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Analysis of Citizen Television's Framing of GMO-Related Stories for Public Awareness in Kenya

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***Abstract*: In recent times, global concerns regarding climate change and its impact on people's lives have heightened, with drought-induced food shortages being a significant issue, particularly in African countries. To address this, many nations have turned to Genetically Modified Organisms (GMOs) as a solution for food scarcity, but public understanding of this topic remains limited, especially in developing countries like Kenya. Therefore, a comprehensive study was conducted to examine how mass media, particularly Citizen Television, one of Kenya's most-watched channels in the country, framed GMO-related stories in October 2022 (when the government lifted a one-decade ban on GMOs) to raise public awareness. The research aimed to answer the question of how Citizen Television framed its GMO-related stories for public awareness and had two specific objectives: one focused on the natural framing of GMO stories and the other on the social framing. The study employed a qualitative content analysis approach and analyzed fourteen news stories from Citizen TV's online database, revealing that Citizen Television used various themes and strategies to shape public awareness, addressing environmental impacts and societal implications of GMO adoption. The study recommended that Citizen Television contextualizes GMOs within both global and local perspectives to enhance public sensitization through its news framing initiatives.**

***Keywords*: GMOs (Genetically Modified Organisms), Media Framing, Public Awareness, Content Analysis.**

1. Introduction and Background to the Study

In recent years, global concerns about climate change have intensified due to its visible impacts on Earth, including extreme weather events, rising temperatures, and ecosystem disruptions caused by factors like greenhouse gas emissions and deforestation. These changes pose significant threats to the environment and human societies, affecting food security, water resources, and biodiversity. In response, nations worldwide have been compelled to urgently address climate change, leading to international agreements like the Paris Agreement, which aims to reduce greenhouse gas emissions. A poignant example of climate change's impact is evident in Northern Africa, where prolonged droughts have led to severe food shortages and loss of lives. This underscores the urgent need for effective climate change mitigation and adaptation strategies. In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was established, and subsequent agreements like the Kyoto Protocol and the Paris Agreement have sought to address the issue collaboratively. By 2022, the UNFCCC had 198 parties, with efforts to tackle climate change gaining momentum globally. Africa, particularly, has recognized the increasing vulnerability to climate change, leading to initiatives like the Africa Climate Summit, emphasizing the need for both mitigation and adaptation actions despite being low emitters of greenhouse gases.

It is against this backdrop of addressing challenges posed by climate change that governments worldwide have explored various approaches to secure food production and alleviate food scarcity. One of these strategies involves the integration of Genetic Modification (GM) technology into the agricultural sector. GM technology enables scientists to selectively modify the genetic makeup of living organisms, including plants, animals, and microbes. This genetic engineering can enhance crucial attributes such as agricultural productivity and resistance to pests and diseases through use of the resulting Genetically Modified Organisms (GMOs). This notwithstanding, GMOs have emerged as a focal point of global debate and controversy. Differing perspectives exist on their safety for consumption, environmental impact, and ethical implications. Notably, GMOs faced initial prohibition across the African continent, as stipulated by a resolution adopted by the African Union in 2006 (Chambers, 2013). However, this stance has since evolved, as the potential benefits of GMOs in transforming agricultural practices and addressing food security challenges became increasingly evident (Hemphill & Banerjee, 2015). The urgency of global concerns related to climate change and food security has elevated these issues to the forefront of political agendas in many nations. Within the context of GMOs, GM crops have gained significant public attention (Bara et al., 2021). Educating the general public about GM crops, elucidating their advantages and disadvantages, and discussing their applications have become essential imperatives (Kumar et al., 2011).

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In Kenya, a country highly susceptible to climate change, growing concerns about climate-related impacts on agriculture, food quality, livestock production, human health, and the economy have led to significant discussions (Aram, 2013; Wambugu, 2014). Consequently, the Kenyan government recently reversed a longstanding genetic engineering law to address food and nutrition insecurity, allowing GM crops in 2022. This decision sparked both support and criticism, reflecting the complexity of GMO debates. Research on GMOs in Kenya has yielded mixed findings, exploring their effects on human health, ethical considerations, technology ownership, seed sovereignty, and laboratory quality (Lore et al., 2013). Some argue that there is insufficient evidence to support GM food crops as a hunger alleviation strategy. Print media's role in covering the GMO debate has also been scrutinized, with calls for more comprehensive and accurate portrayals of GMOs to the Kenyan public (Pollard & Booth, 2019). The ban on GMOs in Kenya in 2012 was influenced by concerns about public health, driven by the Séralini study linking GMOs to rat cancer, along with worries about non-target species and insect pest resistance. However, various factors, including regulatory reforms and scientific oversight, led to a shift in Kenya's GMO policy, with proponents citing their potential benefits for agricultural challenges and opponents emphasizing health and environmental risks, as well as the need for increased public involvement in GMO-related decision-making

Traditional media ethics have historically aimed to provide balanced reporting on topics like GM crops by presenting both scientifically supported information and unsupported claims, potentially influencing public opinion. Public attitudes towards GM foods are considered changeable over time, particularly in Kenya, where limited knowledge of GM products suggests that beliefs may be shaped by how questions are framed. This highlights the need for comprehensive GMO studies in Kenya to better understand and address public perceptions. However, ethical concerns have arisen regarding media reporting practices, as the balance between presenting diverse views and influencing public understanding can be delicate. Given the malleability of public opinions and limited understanding, conducting thorough content analyses of GMO portrayals by media outlets like Citizen Television in Kenya can shed light on agenda-setting, priming, and framing techniques, contributing to a more informed national conversation about GMOs and their impact within the Kenyan context.

1.2 Statement of the Problem

In recent years, growing concerns about the safety of genetically modified foods (GMOs) have led to a crucial and challenging field of research (Balcha, 2022). Environmental and consumer non-governmental organizations (NGOs) argue for comprehensive testing before approving GM foods and crops for human consumption, reflecting a global debate over GMO safety (Ewa et al., 2022). Africa, notably, has been a hotspot for the dissemination of false information about GMOs through its media, particularly compared to other continents (Ongu et al., 2023). Surveys conducted in Kenya have revealed conflicting public perceptions, knowledge gaps, and a notable lack of information on GM foods (Merem et al., 2021; Khatiwada et al., 2021; Lalah et al., 2022). Furthermore, to address food shortages and boost agricultural yields, Kenya's government made a significant policy shift in October 2022 by lifting a longstanding ban on GM food production and importation (Andae, 2022). This policy change generated public interest and raised questions about GMOs, particularly in the context of food security.

In this landscape, the media, with Citizen TV at the forefront as the most watched television channel in the country (Tully, 2022), played a pivotal role in educating the public about the lifting of the GMO ban and its implications. However, there is yet to be done a scholarly assessment on how the Kenyan media carried out this sensitization among the citizenry on this matter that elucidated a lot of emotional debates across the nation. Therefore, this study seeks to comprehensively analyze how Citizen Television portrayed information about GMOs through its news storiesin a bid to raise public awareness among Kenyans immediately the government lifted the decade-long ban on GMOs in October 2022. By so doing this study contributes to the broader discourse on GMOs, their safety, and the role of media in facilitating informed public discussions on complex scientific topics among lay audiences

A. Study Objectives

1) The general objective

The general objective of this study was to analyze the framing of GMO-related stories by Citizen Television in a bid to raise public awareness among Kenyans in October 2022.

The study sought to answer the question “How did Citizen Television do framing of its GMO-related stories in October 2022 in a bid to raise public awareness among Kenyans?”

2) Specific objectives

The study was further guided by the following two specific objectives:

- To examine the natural framing of GMO-related stories as presented by Citizen Television in October 2022.
- To assess the social framing of GMO-related stories as presented by Citizen Television in October 2022.

