

**Saving Lives through Effective  
Flood Early Warning  
Communications in Nigeria**

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## **Saving Lives through Effective Flood Warning Communications in Nigeria**

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### **About CJID**

The Centre for Journalism Innovation and Development (CJID), formerly the Premium Times Centre for Investigative Journalism (PTCIJ), is a West African media innovation and development think (and do) tank. Founded in 2014 as a non-governmental organisation in Nigeria. The Centre has been a leader in investigative journalism, civic technology, open data, verification, safety of journalists, elections and freedom of information and expression. It has a presence in Nigeria, Ghana, Sierra Leone, Liberia and The Gambia.

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# Forward

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This report explores the importance of a robust Flood Early Warning System (FEWS) in Nigeria and the need for effective communication to ameliorate the loss and damage caused by flooding.

Following Nigeria's Floods of 2022, which resulted in over 600 lives lost, 3000 injured, 300 thousand hectares of farmlands wiped out and 200,000 houses damaged, and two million people displaced across 20 states in Nigeria, as reported by Premium Times, it is imperative that focus be given to strategies to adapt and prepare for future flood events which are expected to be worse in order to limit the damage caused. However, Nigeria has faced challenges in effectively communicating and preventing the impacts of floods due to poor FEWS communication.

The article emphasizes that an early warning system is crucial for building resilience and reducing the impacts of climate-related disasters. By informing citizens about potential and imminent extreme events, governments and stakeholders can save lives, protect infrastructure, and support long-term sustainability. However, developing countries like Nigeria face difficulties in implementing and communicating FEWS due to technical limitations and insufficient infrastructure.

Traditional and social media have been the primary channels for FEWS communication in Nigeria. Federal and state environmental institutions conduct regular press briefings to alert the government and the public about potential flooding disasters. However, the effectiveness of these briefings is hindered by various factors.

To address these challenges, the article proposes framing FEWS communication as political communication in Nigeria. It suggests involving popular politicians as information bearers across states and local governments, who can act as climate champions and effectively disseminate early warning messages to the public. This approach leverages the popularity and influence of political figures to enhance FEWS communication and increase climate resilience among the population.

By incorporating political figures as intermediaries between environmental institutions and the public, FEWS messages can be humanized and amplified. This

strategy aims to improve the effectiveness of FEWS communication, particularly in reaching and resonating with the majority of the population, including those in rural areas.

The article concludes that effective FEWS communication is critical for resilience-building and disaster reduction. By addressing the communication weaknesses of existing FEWS in Nigeria and involving political elites in the process, the country can demonstrate its commitment to addressing climate change and inspire other developing nations with its innovative approach.

Our mission at CJID with this policy brief is that it serves as a valuable resource for policymakers, environmental agencies, and researchers working towards effective disaster risk reduction and climate change adaptation in Nigeria and beyond. It also helps media practitioners who interact with policymakers to set the agenda and ensure focus is given to strategies that limit the damage caused by climate events.

Akintunde Babatunde  
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# Introduction

The early warning system is a strategic effort at ensuring that citizens are resilient to the effects of climate change (World Meteorological Organisation, 2020). Through this, governments and other stakeholders ensure that citizens are informed about potential and imminent extreme events in order to prevent loss and damage that is associated with these events. The United Nations (2022) notes that “a successful FEWS saves lives and jobs, land and infrastructures and supports long-term sustainability. Early warning systems will assist public officials and administrators in their planning, saving money in the long run and protecting economies”. Flood Early Warning System (FEWS) is a critical resilience-building strategy in this anthropogenic era characterised by increasing and more dangerous flooding situations. A situation that is overwhelming for many developing countries that lack both the technical wherewithal to plan and communicate FEWS and the infrastructure buffers to prevent loss and damage.

In many developing countries around the world, the rising flooding crisis brings home the reality of climate change. In Nigeria, for example, the incidence and magnitude of flooding have been direr in recent years. The Great Floods of 2012, for example, brought flooding as an effect of climate into perspective. The floods affected almost all the states in the federation, caused 43 casualties, displaced 2.3 million people, and were tagged the worst floods in 40 years by stakeholders. The floods destroyed 597,476 houses across the country and in financial terms, its cost stands at N2.6 trillion (The New Humanitarian, 2012; Soriwei, 2012). Over the recent years, Nigeria has proven not to be able to prevent loss and damage arising from floods and this can be traced to poor FEWS communication in the country (Meribe, 2017). In early August 2022, heavy flooding occurred in many states of the federation. Many people were displaced from their homes and casualties were reported. For example, 43,155 people were displaced in 26 local government areas in Borno, Adamawa and Yobe States (Reliefweb, 2022). Flooding is now a recurrent climate event and the impacts are severe for many citizens, as climate change resilience is low across the country.

Like other early warning systems, FEWS involves strategic processes such as risk knowledge, monitoring and forecasting, warning dissemination and communication, and response capabilities (Perera, Seidou, Agnihotri, Ramsey, Snakhtin, Coulibaly

& Mehmood, 2019). The Nigerian FEWS process also captures the foregoing through environmental institutions, such as the Nigeria Hydrological Services Agency (NIHSA) and the Nigeria Meteorological Agency (NEMA) at the federal level and the respective environmental institutions at the sub-national level. These bodies study climatic and weather patterns and endeavour to communicate warnings, if there are any, to the society. The nature and effectiveness of the early warning system communication emanating from these bodies determine the level of resilience of the society to climate events such as flooding and others.

Effective FEWS communication is critical to resilience building and disaster reduction. This is because the inability to pass across early warning through the right media and channels can potentially lead to massive loss and damage. FEWS communication is done in Nigeria through the traditional media and, more recently, social media (Owolabi & Ekechi, 2014). Federal and state environmental institutions conduct regular press briefings to alert the government and the public about possible and imminent flooding disasters across the nation. These briefings are then relayed across different channels to the public.

