energy savings

Respondents were further asked the number of times they talked about energy savings. The study revealed that 54% often talked about energy savings due to the high cost of energy while 39% talked about it sometimes and 5% rarely talked about it. See Figure 25.

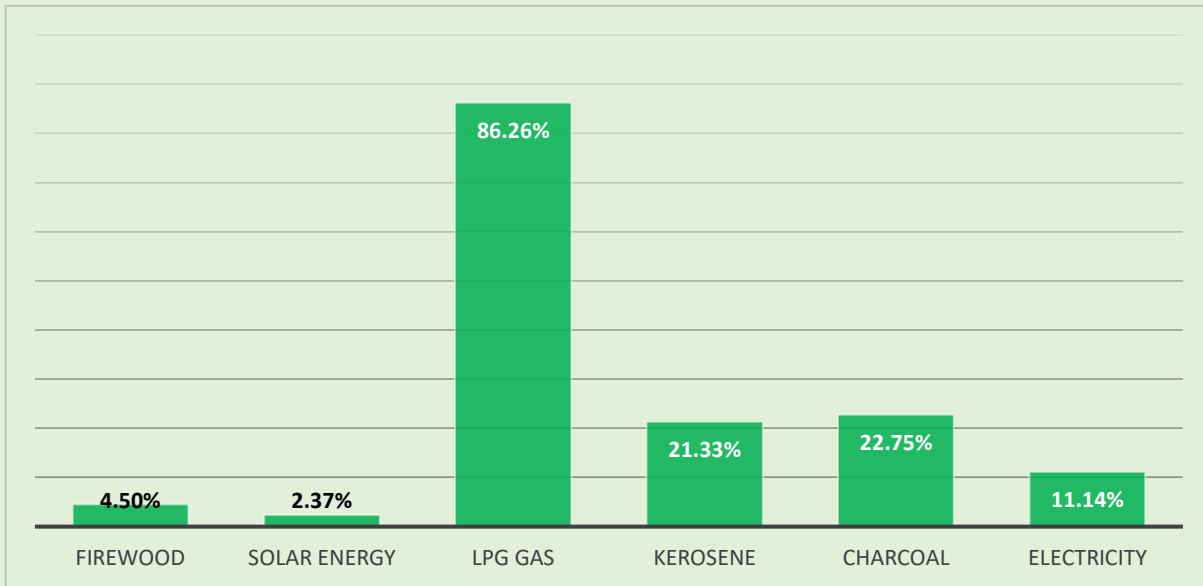
Figure 25: Times talk about energy savings



6.4.3 Source of energy for cooking

The study also revealed that 86% of respondents interviewed used LPG gas a cleaner energy which was commendable. However, about 23% used charcoal and only 11% used electricity and this could be attributed to the high cost of electricity. On the other hand, only 2% used solar energy and 5% use firewood while a good proportion still used kerosene (21%) as shown in Figure 26.

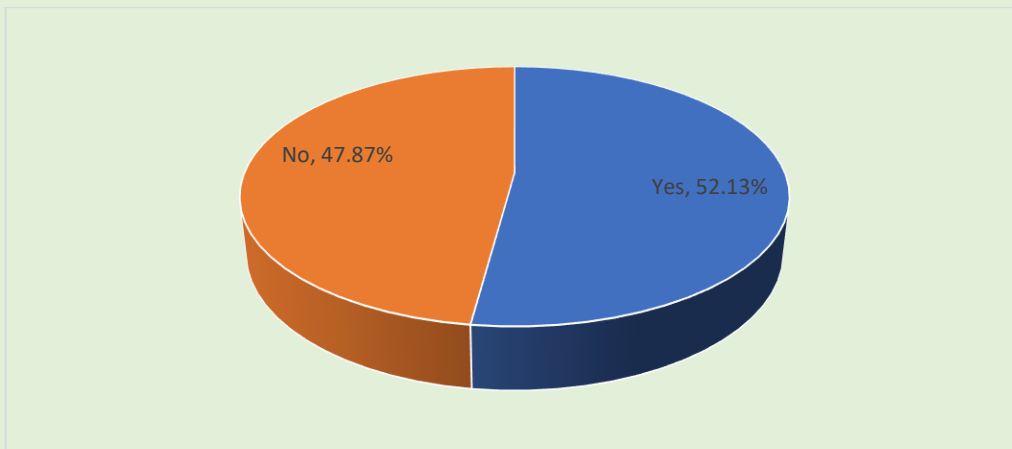
Figure 26: What is used for cooking



6.4.4 Water Harvesting by Households

Some of the climate change adaptation measures are harvesting of rain water for use during dry season. The study asked respondents whether they harvested rain water. Only 52% agreed that they harvest rain water. This could be due to the fact that most households are in flats or apartments hence rain water harvesting is mainly possible in stand-alone houses.