2. Theoretical Framework

This study was guided by the Framing Theory, a mass communication theory that was initially proposed by Erving Goffman in 1976. This Theory has become a cornerstone in understanding how people perceive and interpret the world around them (Lynas et al., 2022). Goffman's theory posits that individuals view the world through the lens of their underlying assumptions, and framing serves as a method of selective control (Waterton & Watson, 2013). It is imperative to note that Framing theory extends beyond agenda-setting theory by highlighting specific issues and placing them within a broader field of meaning (Schweinsberg et al., 2017). While agenda-setting focuses on the prominence of topics, framing delves into the root causes of problems, expanding the scope of research. According to framing theory, the media brings certain events to the public's attention and provides context. How something is presented to an audience, known as "the frame," influences

people's comprehension choices.

Goffman distinguishes between two fundamental frameworks that were used in this study: natural and social (Lynas et al., 2022). Each framework serves the purpose of helping individuals make sense of information, but they do so in different ways and provide different perspectives on events. Natural frameworks define events as physical occurrences, focusing solely on the literal interpretation of the natural environment and excluding any potential explanations involving social actions or human intentions. In contrast, social frameworks attribute events to the whims, desires, and interactions of social participants, acknowledging the influence of other people in shaping events. Natural frameworks serve as the foundation for social frameworks, influencing how data is interpreted, processed, and conveyed. Goffman's fundamental premise is that individuals are skilled users of these two frameworks, whether consciously aware of them or not.

This understanding of framing theory was crucial in this study because it helped assess how Citizen TV presented GMO-related news stories, the language used, sources of information, and the overall narrative in the stories through the natural and social frameworks. These frames played a pivotal role in shaping Kenyans' interpretation of GMOs, influencing whether they perceived them as beneficial solutions to agricultural challenges or as risky and potentially harmful innovations. In summary, the Framing Theory, as proposed by Goffman, provided valuable insights into how Kenyan publics perceived and interpreted the world around them, with significant implications for how GMO news coverage shapes public understanding and opinions.

A. Literature Review

Since the initial commercialization of GM plants in the mid-1990s, biotechnology has been a subject of continuous public debate and discourse (Omeje, 2019). However, consumer awareness of GMOs has grown at a different rate than acceptance of GMO crops. Consumers worldwide need more biotechnology knowledge to dispel widespread misconceptions (Huesing et al., 2016). Many consumers have claimed that they first learned about GMO foods from the media, the Internet, and other news sources. Unfortunately, these information sources may not always be as reliable as the current scientific evidence. Omeje (2019) found that individuals with limited knowledge of GMOs tended to be more sceptical of the technology, while those with higher scientific knowledge held more favourable opinions.

The agenda-setting process is closely intertwined with framing (Baylis, 2020). Initially, the audience is presented with thought-provoking material. On the other hand, framing describes how the media shapes the audience's perspective on a subject. After acquiring knowledge about a topic, the media can provide the public with a specific viewpoint through framing. Using framing theory, the public can adopt a positive or negative view based on how a political party or organization aligns with their message or agenda. Mass media organizations often prioritize certain stories over others because they align with their message or objectives, which can influence how viewers assess and respond to the information.

The extensive use of framing and discourse analysis in the study of GMO media coverage internationally underscores the pivotal role that media plays in shaping public perceptions of complex scientific issues like genetically modified organisms. This research not only highlights the presence of distinct ideological cultures in media portrayal but also illuminates the broader dynamics of media influence on public discourse and policymaking. It demonstrates how media outlets can either reinforce established power structures and policy directions or serve as agents of critical inquiry and democratic engagement (Baylis, 2020). Such findings emphasize the need for media literacy and active engagement with diverse sources of information, as well as the importance of holding media accountable for their role in shaping public understanding of scientific advancements and their societal implications. Ultimately, the study of GMO media coverage serves as a microcosm of the larger interplay between media, science, and society, shedding light on the complexities and nuances that underlie public debates on scientific innovation and its societal consequences.

The media's framing of GMO-related news stories, as evidenced by the provided data, demonstrates the application of framing and discourse analysis to explore how GMOs have been portrayed internationally. This approach unveils distinct ideological cultures that influence the coverage of GMO controversies in media outlets. One primary ideological culture strongly emphasises scientific consensus, prioritizing processes that legitimize authoritative perspectives rather than fostering democratic debate. This culture aligns with maintaining the status quo, implying a cautious approach to challenging existing norms. Media outlets associated with this perspective may downplay opposing viewpoints and scientific uncertainties, thus reinforcing the authority of established institutions in the GMO discourse (Prat & Strömberg, 2013).

Conversely, another ideological culture emphasizes the importance of democratic debate. Media outlets aligned with this framing actively challenge the status quo and encourage open discussions on GMO-related matters. This culture promotes diverse viewpoints and responses to scientific uncertainty. Media coverage linked to this perspective may be characterized by a willingness to question established norms and authority, fostering an environment where opposing perspectives can be explored and debated openly. Therefore, the framing of GMO-related news stories, as demonstrated by this discourse analysis, underscores the role of media outlets in shaping public perception and understanding of GMO controversies. The choice of framing can influence whether GMO discussions are predominantly characterized by deference to scientific consensus and authority or by a commitment to democratic debate and the exploration of differing viewpoints. This framing, in turn, contributes to the broader societal discourse on GMOs and their implications

Mabaya et al. (2015) point out that many factors influence the diversity in GM policies across African countries. These factors encompass the structure of state ministries, the development level, and key politicians' involvement in various

domains, including media, activism, food security, and technology. Additionally, some countries face constraints related to infrastructure and technology, which can significantly impact their ability to adopt biotechnology. Consequently, how the media frames these issues becomes crucial in facilitating citizen understanding of the complex dynamics. Despite these challenges, gradual progress in developing the necessary framework conditions for biotechnology adoption is being made. Recognizing and navigating these relationships is imperative in formulating policies and regulations surrounding GMOs in Africa.

In a comprehensive study conducted in 2017, Davison and Ammann delved into the media coverage, legislative framework, and public discourse surrounding GM crops in Nigeria. Their research aimed to assess science journalism's state and media coverage quality on contentious scientific topics, especially genetically modified organisms (GMOs) (Davison & Ammann, 2017). They drew upon agenda-setting and social constructivism theories to build their theoretical framework, conducting extensive analyses of local newspapers. Their findings highlighted a notable issue in Nigeria: the infrequent reporting on GM crops. Interestingly, they discovered that more articles focused on the alleged concerns associated with GM crops than those highlighting their potential advantages. This skewed coverage could contribute to skepticism and misconceptions surrounding GMOs, emphasizing the need for more balanced and comprehensive reporting to foster a well-informed public discourse.

Citizens must have easy access to information that empowers them to critically assess conflicting claims and make informed decisions, as highlighted by the work of Malyska et al. (2016) and Vigani (2017). Public engagement should not be limited to promoting research outcomes once they are implemented; rather, it should be an integral part of research projects from their inception, tailored to the various stages of technological advancement, as Malyska et al. (2016) noted. This approach fosters a more informed and engaged public, enhancing the discourse on biotechnology and its implications. Encouraging proactive public engagement can help bridge the gap between scientific advancements and public understanding, leading to more informed decision-making processes regarding biotechnology adoption. Moreover, it can promote a sense of ownership and trust in the scientific community and regulatory bodies, as the public becomes an active participant in the decision-making process, rather than a passive recipient of information.

