

**COMMUNICATION GAP BETWEEN SCIENTISTS AND THE PUBLIC ON THE
CLIMATE CHANGE DISCOURSE; A CASE OF KASARANI CONSTITUENCY**

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DECLARATION

I, Gladys Wambui Mwangi, affirm that I am the exclusive author of this research project. Any assistance from other individuals has been appropriately recognized. As far as I know, this research has not been undertaken or presented to any educational institution globally for comparable purposes or forums before.

Signature..... Date5/12/2023.....

Gladys Mwangi

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Supervisors' Approval

I attest that, in my capacity as supervisor at the University of Nairobi, I endorsed the submission of this research project for evaluation.

Signature.....  Date.....06.12.2023.....

Dr. Samuel Ngigi

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DEDICATION

For all the encouragement, wisdom, and strength they have given me, I am eternally grateful to my family and parents.

In memory of those who came before us, paving the way for exploration and discovery, and in anticipation of the future generations who will build upon the insights uncovered in these pages. May this research be a small but meaningful contribution to the ever-expanding knowledge.

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To the future generations, build upon the insights uncovered in these pages!

ABSTRACT

Despite the popular dialogue among the scientists on climate change, the general public's level of understanding and their engagement in climate change discourse remains a concern as the public remains uninformed and disengaged. Despite abundant scientific evidence, there is lack of understanding at the local level. For the public to contribute to the climate discourse, it is imperative to identify the cause of the disconnect and therefore assess the extent of knowledge and communication gap between the public. This study looked at the communication gaps between the scientists and the public on the discourse around climate change within Kasarani Constituency. Using a mixed-method approach, including questionnaires and in-depth interviews, the study assessed the level of public awareness, communication gaps, and the factors contributing to these gaps. The research employed the Information Deficit theory, attributing the public's disengagement to lack of information. To arrive at the findings a target population of 60 respondents selected through Stratified random sampling, 15 scientists purposively selected from climate related organizations and 15 journalists who report on climate thematic area also selected purposively were selected. Data generated was presented in Tables and Pie Charts. The study concluded that there is a communication gap between scientists and the public on climate change discourse and both the media and scientists are contributors to this. The study recommends strategies that will enhance climate change communication.

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ACRONYMS

IFRC	The International Federation of Red Cross and Red Crescent Societies
RCMRD	Regional Centre for Mapping of Resources for Development
CIFOR	Center for International Forestry Research
ICPAC	IGAD Climate Prediction and Applications Centre

DEFINITION OF TERMS

Discourse – A comprehensive and extended presentation of a topic, conveyed through either spoken or written means.

Journalist – A reporter, someone who professionally reports on news and current events

Scientist – Someone who employs the scientific approach to address inquiries about the quantifiable cosmos through their actions.

Knowledge Gap – This refers to the lack of understanding or difference between what is known and what needs to be known in a particular field or subject.

Communication Gap – This occurs when there is a discrepancy between the information intended to be passed and the recipient's understanding of that message which leads to misunderstandings or incomplete transmission of messages

CHAPTER ONE INTRODUCTION

1.0 Background

Climate change has evolved into a multifaceted scientific phenomenon with significant impacts on ecosystems, economics, and civilizations. This has elevated it to a crucial matter on a worldwide level, requiring informed public involvement and resolute measures. Climate change refers to alterations in weather patterns, temperature, and other atmospheric elements. These shifts can naturally arise as a result of fluctuations in solar activity or significant volcanic eruptions. Human actions, specifically deforestation, agricultural practices, and oil and gas production during the 1800s, have been the primary drivers of climate change due to the discharge of gasses that trap energy. The consequences of climate change include extended periods of scarcity of water, intense drought, floods, wildfires, escalating sea levels, devastating storms, polar ice melting, and a decline in biodiversity (IFRC, 2020; International Organization for Migration, 2022).

Climate change can impact different aspects of our lives, including our well-being, capabilities in agriculture, housing, safety, and opportunities in employment. Certain individuals and communities, especially those living in small island nations and less economically developed regions, are already more susceptible to the perilous repercussions of change in climate. For example, the occurrence of rising sea and lake levels, such as in Lake Nakuru and Baringo in Kenya, has reached a crucial point, requiring the complete relocation of entire settlements.

Climate change communication is crucial for people's awareness and opinions. Most people do not experience climate change firsthand but must rely on communicative content to develop an understanding of climate change.

Scientists have been at the forefront of climate studies, producing a wealth of data and findings. Scientists play a pivotal role in generating climate knowledge, and their insights are invaluable in shaping climate policies and solutions. However, despite abundant scientific evidence, a significant communication gap persists between scientists and the general public regarding climate change discourse. This gap hinders effective climate action, as public understanding and support are essential for implementing policies and individual behaviors necessary to address and adjust to climate change (O'Neill & Boykoff, 2010).

According to a study conducted by Jahn et al. in 2012, there is a deficiency in comprehension at the local level due to the scientific explanations of quantifiable causes and effects being frequently not relatable to local perspectives.

Lack of scientific literacy among the public is often cited as a barrier, making it challenging for individuals to comprehend complex climate science findings and people commonly regard change in climate as a remote matter, both in respect to space and time, which can lead to apathy and inaction (Leiserowitz et al. 2010).

For the public to contribute to the climate discourse, it is imperative to identify the cause of the disconnect, it is therefore crucial to assess the extent of knowledge and communication gap between the public in Nairobi, which is a cosmopolitan and the public assumed to be informed and recommend the most suitable communication strategies that will enhance the public participation on climate matters and action

1.1.1 Why Nairobi County

Kenya has 47 counties, one of which being Nairobi City County. As the capital of Kenya and the third-smallest county in the country, it boasts a population of 4,397,073 according to the 2019

census. One of Nairobi's electoral districts is known as Kasarani Constituency. This is the second-largest constituency in Nairobi, after Embakasi according to Kenya National Bureau of Statistics, and it encompasses 152.60 km² (58.9 sq. mi) of Nairobi City County.

Undertaking a research study concerning the communication divide between scientists and the general public regarding climate change discussions in Nairobi County, Kenya, presents numerous compelling justifications. Nairobi is Kenya's capital and a cosmopolitan city with a diverse population. Nairobi embodies an urban setting, serving as Kenya's economic center, with a dense cluster of businesses and industries. Nairobi is also home to many research institutions, universities, and environmental organizations. Conducting research in this area allows you to tap into potential research collaborations, access data and resources, and engage with experts in climate science and communication. Nairobi is relatively accessible, with good transportation infrastructure. This facilitates data collection, interviews, and surveys, making it more feasible to conduct comprehensive research in these areas. Climate change has direct and indirect impacts on both urban and rural communities. By studying Nairobi County, you can assess how communication gaps affect individuals, businesses, and communities at the local level, contributing to actionable insights.

Conducting the research on the communication gap between scientists and the public on climate change discourse in Nairobi County offers a unique opportunity. Research in this county has the potential to inform climate policy in Kenya, strengthen local communities' ability to withstand climate change, and add to our knowledge of the difficulties and solutions associated with climate communication to examine diverse demographics, climate vulnerabilities, and communication dynamics.