Figure 27: Rain water harvesting

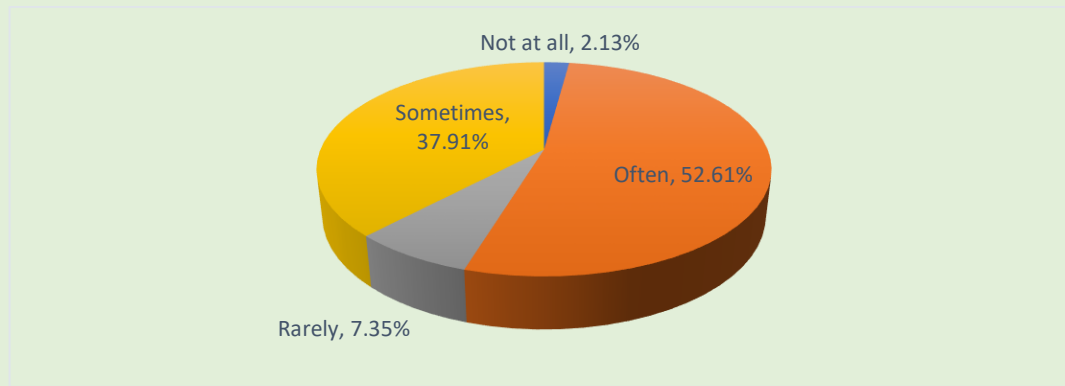


6.4.5 Water saving

Respondents were also asked how many times they discussed water saving in their households. The results revealed that 38% sometimes talk of water harvesting and 53% often talked about it. The 53%

is in tandem with those who harvest water. However, only about 9% rarely or never talked about water harvesting.

Figure 28: How often talk about saving water in the home



6.5 Climate change adaptation measures

Household were also asked how they adapt to climate change. Some respondents stated that they built far from water bodies (77%), other stated that they get home property insurance (53%), move to higher grounds (83%), collect and use rain water (90%), conserve and reuse rain water (90%), and 74% that they construct houses following government regulations (Figure 29-1 and Figure 29-2).

Figure 29-1: Household climate change adaptation measures

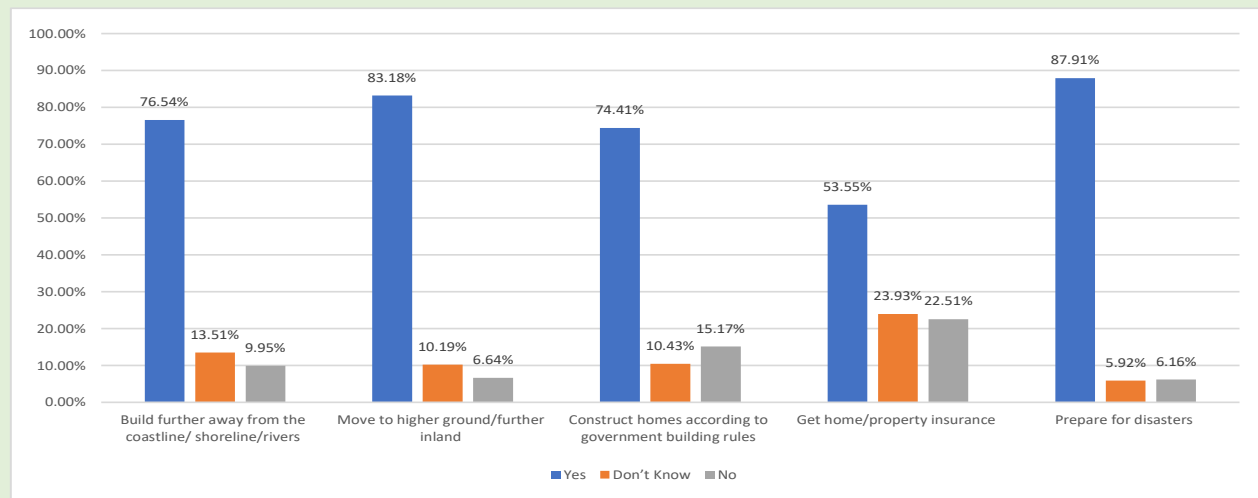
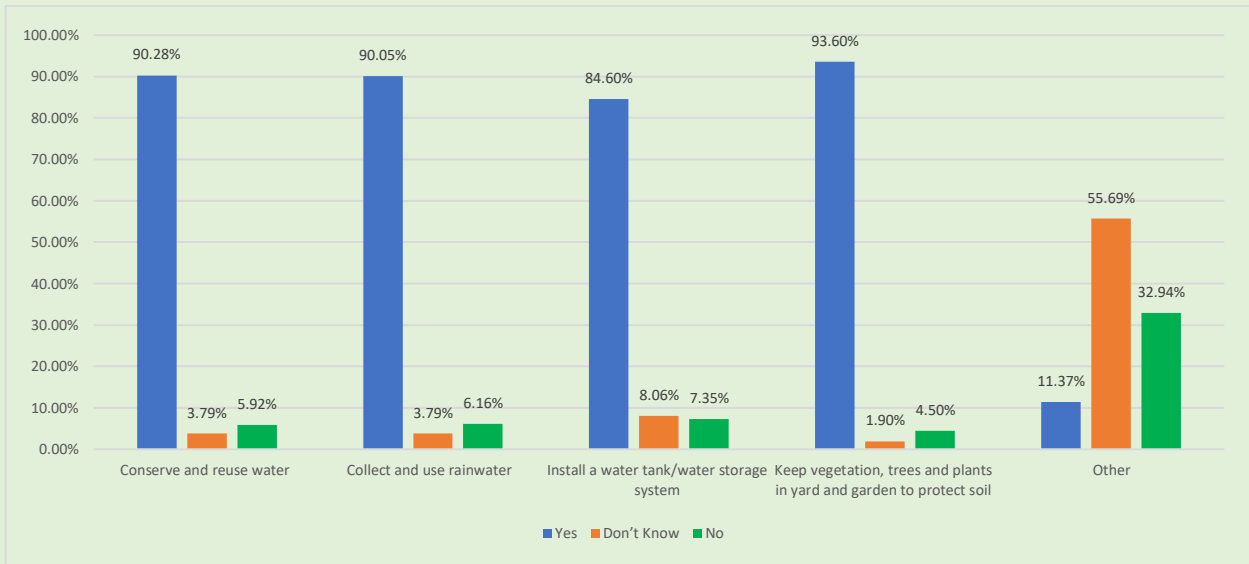