Finally, Omeje's 2019 study emphasized that journalists possess the requisite skills and resources across various platforms to provide accurate coverage of science, particularly on contentious subjects such as GMOs. In the modern information age, with digital media and social networking enabling the widespread dissemination of news, journalists must maintain a commitment to objectivity, accuracy, and thoroughness. This commitment extends to addressing complex scientific topics comprehensively and providing the public with a nuanced understanding of issues like GMOs. Journalistic training and ethics play a pivotal role in ensuring that the media effectively bridges the scientific community and the general public. By upholding these standards, media professionals can foster a well-informed citizenry capable of actively participating in the dialogue on biotechnology and its implications for society. It is essential for journalists and media organizations to recognize their role in shaping public opinion and to exercise this influence responsibly, particularly when dealing with subjects as intricate and impactful as GMOs.

3. Research Methodology

This study employed qualitative content analysis as the research design, aiming to uncover various ways in which Citizen Television framed issues around GMOs in Kenya. The study site was Citizen Television, a prominent channel within the Royal Media Services (RMS), chosen for its substantial viewership and influence in Kenya's media landscape.

The study population comprised GMO-related news stories aired by Citizen TV in October 2022 immediately the ban against the government lifted the ban against GMOs in the country. The researcher collected data from fourteen (14) stories that were identified as GMO related stories and purposively chosen for the study (Please see Appendix 1 for summary of dates and story headlines and links to the 14 stories).

Data from the 14 stories was collected from Citizen TV's digital library database and each story was fully transcribed for content analysis. Ethical considerations including obtaining permission from the National Council for Science and Technology (NACOSTI), and respecting intellectual property rights when referencing and citing scholars, were observed throughout the research.

Data presentation and analysis was thereafter done by organizing the data into manageable thematic narratives using created codes from the two specific objectives guiding the study, enabling the interpretation of the findings.

4. Study Findings and Discussions

A. Natural Framing of Citizen Television's GMO-Related News Stories

The first objective of the story was to examine the natural framing of GMO-related stories as presented by Citizen Television in October 2022. The study found out several natural frameworks that were used to raise awareness about GMOs to Kenyan publics by this leading television station in the country.

To start with, the researchers found out that through natural frameworks, the initial focus of GMO-related news stories by Citizen TV predominantly revolved around the political landscape. These narratives prominently featured statements from key political figures, such as Senator Daniel Maanzo and MP Robert Mbui, as well as leading opposition leaders, such as Hon. Raila Odinga and Hon. Kalonzo Musyoka, who voiced their perspectives and apprehensions concerning GMOs. Their comments span topics ranging from the shortage of public involvement and constitutional compliance to the potential hazards of genetically modified organisms. These statements were presented devoid of extensive editorial intervention,

granting audiences a direct channel to the viewpoints of these politicians. First and foremost, Story 1 underscored the apparent unconstitutionality of lifting the GMO ban, with several individuals contending that it necessitated public participation. Senator Maanzo aptly summarized this sentiment when he proclaimed,

"Kenyans have to be given this choice; I think this decision has been rushed; it has not followed public participation; therefore, it is unconstitutional, and Kenyans should be up in arms against this, especially the ones who do not support GMOs."

Maanzo argued that the ban's repeal transgressed constitutional norms due to the absence of public involvement and adherence to proper procedures. He stressed the need for Kenyans to have a say in whether they wished to consume GMOs while also highlighting the decision's commercial interests, suggesting that it had been driven more by profit than public welfare. Furthermore, the October 2022 coverage of GMOs by Citizen TV accentuated the urgency of greater public participation. Several news pieces framed the lifting of the GMO ban as a process that needed more input from the public. In Story 6, MP Robert Mbui criticized the decision, emphasizing that it deviated from the constitutional spirit, which mandates public participation in significant matters. This framing positioned the decision as undemocratic and raised pertinent concerns regarding transparency and inclusivity. Similarly, Senator Maanzo continued to set the stage by criticizing the decision to exclude the public and the absence of a rigorous approval process for GMOs. He expressed,

"The government did not engage in public participation; we shall progress this conversation to the National Assembly and the Senate. We urge our leaders to take this challenge," indicating a resolve to rectify the perceived deficiencies in the decision-making process.

The second natural framework within the GMO narrative centered on expert insights and the voices of civil society groups. This coverage seamlessly integrated the wisdom of experts such as Professor Oduor, who eloquently expounded on the significance of embracing biotechnology and the potential benefits inherent in GMOs. These expert perspectives enriched the narrative, with their contributions featured across multiple stories (Story 2, Story 5, and Story 7), providing viewers with a more comprehensive understanding of the subject matter. Conversely, the coverage did not shy away from shedding light on the protests and apprehensions voiced by civil society groups regarding the decision to lift the GMO ban. These concerns were presented candidly, affording the audience insight into the multifaceted issues raised by these advocacy groups. Notably, Story 8 underscored the palpable discontent and reservations expressed by civil society groups regarding the ban's repeal. It spotlighted the five pivotal concerns articulated by these groups, encompassing matters of public participation, socioeconomic repercussions, regulatory capacity, safety apprehensions, and concerns of public misguidance. Marina's poignant statement further underscored the gravity of the situation, asserting,

"The solutions will include putting safeguards in place to protect millions of producers and consumers who do not embrace the technology. Knee-jerk reactions to structural food system challenges will not work."

This framing positioned civil society groups as champions of the public interest and emphasized the imperative nature of addressing their reservations. Their persistent query remained: Why the haste in lifting the ban without engaging the citizenry? This theme was emphasized by (Mabaya et al.,2015) when they asserted that the diversity in GM policies across African countries is influenced by a myriad of factors, including the structure of state ministries, the level of development, and the engagement of key politicians in areas like media, activism, food security, and technology.

The third natural framing that Citizen TV portrayed was the comparative analysis of GMOs in Kenya concerning other African nations. This nuanced coverage featured an in-depth examination of Kenya's position on GMOs in contrast to its African counterparts, focusing on Tanzania (as seen in Story 9). This analytical element not only furnished context but also encouraged viewers to contemplate the diverse approaches different nations took toward adopting GMOs. In Story 1, Maanzo articulated that the GMO issue transcended Kenya's borders, invoking scientific research conducted in the United States and elsewhere to imply that concerns related to GMOs extended far beyond Kenyan soil. He framed the debate as part of a larger global discourse on GMOs and provocatively questioned,

"Why was there a hurry to lift the ban without the involvement of citizens?"

This perspective positioned Kenya's GMO policies within a broader international context, fostering a sense of global interconnectedness. Professor Oduor's insights, as featured in Story 2, added depth to this comparative platform as he remarked,

"We are very late in the game because when that paper popped up, it was not only Kenya that panicked... Other countries panicked as well; even Russia panicked. But soon after investigations were done and it (the white paper) was found to be flawed, they lifted the ban. It has taken us almost ten years to debate this, and in those years, haven't we had cancer cases?"

Oduor's comments underscored the importance of a consultation process and put Kenya's market in a comparative spotlight. The coverage emphasized the need for extensive consultations involving scientists and citizens from diverse backgrounds. In a similar vein, MP Mbui emphasized the significance of soliciting input and expertise from various stakeholders in Story 6, stating,

"I have said this time and again, there are scientists in this country that can be consulted."

This framing accentuated the essential nature of consultation to consider a spectrum of perspectives and knowledge thoroughly. Story 14 contributed to this comparative perspective by highlighting the situation in other scientifically advanced economies where GMOs were banned, such as France, Germany, Austria, Greece, Hungary, the Netherlands, Latvia, Lithuania, and Luxembourg. Raila Odinga's query,

"Why Kenya?" resonated with the Séralini study of 2012, which linked GMOs to rat cancer and echoed the reluctance of many African nations to embrace GMOs (as noted by Kahuthia in 2021). The news coverage by Citizen TV further delved into the adoption of biotechnology by other African nations, including Nigeria, Ghana, Ethiopia, Sudan, Malawi, South Africa, and Eswatini, underscoring their recognition of the benefits of this technology. This comparison positioned Kenya as lagging in adopting GMOs, thereby amplifying the issue's significance and its potential to influence public perception.