1.2 Problem Statement

Climate science encompasses complex mechanisms, rigorous data analysis, and interconnected variables, which may provide challenges for someone without a scientific background to comprehend. Although there is a wealth of empirical evidence provided by prominent scientific institutions and the organizers of most scientific outreach initiatives, a significant communication gap persists between scientists and the general public regarding climate change discourse (Rothwell, 2002). This gap hinders effective climate action, as public understanding and support are essential for the implementation of policies and individual behaviors necessary to mitigate and adapt to climate change. Rarely do global discussions on the climate catastrophe place the daily realities of people living on the front lines of climate change front and center. Discussions of these topics typically center on temperatures, timeliness for action, carbon credits and statistical evaluations

The robust scientific data firmly validates the presence of climate change and its attribution to human activities. Nonetheless, there remains substantial apprehension regarding public awareness and engagement in conversations concerning climate change. Efficient communication serves as the link between complex scientific discoveries and the necessity for well-informed public action. For a considerable duration, politicians, activists, and scholars have advocated for a heightened engagement of the general people in discussions around climate change (Wibeck, et al 2014).

Efficient communication is crucial for organizing collaborative endeavors to tackle and alleviate the consequences of climate change. Notwithstanding their endeavors, a substantial segment of the populace continues to lack knowledge, possess incorrect information, or show apathy towards climate change. This lack of comprehension impedes the progress and execution of efficient climate policies and individual initiatives. Understanding the factors that contribute to the

communication divide between scientists and the public in the discourse surrounding climate change is crucial (O'Neill & Boykoff, 2010).

A substantial segment of the public is either uninformed or unconvinced by the consensus among climate scientists and the general public that human activities substantially contribute to climate change, according to surveys conducted by McCright and Dunlap among scientists and the general public. The observed discrepancy indicates a significant lack of communication. There exists a disparity in comprehension between scientists and the general populace concerning the fundamental understanding of the origins and impacts of change in climate.

Moreover, studies conducted by (Cook et al. 2016) and (Leiserowitz et al. 2013) have also highlighted shortcomings in communication. Leiserowitz's research emphasizes the significant differences in viewpoints concerning seriousness and urgency of changes in climate change between climate scientists and the broader public. Cook et al.'s study, which entailed an exhaustive examination of scientific literature, validates the prevailing scientific consensus regarding human-induced global warming. However, the authors highlight the ineffective communication and perception of this consensus by a substantial segment of the public.

1.3 General Objective of the Study

This research study aims to analyze the communication gap between scientists and the public on the climate change discourse.

1.3.1 Specific Study Objectives

These are the objectives will inform this study:

- a) To gauge the extent of public awareness regarding matters related to climate change
- b) To identify the communication gaps between scientists and the public on climate change discourse.
- c) To identify the key factors contributing to the gaps in communication between scientists and the public on the discourse about climate change.

1.3.2 Research Questions

The issues that follow will constitute this study's research questions:

- 1) How aware is the public on climate change?
- 2) What are the communication gaps between scientists and the general public in climate change discourse?
- 3) How do communication gaps currently arise between scientists and the public?

1.4 Justification

Climate change is one of the most pressing and far-reaching challenges facing humanity in the 21st century. The urgency of addressing this issue stems from its multifaceted and global impact, affecting not only the environment but also human societies, economies, health, and the very sustainability of our planet. The issue at hand is of the utmost importance due to its far-reaching and interconnected consequences. The increasing global temperatures, largely caused by human activities such as burning fossil fuels and deforestation, are resulting in more frequent and severe weather events like hurricanes, wildfires, and droughts. These occurrences put human lives in danger and cause significant damage to economies and infrastructure, resulting in substantial financial losses.

In this context, scientists play an indispensable role as the primary generators of climate knowledge. The scientific community consistently generates substantial evidence concerning climate change, but frequently, this information struggles to reach the broader public, resulting in misunderstandings, indifference, and a lack of action.

Public engagement fosters transparency and accountability in climate science, ensuring that research findings are subject to scrutiny and that climate policies are informed by the best available scientific evidence. According to International Federation of Red Cross and Red Crescent Societies (IFRC, 2020), many highly vulnerable countries are receiving little climate change adaptation support. World Bank, 2022 research recommends for further consideration as citizens in local communities from these countries are almost wholly disconnected from the funding landscape despite bearing the blunt of climate related behaviors of rich countries and are cut off from mechanisms that can fund them. In essence, scientists have both a moral obligation and a practical imperative to engage the public in climate change discourse to catalyze collective action, promote

informed decision-making, and inspire sustainable behaviors, ultimately contributing to a more resilient and sustainable future for our planet. Therefore, this research will delve into the multifaceted aspects of climate change as a concern and elucidate the reasons why scientists should actively engage the public in addressing this critical global challenge.

Recent report released by Dr. Stephanie Diepeveen, a Senior Research and, Expert at State Up, and Research Associate at the University of Cambridge titled the ‘Silence Crisis’, indicates that despite the significant global focus on climate change effects, there is not enough of bottom-up, evidence-based research into the integration of climate-related experiences and local information contexts, particularly in populations at greatest risk. This knowledge gap impedes our understanding of these communities' informational demands and effective tactics for supporting their information ecosystems.

According to the environmental and development group German watch Newspaper, published September 6, 2023, the Africa Climate Summit was a success, sending the signal that African states desire to play an active role in the climate debate. This suggests that, for a long time, the continent in which Kenya is located was not a part of the climate change discourse. Furthermore, the organization newsletter says that civil societies, which have a greater understanding of the community's needs and consequences, were left out of the dialogue. This demonstrates how climate change discussions are exclusively held at the highest levels, leaving the general population out.

It is crucial to investigate this communication gap to uncover the obstacles that impede the dissemination of scientific knowledge to the public. The primary objective of this research is to promote a more constructive and cooperative discourse between scientists and the public, nurturing

a common comprehension of climate change and empowering society to participate in meaningful solutions.

1.5 Scope of the Study

Despite the wealth of scientific evidence presented by the foremost producers of climate knowledge and the organizers of scientific dissemination activities, public understanding and support is missing.

The research did not include anything beyond randomly interviewing a sample size of 60 people who are between the ages of 18 and 35 within the youth bracket and 45-60 above the youth bracket from Nairobi county. The county was arrived at through random stratified method as it's the county with the highest population in Kenya. Since the population sample is broad, the research will use stratified sampling to settle for Kasarani Constituency which is the second county with the highest population. To arrive at the 60 respondents, we will use convenient sampling technique where 15 respondents from the four wards will be requested to complete a questionnaire in order to evaluate their level of knowledge on climate change. It will find out if the public from selected county in Kenya (Nairobi) has enough information on climate change.

To realize these, the research will employ a multi-method approach. Questionnaires will be issued to gauge their knowledge of climate change, followed by in-depth interviews with scientists selected purposefully and journalists. Through this, the study will establish the most effective strategy to bridge the knowledge gap and encourage a dialogue on climate change issues and initiatives.

1.6 Limitations of the Study

The study's narrow emphasis on a sample size of 60 persons, separated between two age categories, inside Nairobi County, limits its capacity to fully reflect the wide range of opinions that exist in this varied and densely populated region. The utilization of stratified sampling, which involves selecting participants from a certain age range and limiting the study to Kasarani Constituency, may not provide a comprehensive representation of the wider population of Nairobi or Kenya. Consequently, this approach may fail to account for any disparities in climate change awareness across other demographic groups or geographical locations within the county.