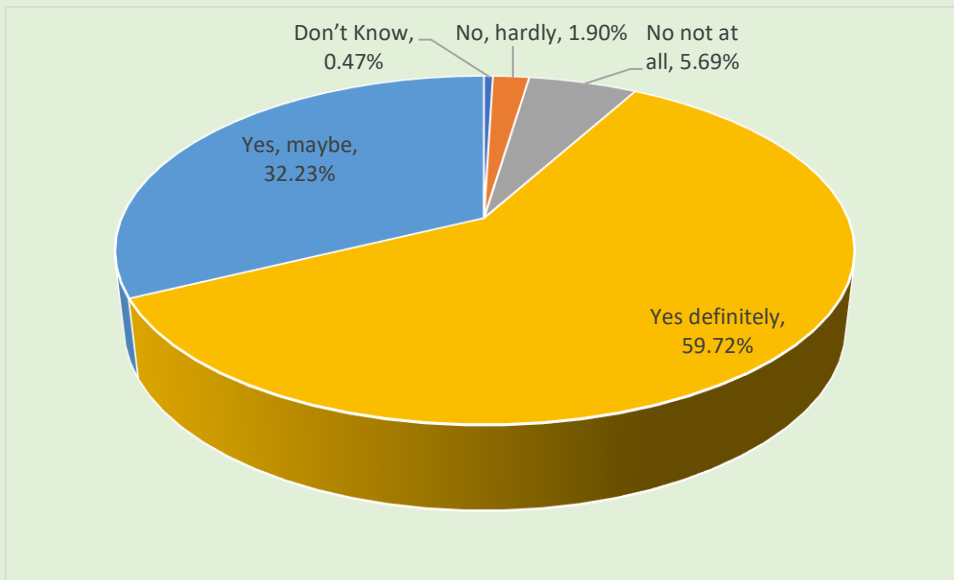
Figure 29-2: Household climate change adaptation measures



6.6 Receive information on climate change

Households were also asked if they would be willing to receive information on climate change. 60% agreed that they would be willing to receive information with 32% also agreeing that they may be willing (Figure 30). This shows that most households in Nairobi would be willing given their fear of the effects of climate change and this may help them plan adequately and put in place appropriate measures to cushion them.

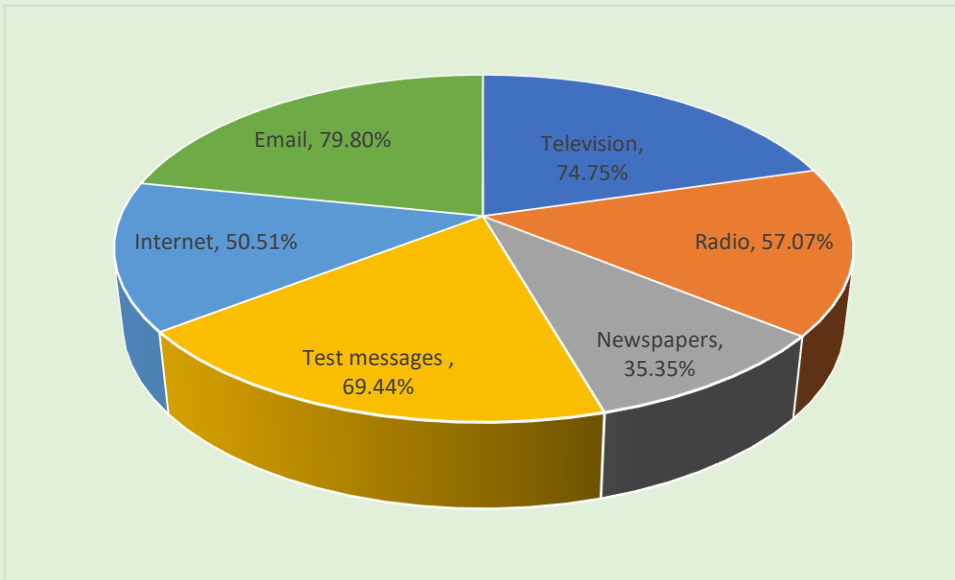
Figure 30: Would like to receive information on climate change



6.6.1 Means of receiving information on climate change

In terms of means of receiving information, Figure 31 shows that 69% of respondents preferred text messages while 70% preferred television, 79% preferred email and only 50% preferred surfing the internet and 35% preferred newspaper (Figure 32).

Figure 31: Source of information on climate change



6.6.2 Interest on various media information

The study revealed that there was highest interest on TV news reports (72%), radio news reports (46%), and TV advertisements (42%) among others as shown in Figure 32-1 and Figure 32-2.