The fourth natural framing that Citizen Television focused on was on the government perspective. The news coverage also provided a platform for the government to present its stance on GMOs, elucidating the regulatory mechanisms in place, assuring safety, and elucidating the potential economic advantages of GMO adoption. Citizen TV's reports cast President Ruto's failure to engage the public in GMO matters as emblematic of broader legislative dynamics. MP Mbui subtly hinted at a power struggle between Kenya Kwanza legislators and their Azimio counterparts, insinuating that decisions were being made without considering opposition voices. He commented in Story 5,

"President Ruto's failure to involve the public in the GMO matter has undeniably revealed that Kenya Kwanza legislators are engaged in a battle with Azimio counterparts solely to secure a majority in Parliament, thereby pushing their agendas without seeking input from the opposition."

He further emphasized,

"Not to mention, as representatives of the people, how can such a decision be made while ignoring the very people we are here to serve?"

This framing underscored the significance of democratic processes and the imperative of incorporating diverse viewpoints in decision-making. Additionally, it's worth noting that Lore (2013) has highlighted the extensive use of framing and discourse analysis in the international media's coverage of GMOs.

Lastly, according to this study, the fifth natural framing presented by Citizen TV was legal action and demands. The selected news channel adeptly framed the civil society groups' stance as a potential precursor to legal action against the government should their concerns still be addressed. This strategic framing clearly outlined their concrete demands, encompassing reinstating the ban, orchestrating an inclusive and participatory decision-making process, safeguarding indigenous seeds, conducting a comprehensive review of the biosafety policy, disclosing economic and technological agreements, and launching robust public awareness campaigns. Such framing portrayed these groups as proactive and relentless champions of the interests of farmers, consumers, and the broader public. Moreover, the issue extended beyond mere policy disputes, encompassing violations of fundamental rights and national interests. In its reporting, Citizen TV showcased how Raila Odinga framed the discourse around the infringement of Kenyans' rights and the jeopardization of national interests in reintroducing GMOs. He characterized the lifting of the ban in Story 14 as being,

"driven by foreign commercial interests,"

and contended that it posed a compromise to the health, economy, and environment of Kenyan citizens. Odinga went further, insinuating that accepting GMOs into the nation was equivalent to using Kenyans as unwitting test subjects. He emphatically stated in Story 14,

"We believe that introducing them into Kenya in the current state of international uncertainty is to use Kenyans as guinea pigs, which we shall not allow. Even the poor and the hungry ought to have their rights and dignity protected."

This rhetoric underscored the pressing need to safeguard the rights and dignity of all Kenyan citizens, irrespective of their socioeconomic status, implying that the introduction of GMOs carried potential risks that should only be undertaken with the utmost consideration. In sum, Citizen Television's natural portrayal of GMO-related news stories in October 2022 aimed at presenting a comprehensive and unbiased perspective on the subject, incorporating diverse viewpoints, concerns, and expert insights.

B. Social Framing of Citizen Television's GMO-Related News Stories

The second objective of this study was to assess the social framing of GMO-related stories as presented by Citizen Television in October 2022 in its bid to raise public awareness on this subject that attracted a lot of public attention during that period.

The first social framework, according to the study, centered on public engagement and awareness. The media's depiction of GMO-related news stories underscored the importance of involving the public and fostering heightened awareness. Notably, statements from political luminaries and subject matter experts served as clarion calls, illuminating the critical necessity of public involvement in the intricate web of decision-making processes surrounding GMOs. This salient theme unveiled the underlying purpose of the news coverage: to galvanize and amplify public consciousness, effectively kindling a robust discourse. The resonance of this narrative reverberated through the voices of political figures and experts who consistently championed the cause of public engagement. Their collective message conveyed a resounding imperative for citizens to actively participate in shaping GMO-related policies. Implicit in their declarations was a tacit challenge to the prevailing status quo, beckoning the public to become active stakeholders in decisions that carried far-reaching consequences.

The second social framework focused on deftly amplifies the issue of safeguards and the systemic challenges within the food industry that came to the fore in October 2022, courtesy of the news channel's coverage. Citizen TV meticulously frames the solutions proposed by civil society groups to shield producers and consumers who remain skeptical about embracing GMO technology. It aptly underscores the pressing need for safeguards and cautions against hasty responses to systemic food challenges. This framing unequivocally accentuates the groups' commitment to long-term, sustainable solutions while shedding light on the potential risks GMOs pose, particularly in

comparison to the success witnessed with hybrid and open-pollinated crops. For instance, the text delves into the narrative surrounding the triumph of hybrid and open-pollinated crops in Tanzania. Agriculture Minister Bashe's assertion in Story 6 that,

"since these crops have been successful, there is no need for Tanzania to commercialize or promote the adoption of GMOs."

Resounds within this framing. It expertly portrays Tanzania's existing agricultural practices as effective and entirely self-sufficient, further fueling the discourse on the merits of GMOs compared to already thriving conventional methods.

Thirdly, Citizen TV news narratives extended to social comparative analysis, compellingly contrasting Kenya's stance on GMOs and neighbouring African nations, notably Tanzania. This narrative subtly encourages viewers to reflect upon their regional counterparts' diverse decisions and approaches. Such framing sparks discussions and prompts contemplation regarding how Kenya's GMO stance aligns with or deviates from broader regional trends.

Moreover, the news coverage effectively draws parallels between GMOs and pharmaceutical products, specifically focusing on insulin. Professor Oduor adeptly argues in Story 2 that,

"The process of GMO release includes post-release monitoring, similar to the pharmaceutical industry."

This juxtaposition underscores the rigorous evaluation that both genetically modified insulin and GMOs undergo. It provides a perspective on the meticulous scrutiny involved in evaluating the safety and efficacy of these products, thus enhancing public understanding.

The fourth social framework delved into the social health and environmental concerns raised by anti-GMO activists and skeptics. They aptly frame these concerns regarding potential health risks and negative environmental impacts, highlighting fears of GMOs causing cancer and allergies. This framing underscores the perception that GMOs carry potential hazards for human health and the environment, thus emphasizing the need for rigorous scrutiny and comprehensive evaluation. Additionally, the government's role and the National Biosafety Authority's oversight in regulating GMOs are emphasized in a framing in Story 7 that underscores,

"The introduction of standards and spot-checking measures to prevent uncertified GMO products from entering the market."

This perspective positions the government as actively monitoring and ensuring the safety and integrity of GMO products in Kenya, reinforcing a sense of consumer protection and oversight. Another pivotal concern centers around health and safety considerations. Citizen TV's news report thoughtfully alludes to the years of rigorous research that preceded the commercial cultivation of BT cotton and the approval of GMO cassava. This framing strategically positions GMOs as the outcomes of exhaustive scientific inquiry and meticulous investigation, thereby underscoring their inherent legitimacy and dependability. It effectively communicates that GMOs are not hastily conceived novelties but products of well-established research protocols, thus bolstering their credibility. Moreover, the narrative delves into ongoing health research and scientific advancements within Kenya, spanning various genetic modification applications in plants and animals. Story 6 intriguingly notes,

"It is not a floodgate of anything out there coming in; we still maintain that we can only allow that which has been approved by ourselves to be safe for the environment and human and animal health."

This assertion is a testament to the commitment to stringent oversight and regulatory vigilance. Furthermore, it accentuates the achievements and ongoing progress in genetically modified crops, such as BT Cotton, and the impending clearance for GM Cassava. This framing vividly portrays GMOs as the culmination of extensive research and development endeavours, signifying remarkable strides and prospective benefits for the agricultural sector.