Furthermore, the utilization of questionnaires to assess climate change knowledge may lead to biases as a result of individuals' inclination to reveal information about themselves. Respondents' self-reported awareness levels potentially influence social acceptability biases or misconceptions of climate change ideas, which might compromise the credibility of the collected data.

The utilization of in-depth interviews with deliberately chosen scientists, journalists, and public members may unintentionally introduce subjectivity, as their viewpoints may not comprehensively encompass the broader community's perspectives on climate change awareness or the efficacy of communication strategies. This may impede the study's capacity to offer a full comprehension of the community's perspectives. In addition, the study fails to include other possible significant communication channels when assessing the influence of Citizen TV's climate change reporting. This oversight may limit a comprehensive knowledge of how the media environment contributes to influencing public awareness.

The study's relevance is limited to Nairobi County, which hinders the generalizability of its findings to other places in Kenya or worldwide. The allocation of resources and time needed for the multi-method approach, which includes surveys, interviews, and media analysis, has practical limitations that may restrict the thoroughness of the research or the ability to incorporate a wider variety of participants or media sources.

The ethical concerns around the preservation of secrecy and anonymity among a relatively limited group of individuals may influence the openness of replies, thus compromising the accuracy and dependability of the data. It is essential to identify and overcome these limitations in order to correctly interpret the study's findings and grasp the wider ramifications of the research within its stated scope.

CHAPTER 2 LITERATURE REVIEW

2.1 Overview

Essential literature is offered to facilitate comprehension of the research study in this section. It encompasses theoretical literature, empirical reviews, and conceptual framework.

2.1.1 Climate Change Communication

According to Doulton and Brown (2009, p. 191), there is an emerging body of study as regards climate change and the media. There has been a substantial development in the range of techniques, methodology, and research enquiries within this domain of media's interaction with climate change over the last decade.

According to research conducted by Solomon et al. in 2007, public apprehension about global warming experienced a noteworthy decrease despite what was described as the most significant economic downturn since the Great Depression and a milder, less extreme climatic year in various regions worldwide. This decline occurred even as scientific evidence indicating accelerating impacts continued to accumulate. Moser et al. express concern about the apparent lack of public engagement but disagree with simplistic explanations that suggest the public is indifferent or uninformed. They advocate for additional research into public attitudes and related factors to gain a deeper understanding of trends in public opinion and to identify the most effective approaches to communicate about climate change.

While there may not be a single comprehensive theory that specifically addresses the lack of communication between scientists and the public on climate change, there are various research findings and concepts that contribute to our understanding of the subject. It is imperative to note

that academic study'' in this field often draws from multiple theories and models to explain communication challenges related to climate change.

Nisbet, 2009 argues that many climate change communicators believe in emotional appeal to stir an action and increase the urgency leading to action. Fear appeal help the public prioritize their action e.g. terrorism, economy among other issues dominating our lives. However, by using fear as the key message on climate communication to grab This is additionally corroborated by the research of O'Neill and Nicholson-Cole (2009) and Moser (2007), which demonstrates that audiences tend to disregard fear appeals. Conservative audiences, in particular, have been resistant to this fear regarding climate change, as fear appeals that fail to provide effective counterarguments lead to denial, apathy, and numbing. Furthermore, Weber (2006) argues that an overemphasis on adverse consequences without a corresponding emphasis on viable remedies often fails to captivate audiences rather than actively involve them.

2.2 Theoretical Review/Conceptual Framework

2.2.1 Information Deficit model theory

The Knowledge **Deficit Model**, also known as the Information Deficit Model, is a communication theory that asserts that the lack of public concern or engagement on scientific issues, including climate change, is primarily due to a deficit in scientific knowledge or lack of information and understanding (Nisbet & Scheufele, 2009). This theory assumes that if scientists provide more information and data to the public, the public will become more informed and concerned about the issue. The idea of the Deficit Model can be traced back to early approaches to science communication, which often assumed that the public's lack of understanding or concern about

scientific issues was primarily due to a deficit in scientific knowledge. These ideas have been prevalent since at least the mid-20th century, if not earlier.

The core concept at the heart of the Deficit Model revolves around the notion that the public's relatively limited grasp of and apathy toward climate change stem from an inadequacy in their scientific knowledge (O'Neill & Boykoff, 2011). In essence, it posits that the comprehension of the people on climate change is hampered by a deficiency in their awareness of scientific facts and principles related to this complex issue. The Deficit Model often involves information flowing from experts (scientists) to the lay public (Nisbet & Scheufele, 2009). Scientists are seen as the authority figures who possess knowledge, and the public is perceived as passive recipients of this knowledge.

The theory holds significant relevance within the scope of this research as it offers valuable insights into the current level of public awareness and understanding regarding climate change. This statement emphasizes the concept that a considerable segment of the general population could be described as uninformed or deficient in comprehension regarding the complex aspects of climate change (Nisbet & Scheufele, 2009).

2.3 Empirical Review

This section reviews the empirical literature thematically as per the specific objectives of the study.

2.3.1 Climate Change and Public Beliefs

Leiserowitz et al. (2010) aimed to provide a thorough evaluation of public opinions, outlooks, and actions concerning climate change throughout the United States as the central goal of their study. This nationwide survey aimed to capture the diversity of perspectives within the American public and gain insights into how different demographic groups perceived and responded to climate

change. The researchers ensured a broad geographic and demographic representation by surveying a large and diverse sample of Americans from across the country. To ensure the survey's representativeness, respondents were chosen using a stratified random sample procedure, which took into account the relative distribution of various demographic groups and geographic areas.

In order to get answers from a cross-section of the population, the poll used a mix of in-person interviews, online surveys, and phone interviews. People in the United States have different opinions on climate change, according to the survey. A sizeable minority remained doubtful or unsure, even while many others acknowledged the truth of climate change and linked it to human actions.

The complicated terrain of public opinion on climate change in the US was illuminated by the statewide survey performed by Leiserowitz et al. (2010). These findings carry implications for climate change policy and communication, emphasizing the necessity to tailor both communication strategies and policies to accommodate the diverse perspectives and values held by the American population.

2.3.2 Climate Change and Communication Gaps.

An excellent way to learn what does and does not work to address the climate change communication gap is to conduct experiments to determine the efficacy of various communication tactics. Experimental research in climate change communication aims to systematically examine how different message formats, content, or delivery methods impact public understanding, attitudes, and behaviors related to climate change. Experimental studies involve controlled settings in which researchers manipulate one or more variables (in this case, message frames) to assess their influence. Participants are typically randomly assigned to different groups, each exposed to a different version of the message or treatment.

In this research led by Myers and their team, the central focus was on the concept of message framing as a critical variable. Message framing pertains to the art of presenting information in various ways with the intent of eliciting specific responses. To explore this, the researchers crafted different message frames aimed at conveying information about climate change. These message frames commonly include "gain-framed" messages, which emphasize the advantages of taking action, and "loss-framed" messages, which underscore the consequences of inaction.