Figure 32-1: Level of interest on the various media information

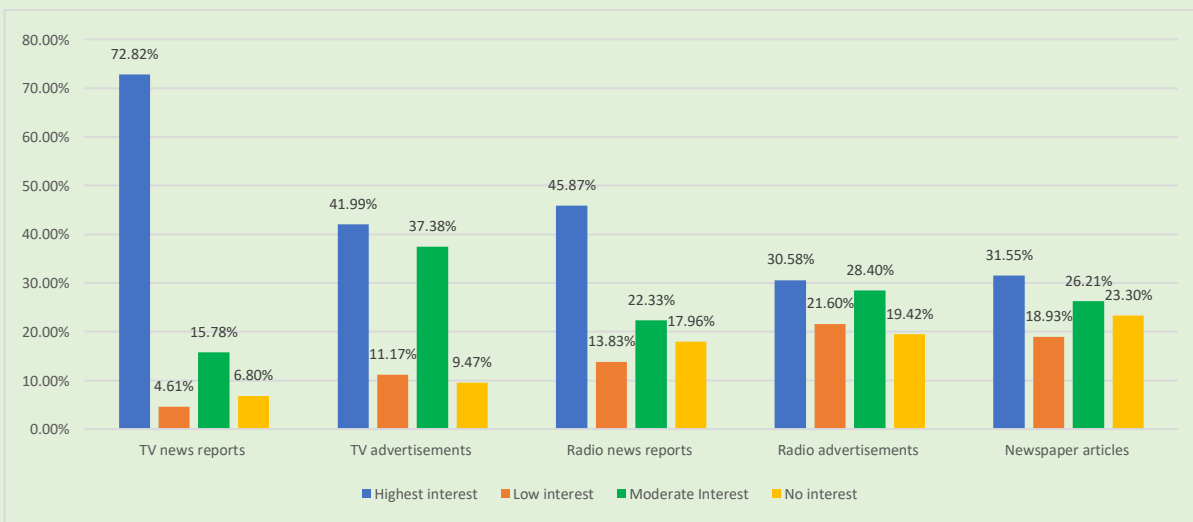
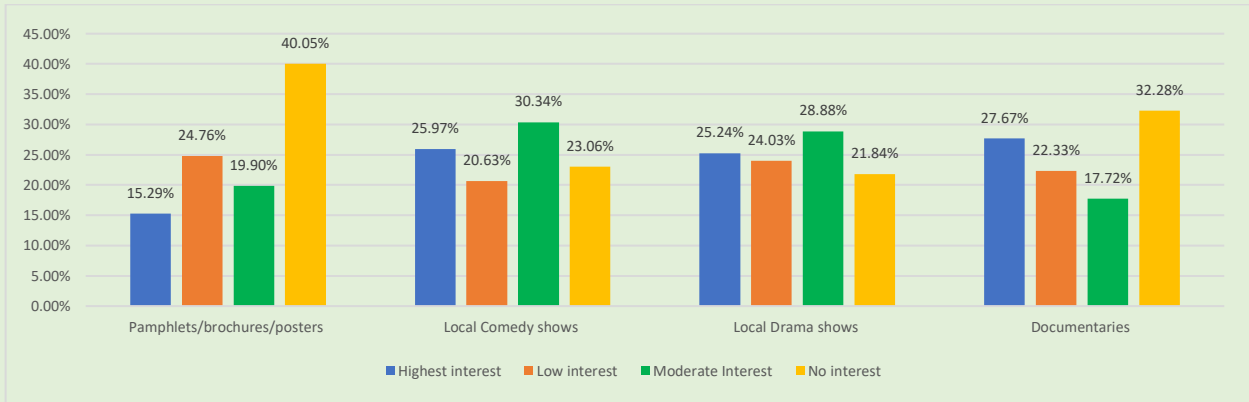


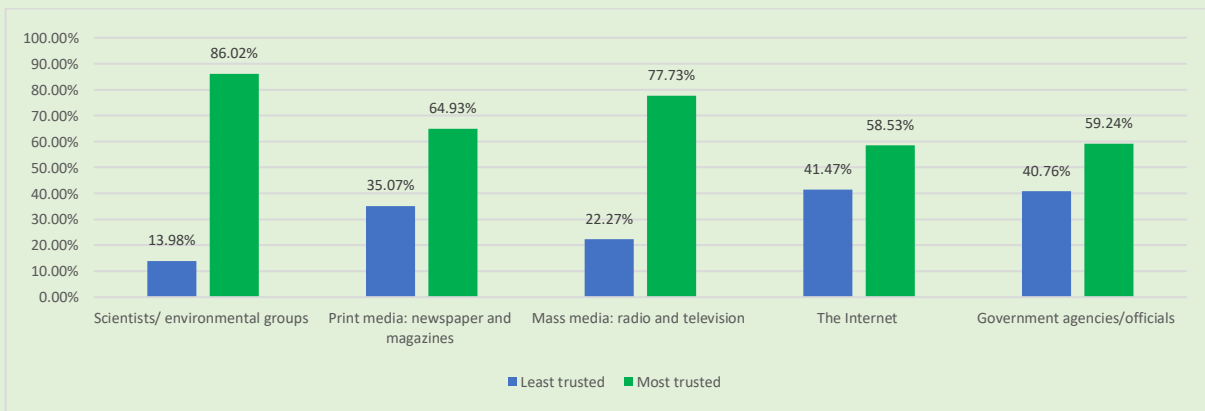
Figure 32-2: Level of interest on the various media information



6.6.3 Trusted information sources

The study also sought to understand which information sources were most trusted. The results revealed that 86% of the respondents trusted scientists of environmental groups while 78% mass media radio and television and 65% trusted print media, newspaper and magazines as shown in Figure 33. This therefore points for the areas that information on climate change can be effectively communicated.