Furthermore, Story 5 asserts that the GMOs that would be allowed in the nation will have drought, disease, and pest resistance,

"The government to revert the directive until the GMOs have been proven safe for human consumption and their adaptability to drought and pests addressed to withstand the problems affecting Kenyan farmers."

According to the report, GMOs are considered potential solutions; however, there is a need to address drought-related challenges, diseases, and pests. It highlights the authority's focus on allowing for the cultivation of GMO crops resistant to these challenges. This framing positions GMOs as a tool to enhance crop resilience and reduce vulnerability to environmental factors. The second issue is more testing and confidence in introducing GMO crops into the nation. The text frames the discussion by highlighting the concerns raised by health experts regarding the lack of proper testing and the subsequent lack of confidence in GMOs. It emphasizes Dr. Muia's argument in Story 4 that,

"GMOs have not been adequately tested, which raises doubts about their safety and reliability as a solution to drought."

There should be relevance to trials and empirical evidence. The text frames the discussion around the importance of trials and empirical evidence to assess the safety and adaptability of GMOs. Former Agriculture Minister Kipruto Kirwa questions the lack of empirical trials to ensure the safety of GMOs and their ability to address the challenges Kenyan farmers face. This framing highlights the need for evidence-based decision-making.

"We need a prospective study, covering globally and not just Kenya; we think globally and act locally. Where in the world have we subjected ourselves to those trials?" (Story 4)

On the contrary, according to Prof. Richard Oduor, there is a sequential process and extensive testing done in the country. Part of the news item from Citizen TV frames GMO adaptation as a sequential process that has undergone extensive testing. Prof. Richard Oduor counters the concerns in Story 5 raised by stating that,

"GMO products go through a rigorous process that can take up to 12 to 15 years".

This framing highlights the thoroughness of the testing process and implies that GMOs are scientifically evaluated and

deemed safe before being released. Additionally, the approval of GMO cassava resistant to brown streak disease in Kilifi is mentioned in Story 4.

"Last year, the government also approved the release of GMO cassava that is resistant to brown streak disease, a severe virus disease of cassava. The crop is being cultivated in Kilifi" (Anami).

This framing presents GMOs as viable solutions to address specific challenges in agriculture, such as disease resistance in crops. Furthermore, the news channel shows how the government has increased its monitoring and surveillance of GMO matters. The news frames the government's efforts to monitor and regulate GMOs.

"We developed a framework long ago consisting of the policy, the law, and the regulations. The regulations complete what one needs to do to transact business at various levels." (Story 6).

The mention of establishing offices at border entry points to check consignments and conducting random sampling and tests to ensure GMO-free products in the local market portrays the government as proactive in maintaining oversight and ensuring the integrity of GMO products.

Last but not least, the fifth social framing identified by the researchers revolved around economic social considerations. The news coverage's explicit mention of the potential economic benefits and the concerns surrounding the cost of GMO adoption adeptly reflects a nuanced societal portrayal that duly acknowledges the profound economic implications for farmers and consumers alike. This portrayal aspect likely resonated deeply with individuals who harbour concerns about their livelihoods and the affordability of essential commodities. Maanzo deftly characterizes GMOs as financially burdensome within this framing, underscoring that they necessitate greater herbicide usage, rendering them more costly to cultivate. He contends that these decisions are primarily driven by commercial interests that predominantly favour certain individuals rather than genuinely contributing to the overall welfare of Kenyan citizens. Simultaneously, the discourse extends to food security and accessibility costs stemming from the acceptance of GMOs within the nation. Kalonzo Musyoka adeptly frames the discussion within the context of food security and affordability, emphasizing that,

"Relying on GMOs, particularly BT maize, will not effectively address ordinary Kenyans' cost-related challenges" (Story 6).

Instead, he suggests that promoting alternative organic crops and supporting farmers through improved practices could enhance food security without resorting to the perceived risks of GMO imports. Additionally, a notable news segment frames the successful implementation of GMOs within the country. Citizen TV portrays the government's actions in a favourable light, highlighting instances of successful GMO implementation in Kenya. It specifically references the commercial cultivation of BT cotton, which received approval in 2019 after undergoing years of research and scrutiny. In conclusion, the social portrayal encapsulated within GMO-related news stories deftly encompasses a diverse spectrum of perspectives, concerns, and considerations. Its overarching goal remains the stimulation of public discourse and heightened awareness surrounding the multifaceted societal implications of GMO adoption

5. Study Summary and Conclusions

In summary, Citizen TV news stories framed the lifting of the GMO ban as an opportunity for the National Biosafety Authority to address past shortcomings and enhance its regulatory capacity, promoting a positive outlook on GMO adoption. It acknowledged and amplified concerns and skepticism regarding GMOs, particularly regarding potential health risks and the need for thorough scientific studies. It delved into power dynamics within the GMO debate, emphasizing the importance of inclusive decision-making processes and checks and balances within democracy. The news coverage highlighted the role of the opposition in presenting alternative viewpoints and holding the government accountable. It showcased civil society groups' demands and proactive stance, framing them as champions of public interests. It also, drew attention to concerns about multinational control and biodiversity, shedding light on potential threats to food security. The study emphasized the government's role in regulating and ensuring GMO safety, building public confidence through stringent oversight. It addressed health and environmental concerns raised by anti-GMO activists, emphasizing the need for evidence-based decision-making and testing. Finally, the news items touched upon economic considerations, discussing both the potential benefits and concerns about the cost of GMO adoption. Citizen TV's coverage aimed to provide a comprehensive view of GMO-related issues, fostering informed public discourse.

The study concluded that Citizen Television's coverage of GMO-related news stories in October 2022 employed diverse natural and social framing themes to raise public awareness among Kenyans. These themes encompassed political perspectives, expert insights, civil society concerns, international comparisons, government assurances, power dynamics, opposition viewpoints, advocacy, multinational implications, regulatory roles, health and environmental considerations, and economic factors.

By presenting such a multifaceted and comprehensive view of GMO-related issues, Citizen TV richly engaged the public in a well-informed and critical discourse, fostering awareness and understanding of the complexities and implications of GMO adoption in Kenya

6. Study Recommendations

The study recommended that there was need to contextualize its GMO news stories to both global and local perspectives. This means that while framing GMO news, Citizen Television should incorporate comparisons with other countries' stances on GMOs and at the same time highlight the local agricultural context more elaborately. This approach would enrich the audience's understanding of GMOs' implications within broader regional and national contexts.

Secondly, the study recommend future research to delve into the potential impact of media framing of GMO news on policy-making and decision-making processes at the governmental level. This could involve studying how media representations of GMOs influence the formulation and implementation of regulations and policies related to biotechnology and agriculture.

Finally, the study also recommended that a longitudinal study be done to track changes in public perception and attitudes towards GMOs in Kenya over time. This research could help identify trends, shifts in opinion, and factors influencing changes in perception.

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Appendix I: 14 Stories that were analysed

Do Not Force GMOs On Kenyans' Throats – Senator Maanzo, October 4th, 2022.

Makueni Senator Daniel Maanzo has expressed his disappointment in the Cabinet's decision to lift the ban on importing and planting genetically modified crops, well known as GMOs, and animal feeds that had been in effect since 2012.

The lift resulted from a Cabinet meeting chaired by President William Ruto on Monday, which sought to assess progress in the national response to the ongoing drought situation that has affected 23 counties.

Senator Maanzo opined that the move by Cabinet was unconstitutional and that a process should have been followed before lifting the ban, especially with the risks posed by consuming GMOs.

Maanzo said the Cabinet should have engaged the public before finalizing the decision, arguing that it was rushed.

Maanzo went on to say that GMOs are much more costly than the current food products Kenyans consume, claiming that the move is aimed at benefiting certain individuals rather than improving Kenyans' welfare.