To carry out this study, participants were assigned randomly to distinct groups, each exposed to either gain-framed or loss-framed messages (or conceivably a control group with no message presented at all). The researchers systematically collected data to gauge the impact of these messages, encompassing alterations in participants' knowledge, attitudes, and intentions pertaining to climate change.

The valuable insights derived from experimental investigations serve as a foundation for refining strategies in climate communication. For instance, should gain-framed messages prove to be more effective, communicators may opt to emphasize the advantages of adopting environmental conduct that is welcoming, especially when addressing certain demographics.

A recent study in the Kenyan county of Kajiado found that almost all farmers (98%) still rely on traditional practices to manage their farms amidst the impacts of climate change. This study explored how farmers in the region are adapting using indigenous knowledge methods (Manei et al. 2016). In response to the severe effects of climate change on agriculture, the Kenyan government formulated the National Climate Change Response Strategy (NCCRS) in 2010 under the Ministry of Environment and Mineral Resources (MoEMR). The 2018 Kajiado Profile by the

International Center for Tropical Agriculture (CIAT) highlighted ongoing challenges faced by the agricultural sector in Kajiado, particularly due to persistent harsh weather conditions like drought. Food shortages have persisted over the years due to the widespread crop failures and livestock losses caused by these conditions.

2.3.3 Trust in Scientists and Institutions

In the research titled "The Nuances of Public Trust and Engagement with Science" by Besley (2015), the study delved into the intricate dynamics of public trust in scientists and their engagement with science. The research explored the multifaceted nature of how the public perceives and interacts with scientific information. It addressed the complexities surrounding trust in science and discusses the factors that influence public trust and engagement. Besley's study was situated in the context of science communication, a field that explores how scientific information is disseminated and received by the public. Because it affects how the general population views scientific discoveries, researchers, and their work, trust is an important factor in this dynamic. Besley used a mixed-methods strategy in his research, integrating content analysis, interviews, and surveys. Using this method, we may look at how the general population feels and acts in relation to science.

Besley's research shed light on how levels of trust correlate with different forms of engagement with science. This encompasses behaviors such as reading scientific articles, attending science events, or participating in citizen science initiatives. Studies by (Howe et al.,2015) highlight the importance of institutional trust in government agencies and scientific organizations. Public trust in these institutions can impact willingness to accept climate science. Based on the findings, the

researcher concluded that understanding the nuances of public trust can inform strategies for more effective science communication. Additionally, policymakers may use these insights to enhance public engagement with scientific issues and to build trust in science as a whole.

2.4 Conceptual Framework

The main ideas of the Knowledge Deficit Model and its implications for comprehending public attitudes and responses to climate change are at the center of this conceptual framework. It draws attention to the necessity of developing a more comprehensive knowledge of public engagement with scientific topics and stresses the significance of recognizing the limitations of a solely information-centric approach

The central belief at the core of addressing public disengagement is the idea that a lack of scientific knowledge serves as a primary barrier. This belief focuses on countering this deficiency by disseminating information to the public. It's seen as a unidirectional flow where scientific experts generate information, and the public is perceived as passive recipients of this expertise, emphasizing the authority of these experts.

The level of public engagement is believed to correlate with their understanding of scientific concepts; lower understanding leads to decreased concern and engagement. Communication strategies primarily center on providing information and transferring knowledge, assuming that more information will naturally lead to increased public concern.

However, there are critiques acknowledging that solely providing information might not be enough to foster engagement. Factors beyond mere knowledge—such as psychological, cultural, and social influences—play a significant role in shaping perceptions of climate change.

To communicate climate change effectively, there's a recognition of its complexity as an issue. Effective communication requires considering diverse perspectives, emotions, and values, going beyond relying solely on scientific data.

The implications for research emphasize the importance of studying public attitudes, understanding, and behavior regarding climate change. Comprehensive approaches integrating multiple factors influencing public engagement are suggested.

This understanding also has implications for science communication strategies, educational initiatives, and policymaking. It underscores the need for more inclusive and comprehensive approaches to engage the public effectively on climate change beyond a unidirectional knowledge flow.

In conclusion, this conceptual framework, grounded in the Information Deficit Theory, provides a structured approach to investigate and address the communication gap between scientists and the public on climate change discourse. By comprehending the variables and gaps that exist, researchers and policymakers can devise targeted interventions to enhance climate change communication and foster greater public engagement and understanding.

2.4.3 Critique of Literature and Research Gaps

The Information Deficit Model, although significant in comprehending public involvement with technical matters such as climatic change, encounters significant criticisms and acknowledges the existence of fundamental deficiencies. A major criticism is centered on the premise of rationality and the simple transfer of knowledge to induce changes in behavior (Fischhoff, 2013). The

paradigm assumes that humans make decisions based exclusively on rational evaluation of information. Nevertheless, the process of human decision-making encompasses an intricate interaction of emotions, values, and social circumstances that beyond simply availability of knowledge. This omission is a substantial deficiency in comprehending the intricacies of public reaction to climate change, as sentiments and principles frequently exert a strong influence on attitudes and actions (Huang et al., 2019).

In addition, the Information Deficit Model frequently overlooks the impact of cultural variety, values, and social circumstances on the way information is received and understood. This critique highlights the model's lack of recognition of the complex relationship between cultural origins and individual perspectives on climate change. As a result, it undermines its capacity to successfully involve various communities (Leiserowitz, 2006).

Another crucial criticism highlights that the mere provision of information does not automatically result in alterations in attitudes or behaviors. This critique emphasizes the disparity between the assumption that acquiring more knowledge automatically leads to a greater level of concern or action in relation to climate change. In addition to providing knowledge, behavior is greatly influenced by psychological, social, and contextual aspects. This creates a limitation in the model's ability to drive major change (Nisbet & Scheufele, 2009).

In addition, the Information Deficit Model perpetuates power imbalances by establishing professionals as the exclusive authority and the public as passive receivers of knowledge. This power asymmetry disregards the process of making information accessible to the general public and the various types of specialized knowledge, hence neglecting the public's firsthand and localized understanding of climate change (Wynne, 1996).

The model fails to fully account for the inherent unpredictability and complexity associated with climate change. Climate research encompasses intricate and unpredictable aspects that go beyond simple scientific facts. However, the emphasis on factual information in models sometimes neglects the importance of properly conveying uncertainty. This discrepancy has the potential to generate mistrust or doubt among the general population, so compromising the effectiveness of communication regarding climate change (Lorenzoni et al., 2007).

Furthermore, the model assumes that information has an instantaneous effect on attitudes and behaviors, without considering the delay between gaining knowledge and real changes in behavior related to climate change. The process of behavioral change is typically gradual and influenced by other factors beyond the mere transmission of information. This presents a key limitation in the model's ability to comprehend public participation over time (Corner et al., 2015).

It is essential to acknowledge these criticisms and existential discrepancies in order to develop communication tactics that go beyond the Information Deficit Model. It requires more sophisticated, comprehensive, and multifaceted strategies that take into account the intricacies of human thinking, varied cultural contexts, and the ever-changing nature of public involvement in climate change.