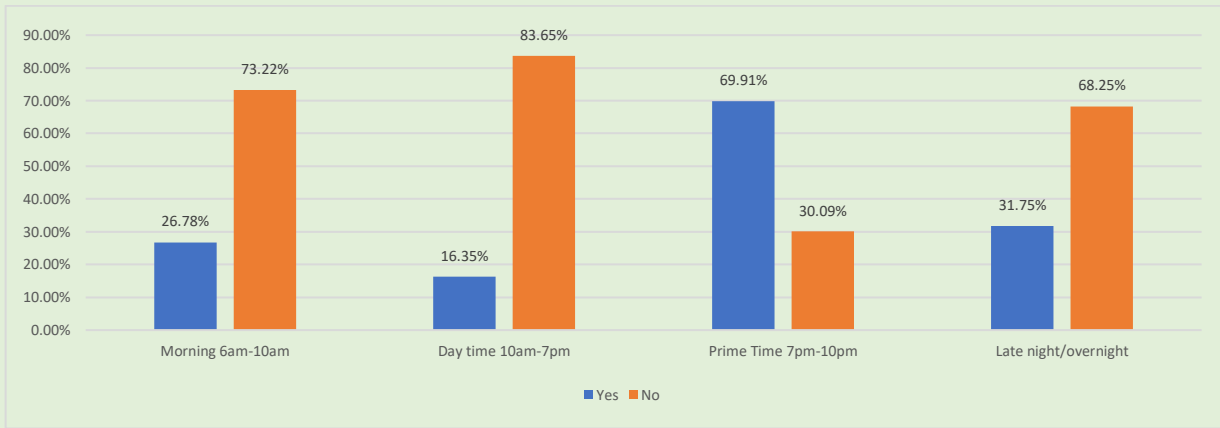
Figure 33: Trusted information sources



6.6.4 General Media Practices

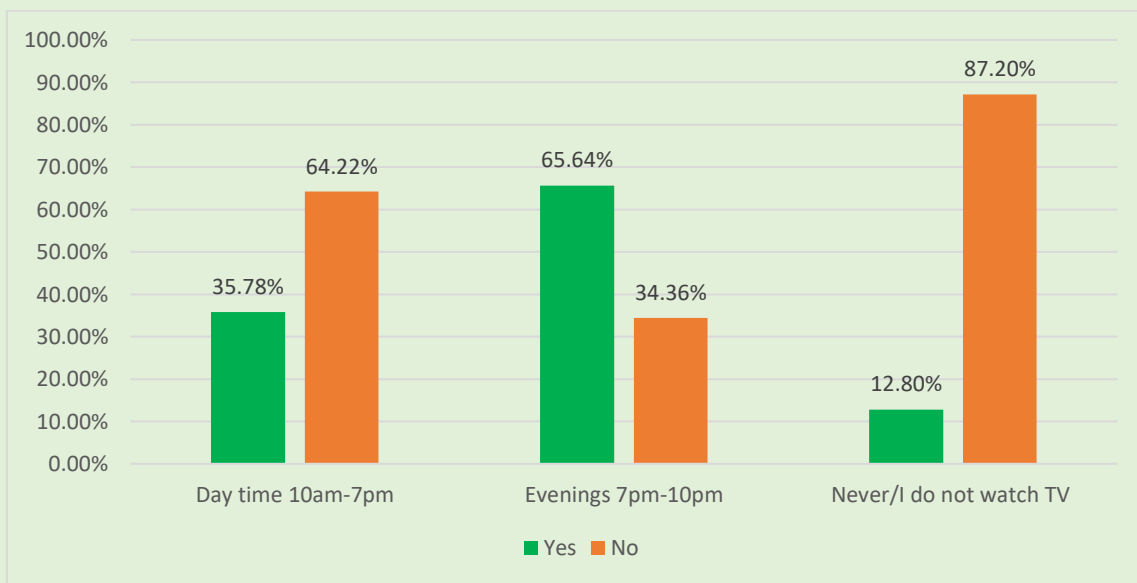
The study also sought to understand the household behaviour in terms of time they watch television. The results revealed most respondents watch television during prime time between 7pm and 10pm (69%) as shown in Figure 34. This shows that to sensitize the public on climate change, it's good to target prime time as this is when family members are all in the house.

Figure 34: Time for watching television- Weekdays



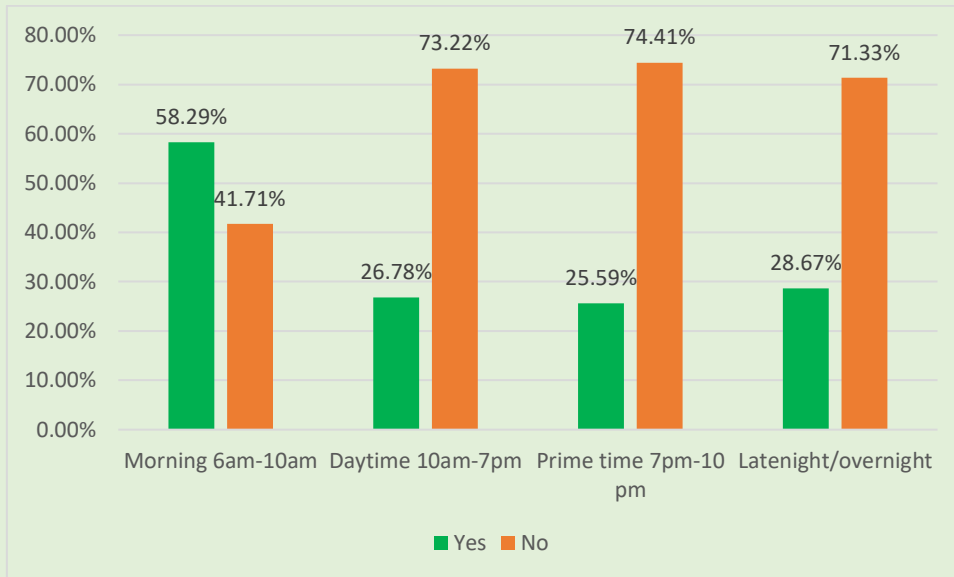
On the other hand, during weekends, the time for watching television was still found to be prime time between 7pm and 10pm (66%). A good proportion 36% also watched television during day time between 10am to 7pm as this time most people are resting at home (Figure 35).