"Kenyans have to be given this choice; I think this decision has been rushed; it has not followed public participation; therefore, it is unconstitutional, and Kenyans should be up in arms against this, especially the ones who do not support GMOs," he said, speaking to KTN on Tuesday.

"There must be a process for the approval of GMOs. If you want to bring them here, they should be announced so that Kenyans can choose to consume GMOs. So it should not be forced into the throats of Kenyans."

Prof. Richard Oduor: Lifting of Ban on GMOs By Kenya Gov't a Little Late. October 05, 2022

Kenya took its sweet time to adopt biotechnology compared to other African nations.

The lifting of the ban on GMOs now presents Kenya with other opportunities for growth and development, not just eradicating hunger.

Other African nations discovered early on that they needed to adopt biotechnology to develop better-yielding, disease-resistant, and drought-tolerant crop varieties.

Countries recognized the pros of embracing a new technology that would stamp out a worldwide food shortage.

Kenya is currently reeling from the effects of one of the longest-running droughts in its history, forcing many Kenyans to flee their homes for food and water.

"We are very late in the game because when that paper popped up, It wasn't only Kenya that panicked…other countries panicked as well; even Russia panicked,"

"But soon after investigations were done and it (the white paper) was found to be flawed, they lifted the ban. It has taken us almost ten years to debate this, and in those years, haven't we had cancer cases?"

"We do not do genetic engineering for fun. GMO is not a silver bullet; it is just one of the tools that we want to complement other ongoing methods."

'They Are Safe,' Experts Demystify Myths Around GMOs, October 05, 2022

Kenyans in the political and commercial spheres have expressed varying opinions, and health experts have dispelled myths surrounding GMOs.

Anti-GMO activists and skeptics have expressed concern that introducing GMOs to Kenya's food markets will negatively affect people's health and the environment, including cancer and allergies.

The government 2019 allowed the commercial farming of BT cotton, which is already happening in places like Busia, making it the first cash crop to be planted in Kenya following years of research dating back to 2004.

Last year, the government also approved the release of GMO cassava resistant to brown streak disease, a severe cassava virus. The crop is being cultivated in Kilifi.

This comes after a ban on the importation and planting of genetically modified crops and animal feeds that had been in place since 2012 was lifted by the Cabinet on Monday during a meeting presided over by President Ruto, ostensibly allowing the open cultivation and importation of white (GMO) maize.

Sylvester Anami, there are no health risks associated with consuming GMOs, pointing out that genetic regulations are in place to ensure that the materials don't contain allergens.

Dr. Mugiira added that to prevent uncertified GMO products from entering the markets, they have introduced a set of standards that they will use to spot-check products in the Kenyan market.

GMOs will benefit from the high costs associated with current food consumption because the crops will tolerate harsh climatic conditions and require little upkeep for growth.

In the same interview, NBA CEO Dr. Roy Mugiira claimed that the government's decision to purchase GMO products would result in cost savings because the crops will require little upkeep and produce at a high level.

"There is no evidence as of now that GMOs cause cancer. Genetically modified foods are not poisonous. It is completely safe, and we welcome the concerns that those opposed to the GMO can talk to us, and we can convince them that these foods are safe," he said.

"For a long time, we have been having a selection of plants so that they choose those that they prefer and with the best qualities. So the introduction of GMOs is very much important because they will control pests without having to use chemicals and then also, if the impact of climate change challenges them, there is a possibility that they can plant resilient crops, and that way, there will be improved yield and have a sufficient amount of food that is healthy."

"They have overcome certain production costs. For example, we have BT cotton, which we sprayed three times. Without GMOs, we'd have sprayed 12 times,"

"We also carry regular surveillance around the country, picking from supermarkets and running them through tests to confirm if any of them has GMO within the market space.

Kenya Set to Release GMO Maize Seeds to Farmers, October 05, 2022

Kenya is ready to release GMO maize seeds to farmers following the lifting of the ban on GMOs in the country.

The country has already tested and qualified varieties of white maize for cultivation that will be resistant to pests, as other trials for crops like cassava and sorghum are ongoing.

Those seeking to import GMO products into the country will also be facilitated to do so through the authority as long as they fulfill the requirements of the law.

NBA, the body charged with regulating GMOs in Kenya, says the adoption of the technology is well-regulated and will be closely monitored.

During the one-decade ban on the products, the authority says it was working on the deficiencies that had informed the prohibition in the first place, including building the capacity in law and infrastructure.

The authority, through the Biosafety Act of 2009 and a set of regulations of 2011, provides a conducive and safe environment for the application of GMO technology in Kenya.

BR Cotton, genetically modified to resist pests, is already under cultivation, while GM Cassava is waiting for clearance from NEMA and the final national performance trials.

Kenya's staple food crop, maize, has undergone all trials and is now a heartbeat away from commercial cultivation.

NBA says it is keen on ensuring that only safe and strategic GMO products can be used in the country.

It is not a floodgate of anything out there coming in; we still maintain that we can only allow that which has been approved by ourselves to be safe for the environment, human and animal health."

"We developed a framework long ago consisting of the policy, the law, and the regulations. The regulations are complete with what one needs to do if they intend to transact business at various levels; if, for example, one is engaged in research with GMOs, they will interact with biosafety contained use regulations."

The close one is BT maize, modified to resist the stalk borer. That one has undergone all the phases; in fact, the ban has been standing in the way of getting this maize variety to the farmers."

Suppose it is an import, for example. In that case, we will contact the competent authority of the country of origin to confirm if the product that is coming in has been approved in that country for use as food, feed, or processing, and then we will conduct a risk assessment.

Explainer: The 4 Critical Stages GMOs Undergo in Kenya. October 5, 2022

GMOs (GMOs) being produced locally undergo four critical stages that take between 10 to 15 years before they are fully processed for both domestic and commercial usage.

But what does it take to process GMOs? Citizen TV visited one of the only four Biosafety Accredited Laboratories where dedicated genetic engineering students were busy carrying out the entire GMO processes under the watchful eye of the facility's Director of Research, Prof. Richard Oduor.

Kenyatta University's Level 2 Biosafety Laboratory, which was unveiled in 2005, is the pioneer plant for processing GMOs in Kenya.

Inside the restricted facility, Prof. Oduor leads genetic engineering Masters and PhD students in producing various varieties of GMOs ranging from cassava to sorghum and millet.

Previous and Current Scientists from the 18-year-old lab have successfully modified at least five GMOs ranging from various needs including drought resistance purposes.

It might even take between 10 and 15 years to actualise the final GMO product for both domestic and commercial usage and that is why there is strict adherence to the regulatory process in the lab.

“This is where we retrieve the genes from the experimental products or plants,” Prof. Oduor stated.

“Here, the sample undergoes controlled temperature and must be on constant inspection... it's the most sensitive stage as a new modified organism is initiated. The sample is then transferred to a dark room because it has to undergo 8 hours in darkness and 16 hours in light. It stays here for 4 weeks,” Asunta Mukami, a Genetic Engineering student said

“We also use this softened soil because the plant is still very delicate…I take the plant from here to hardening now,” Mukami noted.

Another student Sylvia Mutinda added: "Still in this glass house, we expose and test the modified crops for resistance to pesticides, weeds, etc."

"That still does not mean that it's ready for usage... no, in fact, the modified crop can still be recalled for further inspection in the lab. Also, note that it's the National Biosafety Authority which authorizes each of the 4 stages," Prof Oduor said.

MP Robert Mbui: GMOs Were Reintroduced Without Public Participation. October 05, 2022

Public engagement is critical to developing, promoting, and utilizing innovative technologies such as the reintroducing of GMOs; as such, the Cabinet's move was unconstitutional.