CHAPTER 3: METHODOLOGY

3.1 Research Design

A descriptive design serves as a scientific investigative model wherein data is collected and analyzed to depict the current condition or status of a phenomenon. (Kothari 2019) notes that researchers prefer this design due to its feasibility and the ease with which accurate factual information can be obtained from respondents. This research study aims to analyze the communication gap between scientists and the public in the context of the climate change discourse.

3.2 Population

The study followed the guidelines of a convergent parallel mixed-methods research design (Creswell & Clark, 2011). In order to evaluate the overall findings, the researcher gathered data, ran separate analyses of the two components simultaneously, and then combined the information (Creswell, 2014). In order to validate the findings and obtain a thorough understanding of the research problem, the study used a convergent parallel mixed research design, as pointed out by Creswell and Clark (2011). According to Schoonenboom and Johnson (2017), this approach delves into several aspects of the study question to gather complete data.

According to Peil (2018), the target population consists of all the elements that share at least one trait that can be examined or used to influence future studies. A total of sixty people were intended to take part in this research between the ages of 18 and 35 which is within the youth bracket from Nairobi county and respondents between the age of 45-60 years which is above the youth bracket. 15 scientists from ICPAC, RCMRD and CIFOR-ICRAF, as these are International bodies that uses

geospatial technology to monitor climate related phenomenon and 15 communicators (journalists) reporting on climate change.

3.3 Sampling Frame

The following sampling frame is constructed based on the various data collection methods and target groups identified in the study, including surveys/questionnaires and in-depth interviews

3.3.1 Surveys/Questionnaire

- a. Public Survey List (Nairobi) - Individuals residing in Nairobi County - Source: Nairobi County resident's database or electoral roll

3.3.2 In-Depth Interviews:

- a. Scientists Interview List - Climate scientists in International bodies or experts based in Nairobi county. The list of climate scientists is obtained from the organization's staff website.
- b. Communicators Interview List - Environmental communicators, and journalists, based in Nairobi county - Source: List of communicators from local media organizations and environmental NGOs

The above sampling frame was designed to cover the diverse groups and data sources identified in the study. It includes lists of potential survey respondents, and interview participants. The selection of individuals for surveys, and interviews was conducted using appropriate sampling methods, such as random stratified sampling, purposive sampling, or convenience sampling, according to the research objectives and resources available.

3.4 Sample and Sampling Technique

Sampling is a crucial concept in modern statistics, according to Mclead (2014). Elements with similar qualities are selected from a predetermined set. Based on Ponto (2015), the selection is done with the assumption that getting a sample that is representative of the population of interest is the main goal of the research. Participants were selected from scientific institutes and media outlets using a purposeful selection technique. Using informants chosen for their ability to shed light on a particular phenomenon, subject, or idea is the essence of purposeful sampling (Robinson, 2014). Thus, it follows that the sampling allowed for the accurate inference of all components. With a manageable quantity of 15 journalists and 15 scientists chosen on purpose, Based on the principle outlined by Kothari (2017), we used random stratified sampling to select 60 respondents from the public. Stratified random sampling minimizes errors and ensures equitable representation of all elements within the study, which is especially beneficial for populations with diverse characteristics. Additionally, the research made use of the convenience strategy, which entailed choosing participants based on their availability and willingness to participate.

3.5 Instruments

Surveys and one-on-one conversations were used to collect information. In order to gather statistically meaningful data on a specific issue, questionnaires are defined by Mugenda and Mugenda (2008) as a set of questions that are sent to individuals. In this study, questionnaires were used because, as Lyon (2021) explains, they can collect information about subjective

concepts like values, opinions, interests, and personal experiences. Plus, they make it much easier to collect this kind of data than it would be with first-hand observation. Structured inquiries are often used to make data analysis easier and to save time and resources because they are immediately applicable, as pointed out by Mugenda and Mugenda (2008).

3.6 Data Collection Procedure

The researcher individually administered questionnaires to each participant as part of the data gathering procedure. The trial was conducted with rigorous adherence to protocol, closely monitoring the distribution and collection of all questionnaires. The researcher employed a "drop and pick" approach to disseminate the surveys. The researcher conducted extensive interviews with scientists and communicators/journalists. Participants were given a four-day period to fully utilize the chance to optimize their response rates.

3.7 Data Processing and Analysis

In order to facilitate descriptive analysis, the data collected from the surveys was processed using standardized spreadsheet software. When necessary, the researcher also used SPSS and Excel 2019 from Microsoft Office to analyze the data. By making use of percentages and frequencies, the data was given in a descriptive style. The study's findings were presented graphically using bar charts and pie graphs.

The data that was transcribed and analyzed thematically came from documents and interviews. Emerging themes were used to classify these data. The researcher was able to thoroughly examine,

validate, and draw significant conclusions concerning the study's aims and research questions using this method.

As a result, the research findings contributed valuable insights complementary to those obtained from the questionnaires.

3.8 Ethical considerations

Ensuring the protection of all participants' rights and well-being, we conducted this research with meticulous adherence to ethical principles and norms. The following moral factors were considered:

1. **Informed Consent:** Prior to their participation, all individuals involved in this research were provided with clear and comprehensive information regarding the research objectives, procedures, potential risks, and benefits. Informed consent was obtained from each participant, and they were informed that they might discontinue participation in the study at any moment without penalty.
2. **Privacy and Confidentiality:** The research took measures to protect the privacy of our participants. Any personal information collected during the research process was kept confidential, and all data anonymized in reporting to prevent any possibility of identifying individual participants.
3. **Beneficence and Non-Maleficence:** Throughout the research, the researcher tried to maximize the benefits while minimizing any potential harm to participants. The research procedures were designed to ensure that the benefits of the study outweigh any discomfort or inconvenience that participants might experience.

4. **Fair Treatment:** The research maintained a commitment to treating all participants fairly and respectfully, regardless of their demographic characteristics or affiliations. No form of discrimination or bias will be present in participant selection or treatment.
5. **Deception:** Deception was not utilized in this study. All participants were provided with accurate and truthful information about the research purpose and procedures from the outset.
6. **Data Handling and Storage:** To protect against unauthorized access, all collected data was securely stored and managed according to established protocols. Access was restricted to authorized personnel only.

By adhering to these ethical considerations, this research aimed to maintain the highest standards of ethical conduct and ensure the integrity and validity of the findings while safeguarding the welfare of our participants.

CHAPTER 4 RESEARCH FINDINGS

4.1 Overview

This segment comprises the discourse, interpretation, presentation, and analysis of the field data collected in the Cesarani Constituency of Nairobi County in support of this study. The research investigates the instances of miscommunication between experts and the general public regarding climate change. The presentation and analysis of the data were determined by the objectives of the investigation. As it examined both qualitative and quantitative data, the investigation qualified as quantitative research. Furthermore, descriptive and statistical methods of data analysis were employed. In-depth interviews with journalists and scientists, in addition to surveys administered to the general populace of Kasarani Constituency, were utilized to augment the qualitative data. The percentages represented the results in tables and infographics. The research, which sought to investigate the communication divide between scientists and the general public regarding the discourse on climate change, was guided by the special objectives outlined below.

The study aimed to:

- a) Determine the extent to which the general public was cognizant of climate change concerns.
- b) To identify the voids in climate change discourse communication between the scientific community and the general public.
- c) Determine the primary factors that contribute to the communication disparities between the scientific community and the general public regarding climate change.