Figure 35: Time for watching television- Weekends



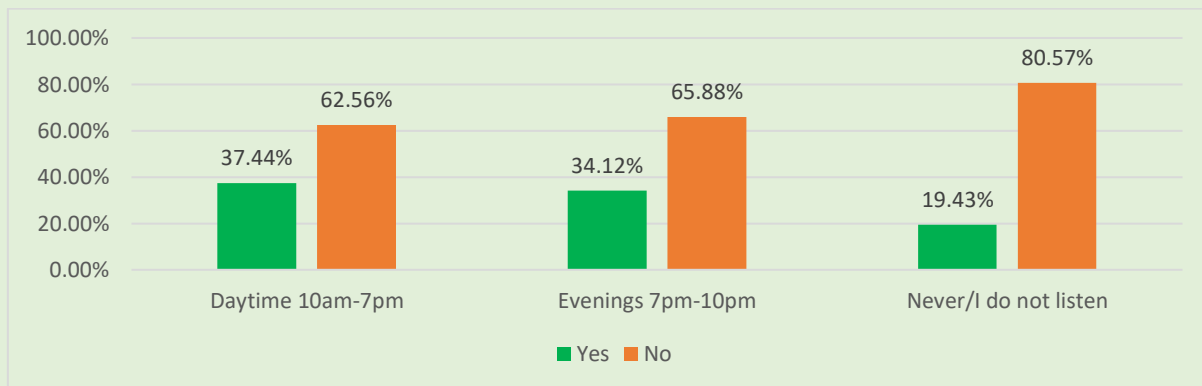
On the other hand, when it comes to listening to radio, most respondents interviewed listened between 6am and 10am during weekdays as shown in Figure 36. This is a common trend in Nairobi where most people listen to radio as they travel to work.

Figure 36: Time listening to radio- weekdays



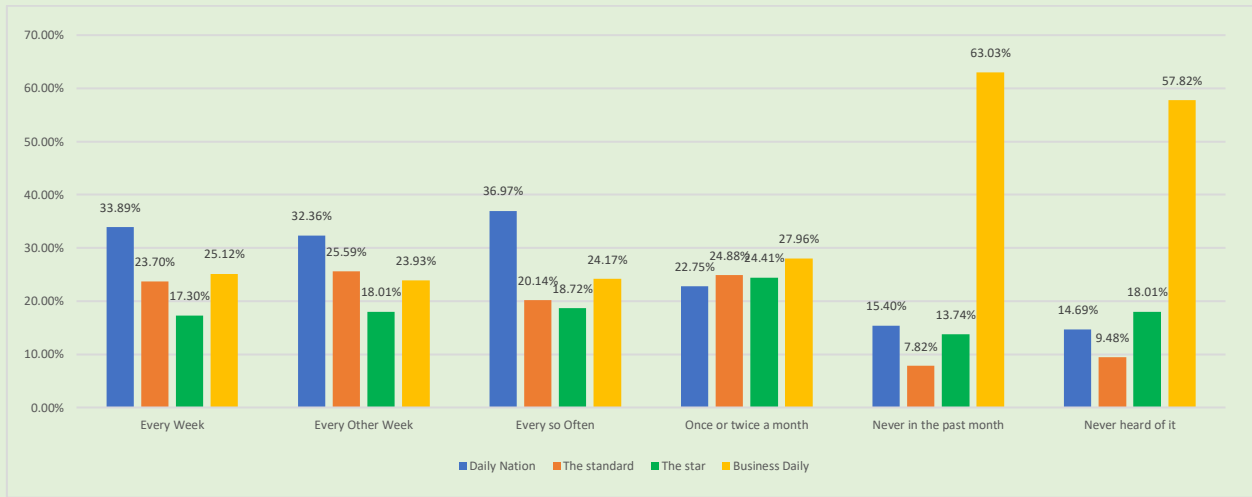
During weekends, the study revealed during weekends 37% listened to radio at day time while 34% listened to radio in the evening s from 7pm-10pm (Figure 37). The low rates for radio during weekends is because most households now focus on TV.

Figure 37: Time listening to radio-weekend



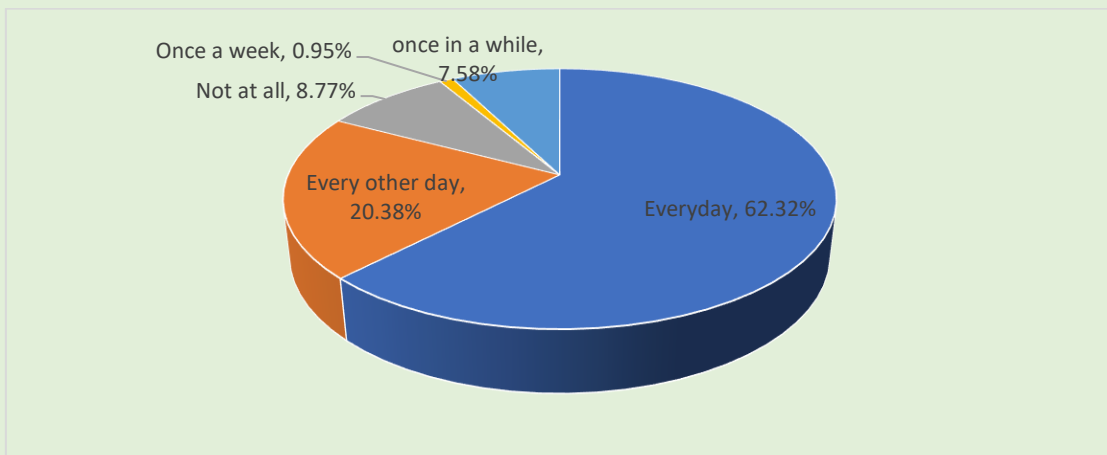
An assessment of the newspaper reading patterns also revealed that daily nation was more read once a week, every other week and every so often (see Figure 38). This shows that nation newspaper is the most prominent newspaper. However, other papers like the standard and the star as well as business daily were also read by a relatively good proportion of respondents.