Kathiani MP Robert Mbui thinks there was insufficient public participation to warrant President William Ruto's decision to lift the ban on Genetically Modified Crops (GMOs).

According to Mbui, despite the reintroduction of GMOs, locals still need to improve awareness, understanding, and knowledge of modified crops.

Mbui went on to insinuate that President Ruto's failure to involve the public in the GMO matter has proven, without all doubt, that Kenya Kwanza

legislators are only tussling with their Azimio counterparts to attain majority status in Parliament to push their agendas without any output from the opposition.

"I think this government has started with a lot of excitement. I won't say that the decision is wrong, but it is not following the spirit of our Constitution because the Constitution is very clear. Article 10 says that for such great decisions, there has to be public participation," Mbui said.

"I have said this time, and again, there are scientists in this country that can be consulted; Kenyans from all walks of life can also be consulted."

"Not to forget that as representatives of the people, how do you make such a decision and ignore the people?"

Experts Differ on the Safety of GMOs Before Release. October 06, 2022

Health experts have clashed over the recent move by the government to adopt GMOs (GMOs) as the ultimate solution to the country's drought.

Dr. Bernard Muia questioned what he termed as the government's rushed decision to reintroduce GMOs to Kenyans, arguing that they had not been properly tested and hence did not inspire confidence.

The State ought to have conducted trials before going ahead to suggest the adoption of GMOs as a way of guaranteeing food safety to its citizens.

Former Agriculture Minister Kipruto Kirwa, on his part, called on the government to revert the directive until the GMOs have been proven safe for human consumption and their adaptability to drought and pests addressed to withstand the problems affecting Kenyan farmers.

Director of Research at Kenyatta University Prof Richard Oduor, however, dismissed Kirwa and Muia's remarks noting that the GMO adaptation was not an abrupt but a sequential process.

He underscored that GMO scientists had taken more than a decade to develop the products, and many tests had therefore been done.

Citing his experience in research, Prof. Oduor intimated that those against GMO adaptation were hypocritical because they considered the same process for pharmaceutical products such as insulin with a similar production process.

“My basic issue is what scientific evidence have we subjected ourselves to to prove that GMOs cannot cause serious public and medical issues? Which clinical trials have we done for us to show that GM foods are safe and not short-term research?” Dr. Muia posed.

“We need a prospective study, covering globally and not in Kenya; we think globally and act locally. Where in the world have we subjected those trials?”

"Which trials have we done, empirically, to prevent any harm to human nature given that we are saying we are unbanning GMOs? They are not telling us that we will face the same problems we are facing with natural crops," he said.

"Initially, anyone alive right now has Diabetes, the world over, there is no other source of insulin; all of it is genetically modified."

10 Civil Society Groups Protest Lifting of GMO Ban, Threaten Legal Action Against Gov't. October 06, 2022

Ten civil society groups have given the national government an ultimatum to reverse its lifting of the ban on GMOs, failure to which they will institute legal action.

The groups, including the Biodiversity and Biosafety Association of Kenya and the Consumer Grassroots Association, have expressed dissatisfaction with lifting the decade-long ban on GMOs.

The groups list five key concerns the government must address before okaying the planting and importation of GMO products into the country.

Some of their concerns include lack of public participation, socio-economic effects of GMO food and crops, lack of capacity of the National Biosafety Authority to regulate GMOs, safety concerns and consumer preferences, and public deception and misinformation.

NBA can sustain a full GMO Import and Export Program.

"Why was there a hurry in lifting the ban without the involvement of citizens?" Anne Marina, National Coordinator, Biodiversity and Biosafety Association of Kenya, posed.

"The solutions will include putting in place safeguards to protect millions of producers and consumers who do not embrace the technology. Knee-jerk reactions to structural food system challenges will not work," Marina said.

Tanzania Wary of GMOs Trickling in from Kenya. October 06, 2022

Emmanuel Atamba, Coordinator of Route to Food, added: "CBC has been accorded public participation through a task force. Why not GMOs, yet it's a serious consumer issue?"

Eustace Kiarii, CEO of Kenya Organic Agriculture Network, said, "The Cabinet disregarded the fundamental precautionary principle and acted in utter contempt of the interests of farmers, food consumers, and the overall public."

They now want the government to reinstate the ban and hold an inclusive, participatory process, protect indigenous seeds and extend support to farmers, review biosafety policy and regulatory framework, make public all economic and technology agreements, and roll out public awareness campaigns nationwide.

The activists said they would consider legal action if the government did not address their concerns.

Consequently, they want transparency in economic partnership and technology transfer agreements and rolling out public awareness campaigns to inform the public about the pros and cons associated with GM foods.

"We are not open to such GM technology, and Kenya's decision has no effect on us," Agriculture Minister Hussein Bashe is quoted as saying by the Citizen.

“Currently, issues related to biotechnology are being widely researched so that people understand its handling and control as far as data collection and analysis are concerned,” he said.

“But such trials will only be allowed for academic purposes, which in turn would help the country and its people to have a broad understanding of genetically modified varieties, especially the benefits and impact on the environment.”

MP Jalang’o: Gov’t Should’ve Pursued Other Options Before Lifting GMO Ban. October 07, 2022

Lang’ata Member of Parliament Phelix Odiwuor alias Jalang’o has opined that the government ought to have considered other possible solutions before lifting the ban on GMOs (GMO) to solve the current food crisis.

Jalang’o argues that the State did not fully explore other options in boosting the agricultural sector, such as empowering local farmers, and thus should not have rushed into reintroducing GMOs as the last resort.

The lawmaker further cited the dangers of GMOs as key causes of some of the most prevalent chronic diseases as had been laid out by health experts, intimating that Kenya should take caution by evaluating other favourable ways in crop production.

He however noted that if research proves GMOs to be the best solution in addressing the food shortage and boosting production, then it should be put into action in a bid to save lives.

Tetu MP Geoffrey Wandeto, who was also on the same platform, on his part concurred with the government on venturing into GMOs saying it would increase agricultural productivity.

Wandeto overlooked the effects of GMOs, underscoring that Kenya is already using some genetically modified foods from other nations which have maximised their production.

“We still have a lot of agricultural activities we can still pursue as a country before we go the GMO way. The local farmer as we speak is not fully empowered to give their total output. We first need to empower our own farmers,” the MP said on Citizen TV’s Day Break show on Friday morning

“Have we exhausted the arable lands that we have to go the GMO way? Have we exhausted everything in the productivity of this country to go that way?”

“I know that GMO has a lot of effects out here; cancers and chronic diseases...we are already consuming GMOs anyway,” he said.

“But if it is something that will keep us going, watu wanataka chakula…if it will increase our food production, then why not? But first let’s consider exhausting all possible means before we go that way.”

“In the GMO debate, we should be guided by science. It is not a new thing globally and it is practised in some of the advanced economies and they have used it to boost their agriculture,” he stated

“The only way to lift millions of our people out of poverty is through increased agricultural productivity. GMO crops which are resistant to drought, pests coming to answer some of the issues we are grappling with such as climate change…our people no longer have food.”

He added: “Let’s assume we have 10 million farming households, if each household increases its production just by two bags, we have 20 million extra bags of maize. That is all the maize we are importing, we, therefore close the chapter on importation.”

Raila, Kalonzo Slam President Ruto's Decision on GM Maize, Insist It Is Harmful. October 11, 2022

Stakeholders in Tanzania's agriculture sector think that the proximity

between Nairobi and Dodoma and the two nations' shared borders could allow GMOs to seep out of Kenya and into Tanzania.

According to Bashe, since the rollout of Hybrid and Open-Pollinated (OP) crops has been successful in Tanzania, President Samia Suluhu's administration does not see the need to commercialize or promote the adoption of GMOs.

Nonetheless, Bashe underscored Tanzania will keep an eye on GMO developments in Kenya.