4.1 Respondent's Profile

The following chart illustrates the age distribution of the participants included in the study.

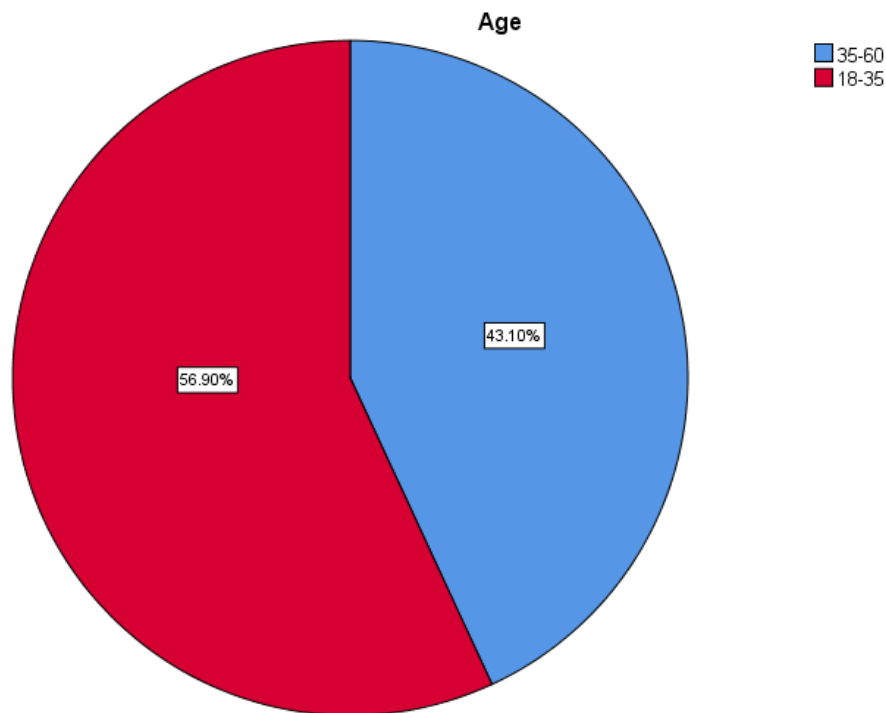


Figure 1

Researcher in this study aimed to identify any communication barriers between themselves and 60 participants ranging in age from 18–45 and 46–60 from the Kasarani Constituency in Nairobi County. Still, 58 people filled out the survey, thus the researcher was successful.

You can see the total number of people that were a part of this study in Figure 2. The results showed that among the respondents, 56.90% were in the youth bracket (those aged 18–35), which accounts for 80% of Kenya's population, while 43.10% were in the middle adulthood bracket (those aged 36–60). The study's 60 participants, split evenly between the 18–35 and 35–60 age groups, allowed for a thorough analysis. For a better grasp of new ideas and possible future moves,

go no farther than the 18–35 age group, while the 35–60 age group may provide light on long-held convictions and life events. The study's findings were enhanced and a more comprehensive knowledge of the communication dynamics surrounding climate change was contributed to by this dual-age strategy, which sought to capture a varied variety of perspectives and experiences across multiple age groups. As a result of include respondents from both the younger and older age groups, the research study did not exhibit any bias based on respondents' ages.

4.2 Gender of the Respondents

The gender distribution of the research participants is displayed in the following chart.

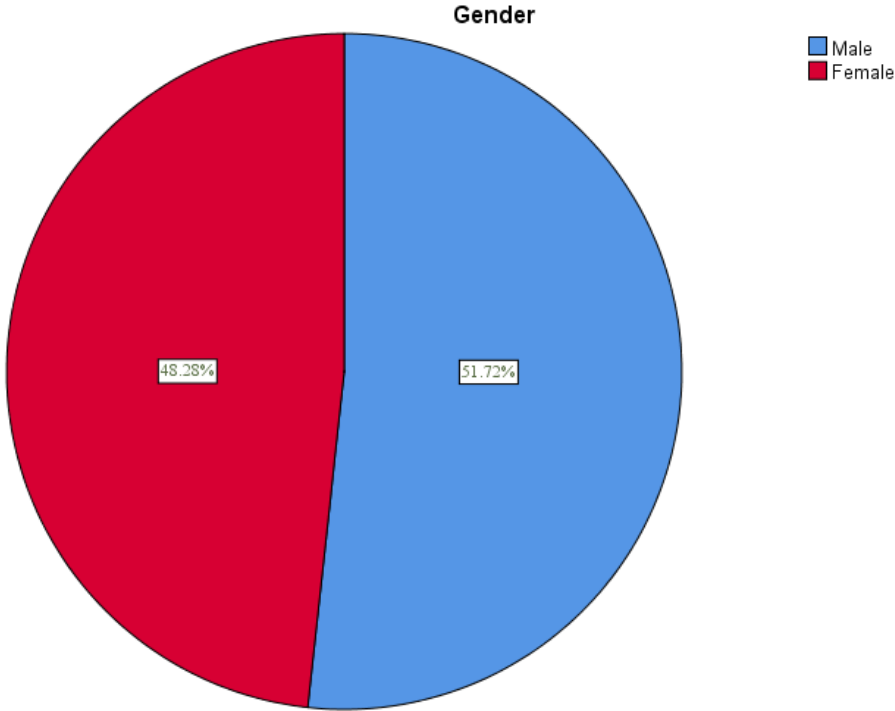


Figure 2

To ensure gender representation, the research ensured all genders were represented in the research. Figure 3 above shows the gender distribution of the respondents within Kasarani Constituency, Nairobi County. The figure above displays the gender distribution of the responses. Out of the responses, 30 individuals (51.72%) identified as male, while 28 individuals (48.28%) identified as female. This demonstrates that the research was not biased towards a specific gender, as both genders are adequately represented.

4.3 Level of Public Awareness

Table 1 Level of Public Awareness

The primary aim of this research was the evaluation the extent of public consciousness regarding climate change in Kasarani Constituency. The study's author determined the public's level of knowledge and participation in climate change conversations. The information is presented in a well-organized table below.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not very familiar	37	63.8	63.8	63.8
	2 Somewhat familiar	18	31.0	31.0	94.8
	3 Very familiar	3	5.2	5.2	100.0

Total	58	100.0	100.0
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In Table 1 above, respondents were asked how familiar they were with the concept of climate change. A total of 37 respondents, which is 63.8% of the sample size said that they were not very familiar with this topic. 31.0% of the respondents which is 18 of them were somewhat familiar while only 3 respondents who account for 5.2% was very familiar with the concept of climate change. It is therefore instructive to note that the level of public awareness amongst the public is still low as almost half of the respondents responded in the negative when asked on their level of awareness. The other half were somewhat familiar which is still not assurance that they were aware with this topic.

4.3.1 Public Understanding of Climate Change

Still on gauging whether the public understood issues pertaining climate change discourse which is in line with the first objective of the research, 15 journalists were asked about the level of public understanding and the responses were captured in the Table below.