Figure 38: Number of times read various newspapers



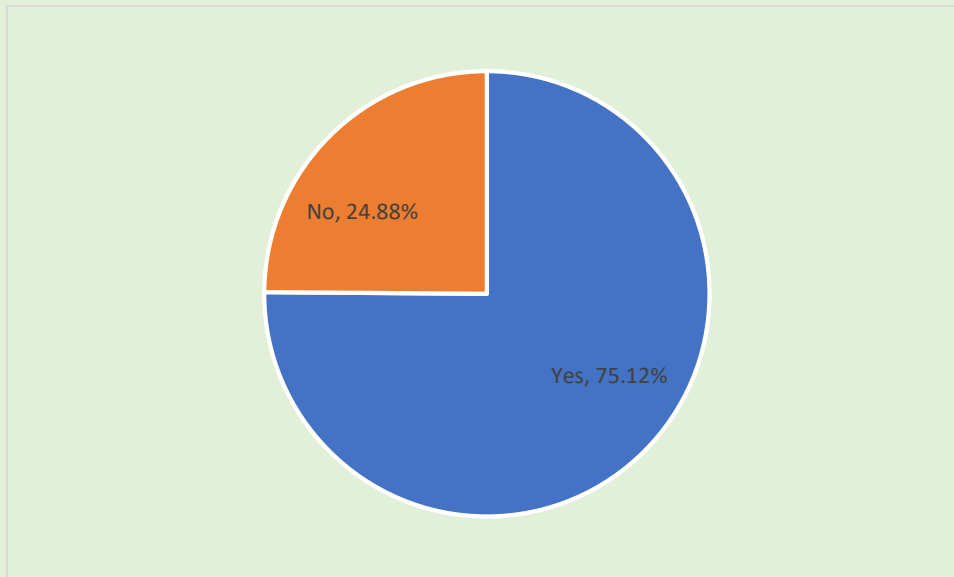
In terms of internet usage, the results in Figure 39 revealed that 62% of the respondents used the internet everyday this can be attributed to the low cost of data in Kenya and high access to mobile phone nationally.

Figure 39: Frequency of internet use



The study also revealed that internet was mainly used by respondents to search for news (75%) as shown in Figure 40.

Figure 40: Use internet as a tool for searching news



Discussions

The results of the study proved that the level of climate change awareness among the residents is not significantly low. The respondents demonstrated some level of awareness on climate change, implying that they have some understanding about climate change and its impact, however, information and knowledge gaps still exist to a greater proportion. The respondents expressed limited awareness on the organization dealing with climate change. It was established that the households were engaged in practices aimed at mitigating climate change such as using energy saving bulbs, turning off lights while not in use, using energy saving appliances, using public transport to save on car fuel among others. The climate change adaptation measures undertaken by the respondents include: building far from water bodies, collecting and conserving rain water as well as construction of houses following the regulations set by the government.

Regarding the sources of information about climate change, the respondents reported that they obtain information from the internet, print and broadcast media. A greater proportion of the respondents reported watching the 7pm and 10pm news on television while those who listened to radio did so while going to work. The respondents further reported that they were able to access news and information on the internet at any time of the day since they own smartphones.

Further the respondents suggested some interventions by the government which include: Some of the interventions raised were: charging higher taxes on goods not environmentally friendly; providing benefits for items that are environmentally friendly; giving people more information; regular maintenance of drainages; not importing goods that damage the environment; replanting trees;

promoting rain water collection; ensure waste garbage collection; more research; and enforce existing laws and regulations.

Finally, the respondents who participated in the study perceive climate change as a serious threat. They overwhelmingly supported the view that climate change is an issue of global concern and poses a serious threat to Kenya. The respondents therefore showed some of the measures they have been taking in their respective household to help mitigate climate change in the country.