GMO research trials were canceled in Tanzania in January 2021 by former Agriculture Minister Adolf Mkenda to preserve the country's genetic resources and local seed.

Speaking separately on Tuesday, Azimio party leader Raila Odinga and his Wiper counterpart Kalonzo Musyoka slammed Ruto's move stating that the cons of GM maize far outweigh their costs and nutrition benefits, especially since some health experts believe that the biotech foods carry several health risks.

On his part, Kalonzo, in his press briefing, noted that Kenya's food security should not be premised on maize consumption alone. According to the Wiper boss, several organic foods readily available in the country can complement and substitute the country's maize production deficit.

Kalonzo likewise opined that even if Kenyan farmers were to start farming Bt (Bacillus thuringiensis) maize varieties, the GM maize strain set to be reintroduced in the country, the cost of the food crop would still be out of reach for the ordinary Kenyan.

Kalonzo also believes that since Kenya is going the GMO route, the country's food security fate will be in the hands of multinational companies that own the GMO technologies.

"Kenyans are heavy consumers of processed maize, and we produce an average of about 40 million bags of maize a year, yet our demand is about 55 million bags of maize per year. Our deficit is about 10-15 million bags per year," said Kalonzo.

"Other varieties of organic foods such as sorghum, millet, sweet potatoes, and cassavas can complement or substitute shortage of maize diet. Kenyans ought to be sensitized on the need to diversify their eating culture and be able to de-monopolize their dependency on a few staples like maize and rice."

"By supporting our farmers to produce more through better extension services, better inputs, climate resilience, and agroecological practices, we will be able to reduce post-harvest losses and trade with our known neighbors rather than resorting to the importation of risky GMO maize."

"The government did not engage in public participation; we shall therefore be progressing this conversation to the National Assembly and the Senate. We urge our leaders to take this challenge."

Raila's Lawyer Paul Mwangi Files Petition Challenging GMO Ban Lift. October 13, 2022

Raila Odinga's lawyer Paul Mwangi has filed a suit to block the Cabinet decision on the importation of GMOs (GMOs) in the country.

The petition comes just days after Azimio la Umoja One Kenya top brass Raila Odinga and Kalonzo Musyoka opposed the lifting of the ban on GMO imports into the country.

In reversing the 10-year-old ban, the Cabinet sought refuge on food security and raging drought to introduce fast growing crops, drought and pest resistant food and animal crops to address the phenomena.

The petitioner stated that in 2012, the ban on GMOs did not close the door on the use of biotechnology in Kenya but rather closed the door on the introduction of foods not tested by local regulatory agencies.

And that this paved way for the introduction of BT cotton as a cash crop in 2016 on trial basis and genetically modified cassava as food crop in 2021 that is still undergoing trials in Kilifi, Murang'a and Busia counties.

Odinga's lawyer warned that this was imperialistic and predatorial and that it would make the country a food colony of foreign countries and multi-national companies.

In the petition, Mwangi contended that the lift on the GMO ban is a threat to food security to peasants and farmers in the rural areas access to adequate food produced ecologically sound and sustainable methods.

As such, the lawyer wants the decision declared unconstitutional.

Azimio has opposed President William Ruto's GMO decision vowing to challenge the Cabinet decision claiming it would expose the country to health risks

In the petition, Odinga's advocate claimed the lift on the 10-year ban on GMOs was unconstitutional and a threat to food security in the country.

If permitted, lawyer Mwangi said was unconstitutional and would threaten food security in the country as it posed a danger to peasant farmers.

Mwangi claims the 2022 Cabinet decision exposes the country to foods and crops not tested in the country, that in fact it opens a floodgates against regulations that the 2012 ban on GMO imposed.

Lawyer Mwangi contends that the 2022 Cabinet decision was not to lift the ban on genetically modified foods but rather effect a blanket uplift of all protocols controlling the introduction of genetically modified foods in Kenya that had been placed by previous administrations.

The petitioner also claimed Kenya risks the danger of having crops developed using genetic use restriction technology gurt; a technology where seeds once grown commit suicide and are thereby unable to be used again to be resown to germinate into a new crop. This to create a dependency on buying of fresh seeds every planting cycle.

Kalonzo Attacks President Ruto, Accuses Him of Dictatorship. October 21, 2022

Azimio-One Kenya Alliance leader Kalonzo Musyoka has accused President William Ruto of making unilateral decisions on important matters in the running of the country.

Kalonzo has raised issue with the President's Mashujaa Day speech that raised issues such as public private partnerships (PPP) in water provision and the lifting of the GMO ban as critical matters that require inclusive decision making.

Accusing Ruto of dictatorship, Kalonzo claimed the President is running a one-man show where he is presenting his personal ambitions as country's policies.

Kalonzo has also questioned the president's directives on the DCI's Special Services Unit, asking for answers on who wrote the report used to execute the purge.

The Wiper leader is warning that the president's decision making has become a one man show and will chip away at the consultative leadership models adopted by his predecessors Mwai Kibaki and Uhuru Kenyatta, as well weaken institutions of governance.

He was addressing the media on Friday, October 21, 2022 after a meeting with Azimio politicians.

"We are staring at the emergence of a personalised dictatorship in which a leader decides to avoid constrains and beelives he does not need to consult anyone on decision making... We are seeing a leader's personal philosophies, fears and ambitions being presented to the country as policies. It is a one-man show,"

"Who prepared the report leading to the ongoing purge of the DCI? Who decided that we can manufacture fertilizers jointly with a neighbouring country or build dams on a PPP basis?" posed Kalonzo.

"Ruto appears to be shifting fundamental decision making from the government to himself and perhaps actually to his party. We fear that these events are early insight into the intentions of Kenya Kwanza leadership and administration."

"Ruto is steadily moving away from the more collective and collegial leadership style characteristic of his predecessors."

Raila: We Will Fight GMOs In Courts and Farms Across the Country. October 25, 2022

Raila Odinga, leader of the Azimio Coalition, has reiterated his opposition to using GMOs (GMOs) to alleviate Kenya's ongoing drought.

GMOs are not a cure-all for Kenya's ongoing drought and food shortage, and they vowed to fight them in court and on farms across the country.

Kenyans deserve a clear plan for increasing access to water to improve irrigation in the unpredictable climate, improving infrastructure to facilitate market access, improving agricultural extension assistance programs, and empowering special interest groups such as youths, women, and people with disabilities to participate in agricultural production.

Kenyans suffering from drought and famine require immediate assistance, not optics, politics, or blame games.

According to Raila, the reintroduction of GMOs is a cruel excuse that violates Kenyans' rights and jeopardizes national interests at the expense of foreign commercial interests.

He questioned lifting the ban on GMOs in Kenya, especially given that they are still illegal in scientifically advanced countries such as France, Germany, Austria, Greece, Hungary, and the Netherlands.

The former candidate for president claimed that introducing the erstwhile outlawed GMOs during this time of international unrest amounts to using

Kenyans as test subjects.

"We demand that Ruto's administration explains to Kenyans the rationale behind the rush to reverse the 2012 directive that stopped the importation and open cultivation of GOs due to concerns about the health risks of GMO foods and insufficient studies on their effects on small-scale farmers and the local food markets," the statement signed by the Azimio leader reads in part.

"They are banned in many scientifically advanced economies like France, Germany, Austria, Greece, Hungary, the Netherlands, Latvia, Lithuania, and Luxembourg. Bulgaria, Poland, Denmark, Malta, Slovenia, Italy, and Croatia. Why Kenya?" Raila added.

"We believe that introducing them into Kenya in the current State of international uncertainty is to use Kenyans as guinea pigs, which we shall not allow. Even the poor and the hungry ought to have their rights and dignity protected," Raila said.