Table 2 Level of Public Understanding

			Cumulative
Frequency	Percent	Valid Percent	Percent

Valid	2.00	1	6.7	6.7	6.7
	3.00	3	20.0	20.0	26.7
	4.00	11	73.3	73.3	100.0
	Total	15	100.0	100.0	

1.00- Completely Understands 5.00- Don't understand

The researcher polled 15 scientists from diverse organizations to determine whether the general public comprehended the difficult topic of climate change. The participants were given a comprehension rating from 1 (totally understood) to 5 (not understood at all) to indicate their level of comprehension. As seen in the table 2 above, 11 (73.3%) of those polled indicated a '4', indicating that the general people had limited comprehension of climate change. Only 3 (20%) of respondents answered 3 on the Likert Scale, and only 1 (6.7%) claimed that the general population understands climate change completely. According to the data in the table above, the public does not grasp climate change issues and, according to Table 6, the majority is not concerned about it either.

4.3.2 Interest in Discourse about Climate Change

In order to gauge how well-informed, the general population is on climate change, researchers asked participants to check a box indicating their interest in hearing more about the topic. The results are listed below.

Table 3 Interest in Discourse about Climate Change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	21	36.2	36.2	36.2
	2 No	37	63.8	63.8	100.0
	Total	58	100.0	100.0	

In Table 3, the participants were queried about their level of engagement with the climate change conversation. Out of the respondents, 21 individuals (36.2%) expressed interest in information and discussions on climate change, whereas the bulk of respondents, 37 individuals (63.8%), stated that they were not interested in any conversations related to climate change. This demonstrates that the majority of the respondents lacked interest in the discussion surrounding climate change. The research findings indicate that the public's level of awareness on climate change is poor, as seen by the lack of interest in discussing the topic. This is also reflected in Table 1. The majority of respondents expressed a lack of interest in the subject of climate change.

4.3.3 Public Sources of Information about Climate Change

Table 4 Sources of Information

To assess the extent of public knowledge on the climate change discourse, the researcher inquired about the sources from which the public obtains its information on climate change.

The participants were instructed to select from a range of options including social media, periodicals, television, and radio.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Social media	35	60.3	60.3	60.3
	2 Publication	16	27.6	27.6	87.9
	3 Television	5	8.6	8.6	96.6
	4 Radio	2	3.4	3.4	100.0

In Table 4 above, 35 (60.3%) of the respondents indicated that they consumed information regarding climate change from social media sources. 16 (27.6) of the respondents showed that they read from various publications about climate change. 5 (8.6%) of the respondents indicated that they watched television for information about climate change while only 2 who constitute 3.4% of the respondents indicated they listen to radio as their source of information. This table indicated that all 58 respondents have at least one source of information in matters climate change.

4.4 Identifying the Communication Gaps

The second objective of this research was to identify the communication gaps between scientists and the public on climate change discourse. The study aimed to evaluate whether or not there were

true communication challenges between scientists and the general people about the ongoing discussion regarding climate change. In order to achieve this goal, the researcher spoke with 15 journalists to determine whether or not there was an authentic gap between the two parties.

Table 5 Existence of Communication Gaps

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	13	86.7	86.7	86.7
	2	2	13.3	13.3	100.0
	Total	15	100.0	100.0	

In Table 5 above, 13 journalists, or 86.7 percent of the total, agreed that there were existential gaps, while just 2 journalists, or 13.3 percent, believed that there were none. This helped the researcher move closer to achieving their second objective, which is to identify communication gaps in the climate change discourse between scientists and the general public.

4.4.1 Adequacy of information from the Media

Table 6 Adequacy of Information

	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	23	39.7	39.7	39.7
Strongly agree	3	5.2	5.2	44.8
Disagree	30	51.7	51.7	96.6
Strongly disagree	2	3.4	3.4	100.0
Total	58	100.0	100.0	

Table 6 shows the responses from the field. When asked if the media disseminated adequate information about climate change, 23 (39.7%) responded that they strongly agreed with this assertion. 3 respondents who make up 5% of the total respondents posited that they agreed that the information from media sources about climate change was adequate. 30 (51.7%) of the respondents indicated that the media was not dispensing adequate information and only 2 (3.4%) strongly disagreed that there was adequate information coming out from the media. From the data above, more than half of the respondents indicated that the information from the media in matters pertaining climate change was inadequate therefore showing a clear communication gap.

4.4.2 Comprehension of Information

The study aimed at establishing communication gaps between scientists and the general public in climate change discourse. That is if the public understood the message on climate change that was being passed from the media. A total of 58 respondents from the public was sampled.

Table 7 Comprehension of information

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	15	25.9	25.9	25.9
No	34	58.6	58.6	84.5
Maybe	9	15.5	15.5	100.0
Total	58	100.0	100.0	

In also establishing the communication gaps that exist between scientists and the media, a total of 58 respondents were asked if they were able to comprehend the information about climate change from the media. 15 of them which is 25.9% of the population in the survey said that climate change was being communicated in a way they could comprehend. 34 (58.6%) being the majority said information was being communicated to them in a way they could not comprehend. 9 (15.5%) of the population in the survey did not answer in the affirmative or in the negative. This uncertainty tends to lean towards the negative therefore it is conclusive to say that majority of the respondents could not comprehend information communicated about climate change. This shows a clear disconnect and gap between the scientists and the public due to inability to comprehend the messaging.

4.4.3 Public Concern about Climate Change

Table 8 Concern about Climate Change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not concerned at all	18	31.0	31.0	31.0
	2 Not concerned	12	20.7	20.7	51.7
	3 Somewhat concerned	12	20.7	20.7	72.4
	4 Concerned	9	15.5	15.5	87.9
	5 Extremely concerned	7	12.1	12.1	100.0
	Total	58	100.0	100.0	

Table 8 shows the results of the researcher's question about the respondents' degree of worry regarding climate change debate. 58 respondents gave their responses and among them 18 (31.0%) said they were not in any way concerned about climate change. This is to mean that they did not give an iota of care on matters to do with the climate change. 12 (20.7%) of the respondents indicated that they were simply not concerned about climate change discourse while only 12 who also make up (20.7%) of the sample population said they were somewhat concerned. 9 (15.5%) indicated that they were concerned in the climate change discourse and only 7 (12.1%) said they were extremely concerned. It is therefore interesting to note that most respondents are not

concerned about the topic of climate change. Their showing of no concern is a testament of an existential gap between them and the ones who are supposed to communicate information concerning climate change to them.

4.5 Factors contributing to the Communication Gaps

The third objective of this research was to identify the key factors contributing to the communication gaps between scientists and the public on climate change discourse. A total of 15 respondents who are scientists were sampled.

Table 9 Key Factors

	Frequency	Percent	Valid Percent	Cumulative Percent
Lack of interest by the public	9	64.3	64.3	64.3
Technical climate jargon	6	35.7	35.7	100.0
Total	15	100.0	100.0	

A team of 15 scientists were engaged to give their responses on the challenges that exists between them and the public on the climate change discourse. 9 (64%) of the respondents said that there was a lack of interest by the public on the climate change discourse. 6 scientists in the survey, who

make up 35.7% of the total sample population said that the technical climate jargon was a challenge for the public in understanding climate change. This is a major communication gap as what is coming from the scientists could not be comprehend by the public

4.5.1 Key Factors between the Scientists and the Public

15 journalists were also involved in this research and were asked what contributed to the gap that exists between scientists and the public on the discourse about climate change.