7 Conclusion / Recommendations

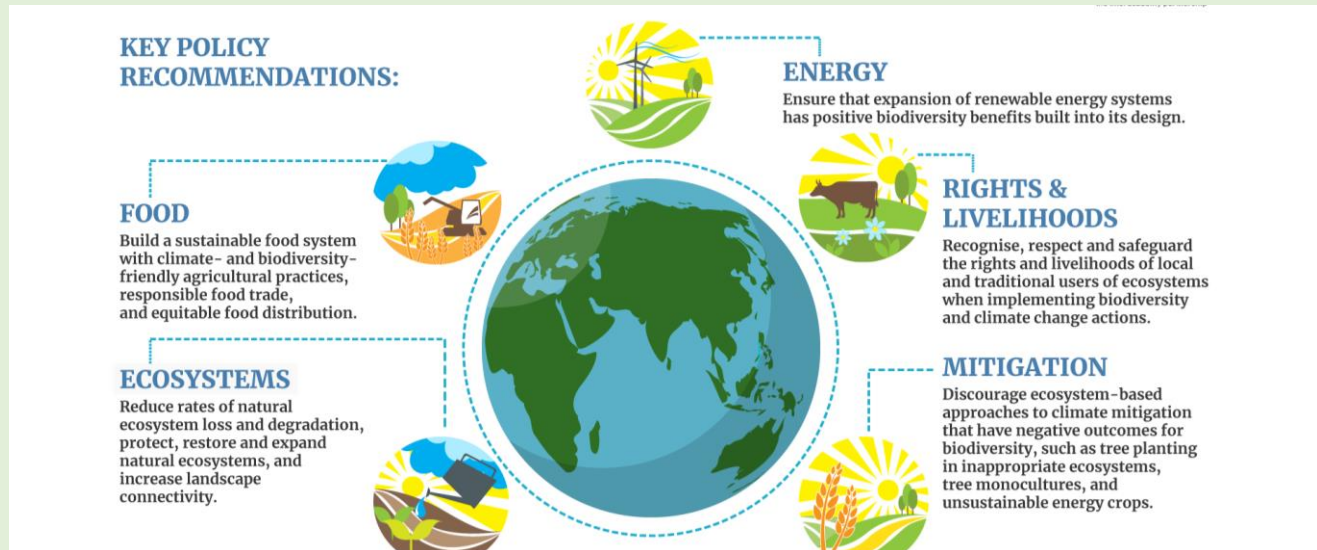


Photo credit - <https://www.interacademies.org/>

7.1 Conclusion

The results of this KAP survey show an overall mid to high level of awareness of climate change among respondents. However, a small proportion of the respondents acknowledged its seriousness and recognised that there were things, which they could personally do to reduce impacts. Environmental issues and conservation efforts were also on the minds of the city dwellers and small actions were seen from some persons. However, only a few respondents were proactive in adopting activities that would help reduce the impacts of climate change.

Most respondents felt that they were not very informed about matters concerning climate change and made a strong call for more information, more public awareness a great percentage are ready to learn and receive information regarding climate change adaptation and mitigation. It is worthy to note that most respondents agreed that children should be taught about climate change in schools

The study revealed that most respondents have access to the internet and internet enabled mobile phones, however, despite this, they generally did not go out of their way to search for information on climate change. Most of the respondents reported that they had used the Internet mostly for news and entertainment purposes.

Most respondents showed high interest in receiving more information on climate change with 59.72% of respondents saying “yes, definitely” and another 32.23% saying “yes, maybe”.

7.2 Recommendations

Based on the findings of this study, the following recommendations are proposed for policy makers and practice.

- i. With the youthful and moderately well-educated population in Nairobi, environmental and climate change education programmes should be initiated in conjunction with schools, colleges and resident associations to educate the city population on the science behind climate change, the effects and both the individual and collective actions of the population that would reduce the effects of climate change.
- ii. The effect of climate change range from increasing global temperatures, rising sea levels, growing inequality and water, food and energy shortages as well as destruction of infrastructure. Climate change also affects the general living standards as well as the general health of humans and animals. With the evident low income levels and harsh living conditions of Nairobi residents revealed by this study, 'Face the facts' project should seek to link climate change issues with the emerging issues such as unemployment, and poverty as part of its awareness creation on introduction of green jobs and development of the economy through green jobs;
- iii. With 93% of the respondents interviewed proposing that children and youth should be taught about climate change in schools, it would be important to create special programmes for school's (primary, secondary as well as colleges and universities) outreach and where possible lobby for climate change topics to be introduced to school forums as well as during outdoor school activities such as games.
- iv. Climate change is a complex subject and may not be easily understood in all educational institutions in the county. Curriculum developers should not overlook the complex nature of climate change and should work with teachers when designing climate change knowledge for primary schools to ensure that the content developed is simple and easy to understand.
- v. The study revealed that a sizable percentage (20%) of the population believe that persons engaging in climate change work are making a big deal of nothing. 13% also believe that climate change is not affecting us as a country. Further, 19% believe that African countries are not responsible for causing global climate change. 17% believe that we are too small to do anything about climate change. Specially targeted messages for these groups of persons may need to be considered;
- vi. TV and Radio are still the major information sources, and preferred medium for the residents of Nairobi and must be utilised heavily in order to reach the majority of audiences. As 69% of the respondents reported to watch TV between 7pm and 10pm, these timings should be used to sensitize the public on climate change. On the other hand, the radio should be used between 6am and 10am during weekdays. Additionally, internet based platforms should be used for the younger persons.

- vii. Despite the popularity with TV, radio and internet as the main sources of information and also preferred media choices for continued information on climate change, 31% do not watch TV and 41% do not listen to radio at all, therefore the project to ensure such persons are still reached through their alternative preferred information sources.
- viii. The media outlets need to broadcast relevant and accurate information on climate change as well as come up with educational media programs as well as shows to educate the public and raise awareness on climate change. In this regard, journalists should be well trained on climate change reporting.
- ix. Additionally, in developing awareness approaches, the project must pay close attention to findings related to whom people trust, and don't trust as messengers of climate change, and must also consider very carefully, the placement of messages.
- x. The project should employ a multi-media approach to its education and awareness initiatives that also embraces a multitude of local stakeholders and promotes community participation.
- xi. The education campaigns should seek to improve conservation habits in water and energy sectors.

There is also need to create climate innovation centres or institutions that periodically advocate for innovative interventions where public and Nairobi residents can always develop climatic programs to be replicated.



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