Table 10 Key Factors between Scientists and the Public

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Media representation	6	36.4	36.4	36.4
	2 Differing levels of scientific literacy	9	63.6	63.6	100.0
	Total	15	100.0	100.0	

When asked what were some of the gaps that existed between the media and the public on the climate change discourse, 6 media personnel who make up 36.4% of the respondents alluded to the skewed media representation on issues dealing with climate change. That is, the media presented the issues pertaining climate change in a distorted and obscure manner. As Table 10

above indicates, 9 respondents who are 63.6% of the respondents said that the different levels of scientific literacy were a major issue and gap that existed between the public and media.

One of the journalists that was interviewed indicated that *“Media is the connection between scientists and the general public. Lack of media empowerment with regards to science communication is lacking, thus leading to misrepresentation.”*

4.5.2 Scientists Primary mode of communication

The third objective of this research sought to identify the key factors contributing to the communication gaps between scientists and the public on climate change discourse. To this effect, the researcher asked scientists what their primary mode of communication on matters to do with climate change was. The response is captured in Table 12 as shown.

Table 12 Channel of Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Radio	2	13.3	13.3	13.3
Television	2	13.3	13.3	26.7
Publications	11	73.3	73.3	100.0
Total	15	100.0	100.0	

Eleven respondents (73.3%) indicated their engagement in communication via publications. Publications such as magazines and journals are included. Two respondents (13.3%) stated that they engaged in communication via television broadcast, whereas the remaining two (13.3%) stated that they obtained their news via radio. This finding presents a stark contrast to the predominant method of information consumption among the general public, which is through social media platforms. A discernible disparity exists between the means by which information is disseminated to the public and the extent to which the public can access said information.

4.5.3 Frequency of Communication

To identify the communication gaps between scientists and the public on climate change discourse, the researcher asked 15 scientists how often they disseminated scientific information to the public. The responses are captured in Table 11 below.

Table 13 Frequency of Communication

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Frequently	3	20.0	20.0	20.0
	2 Occasionally	12	80.0	80.0	100.0
	Total	15	100.0	100.0	

As shown in the table above, a total of fifteen scientists were questioned regarding the frequency with which they disseminated information regarding climate change. The researcher presented two options, and three participants (20%) responded affirmatively, stating that they frequently disseminated information regarding climate change. The remaining 12 respondents, or 80%, indicated that they only occasionally engaged in public communication regarding climate change-related topics. A correlation between the frequency of communication and the sufficiency of information emitted by the media can be deduced from this analysis. Based on the data presented in Table 6, most participants felt that the information broadcast by the media was insufficient. This can be confirmed by examining the sample population of journalists who were interviewed; the majority of them only provided information on occasion, thereby depriving the public of vital data.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter 5 summarizes the literature that has been reviewed and also points us the thematic areas that will need to be researched on further. This section also encompasses the synopsis, deductions, and recommendations.

5.2 Summary

The first chapter contained the study's introduction as well as problem statement. It was observed that there existed a communication gap between scientists and the public on the climate change discourse. Few studies have done surveys on the gap that exists between scientists and the public and none have specifically done on the communication gap that exists between the two. The problem statement posited that while evidence in science compellingly supports the reality of change in climate and its anthropogenic causes, the level of public understanding and engagement in climate change discourse remained a critical concern.

Therefore, finding the gaps was the goal of this study, gaps that existed between scientists and the general public in the discussion about changes in climate and factors contributing to this. It was found out that majority of the respondents had no interest in the climate change discourse and this was directly linked to the technical climate jargon that is not easy to understand for the average

person. 50% of the respondents indicated that they were not very familiar with the concept of climate change.

(51.7%) of the respondents indicated that the media was not dispensing adequate information. This gap in flow of information hampers the development and implementation of effective climate policies and individual actions. Understanding the factors contributing to the communication gap between scientists and the public on climate change discourse is crucial (O'Neill & Boykoff, 2010).

The study indicated that majority of the members of the public did not show concern on matters to do with the climate change discourse. This was influenced by their disinterest in this matter and this also agreed with the low levels of public awareness on matters to do with climate change. Communication channels showed that most accessed information about climate change on social media but most also suggested having climate change forums to dispense knowledge on climate change.

The study captures an important component where 86.7% of the journalist's acknowledged the presence of existential communication gaps. Only 13.3 % of the respondents stated that the gap does not exist. These findings among the journalists help greatly in the research objective. By recognizing the communication gaps, it's a step towards understanding the difficulties in communicating climate change from the scientists to the general population.

This study provides valuable information to the scientists and to also the media on what they can do and the strategies they can adopt and implement to bridge this existential gap that exists between the scientists and the public. One of it is simplifying the scientific messaging to make it more understandable and reducing the technical climate jargons that are a hard nut to crack for many.

5.3 Conclusion

In addition, it has been found that a sizeable section of the general population demonstrates a low level of concern over the topic of climate change. The participants highlighted the utilization of technical vocabulary and the presenting of information in a complex manner as key factors leading to this issue. As a result of this, 12 of the respondents voiced support for the adoption of measures that are targeted at promoting communication that is both clear and straightforward.

5.4 Recommendations

The research indicates a clear communication gap between scientists and the public regarding discussions on climate change, with both the media and scientists contributing to this issue. However, there are identifiable ways to actively engage the public and involve them in these discussions. The study highlights the significance of literacy in understanding climate change; the complex language used by the media often excludes those with lower literacy levels, diminishing their interest in the subject. Moreover, a notable portion of the population lacks interest and awareness in climate change conversations. To address these gaps, potential solutions have been proposed, notably the establishment of dedicated public forums focused on exploring climate change. These forums aim to facilitate an open exchange of knowledge

between the general public and experts in the field, serving as a fundamental platform for bridging these communication gaps.

5.4.1 Recommendations for the Media

The media should come up with creative ways of disseminating information to the public in a way that the public understands. This can be done through training journalists and communicators on how to simplify the technical jargon and deploy simpler language that the public will understand.

The media must alter their approach in disseminating information because it's evident that individuals seldom rely on television as their primary source for information about climate change.

The media should come up with other ways to communicate to the public aside Television as majority indicated social media was their source of information.

There is need for collaboration between the scientific institutes and organizations to develop educational programs that would develop the capacity of the media professionals' and the general public's scientific literacy. This programs could include developing easily digestible climate science information.

5.4.2 Recommendations for scientists

It has been established that scientists have a blame to share in the disconnect that exists between them and the public as regards the climate change discourse. Most scientific terms and terminologies are technical and majority of the populace finds it hard to understand. To mitigate this, scientists need to break down these technical jargons in a way that even those with low literacy levels can understand. There has been an established co-relation between the adequacy of information and interest of the person on this topic. If one does not get adequate information

concerning climate change, then the person automatically loses interest in that particular issue. Therefore, more information should be disseminated used to bring everyone on board and not just a select few who are of high literacy levels.

It is by consciously implementing these recommendations that the discourse within climate change will see a radical shift towards the positive and more people will come on board as their levels of awareness increase. This will have a general positive impact on the climate change discourse and a symbiotic relational between scientists and the public will be created and nurtured for the better.

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