## **Climate Change, Early Warning System and Political Communication: Exploring the Links**



Climate change is a major challenge that the contemporary world is grappling with. This is because of its global incidence and multi-sectoral impacts. For many developing countries around the world, climate change is bearing its threat-multiplying fangs on their development trajectories. While efforts have been made across many quarters to deny or downplay the severity of the threat that climate change poses to humanity, the scientific exactitude of its incidence and worsening impacts mean that climate change response, comprising of an early warning system, must be top-notch. Climate change is most easily explained by global warming and its disruptive effects on the ecosystem worldwide.

The United Nations Framework Convention for Climate Change (UNCCC) takes climate change to mean the “change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable periods” (UNFCCC, 2011:2). For Tyokumbur (2010) climate change can be seen as “alterations in the weather and ecological conditions of a place because of environmental resource use by man” (p. 72). This means that climatic and weather patterns are no longer predictable as they hitherto were. This portends environmental hazards in terms of either the slow onset climate events or sudden catastrophic events across the world. The implication of these for countries around the world is the need for early warning systems to empower people towards the prevention of deleterious circumstances, loss or harm. This is because the impacts of climate change are worsening and the quantum of associated losses and harm are becoming alarming.

The early warning system, like many other social science concepts, does not enjoy a universal definition, as many scholars and practitioners define it in line with the sort of menace or negative phenomenon they are confronted with. Humans are guided by the instinct for self-preservation, which includes the prevention of hazards that can impact their lives and livelihood. Fundamentally, therefore, the early warning system is a process that prevents a population from facing an impending disaster or hazard. This view aligns with that of the United Nations International Strategy for Disaster Reduction (UNISDR, 2012), which defines an early warning system as “the set of capabilities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organisations threatened by a hazard to prepare and act appropriately and in sufficient time to reduce the possibility of harm or loss”. In the same vein, Quansah, Engel Ronchon (2010:24) notes that an early warning system is a “part of a process to predict possible catastrophic events and help minimise their devastating impact on the environment and human life”.

An early warning system encompasses the various processes by which the necessary and adequate information to aid the decision-making of a population towards the aversion of harm, risk or loss is activated or enabled. This portends that the early warning system spans a spectrum that not only detects hazard

information but also sees it through to the stage of community response. Ibrahim & Kruczkiewicz (2016) note that the early warning system is an “end-to-end warning”. This is because it covers the source of information, the information, its dissemination and then usage by a community. This is why Kelman & Glantz (2014) argue that the early warning system is a social process, unlike the tendency to consider or describe it as essentially a technical activity. Rather than being just a technical activity or even as some scholars and practitioners may want to de-technicalise it, the early warning system comprises technical and social processes that make disaster information available to the people to help them avoid hazards. Hence, the early warning system involves the detection and articulation of hazard parameters, the efforts of decision-making authorities, decision-making processes and activation of other social aspects across the spectrum of communicating the certainty of hazards (Kelman & Glantz, 2014). The early warning system is a people-centred process that makes life-saving information available for the use of decision-making authorities and the people, towards cushioning and attenuating the effects of an impending hazard.

Political communication can be linked to the decision-making process of early warning systems. Since decision-making authorities are central to the early warning process decisions on and passing of potential disaster information to communities, it is necessary to consider the kind of information such authorities make use of. Political communication is a hybrid of the political and communication aspects of social processes. It speaks to the generation and dissemination of political information between and among members of the political class, institutions of governance and citizens. Like in basic communication, political communication strives to ensure that political messages and symbols travel seamlessly between the coder (political authorities) and the decoder (citizens).

Norris (2001:11631) defines political communication as “an interactive process concerning the transmission of information among politicians, the news media, and the public”. Swanson & Nimmo (1990) consider political communication as “the strategic use of communication to influence public knowledge, beliefs, and action on political matters”. This portends that political communication focuses on the dissemination of information that may or may not be of political relevance but which becomes political upon being made to pass through the political channel.



This is why Denton & Woodward (1998) argue that the content and purpose of a message are the main elements of political communication, rather than the source.

The foregoing speaks to the fact that many issues outside the direct purview of politics can be communicated politically. This is especially true of scientific and technical issues such as climate change, which can be considered as science communication. This is because, in contemporary times, science communications take place within political contexts and scientific matters now have political outcomes and are critical contents of the political process. This is why Scheufele (2013) holds that there is a blurry line between science and communication and that scientists are political advocates. Climate change response is a political activity because it involves governance in terms of viable institutions, finance and the right political ambience (Olajide, 2022). Therefore, political communication can be relied upon to effectively get early warning systems to the people. This is because political communication is persuasive and also manipulative (Bakir, 2013). This means that with political communication, the public can be made to react or act on an early warning system with the right attitude. For example, in the case of climate events, communicating early warning systems politically can help to get the message to the people with the right amount of publicity and confer the requisite meaning that makes them act in such a way that prevents harm, risk or loss.

## **Climate Change, Flooding and Early Warning System Communication in Nigeria**



Communities across Nigeria are already grappling with the effects of climate change. These include desertification, land degradation, flooding, coastal erosion and inundation, heat waves and so on. The annual rainy season has become a source of worry to many Nigerians because of heavy floods, with the attendant social and economic costs to them. Olajide, Quadri & Ojatorotu (2018) note that climate change is already a serious problem in the country, as both the Northern and Southern parts of Nigeria are experiencing one form of impact of climate change or the other. No less than 10 of the 19 Northern states of the country are experiencing desert encroachment and serious levels of land degradation, meaning

that 89,297km<sup>2</sup> and 133,944 km<sup>2</sup> in the Northern part could be lost to desertification (Eze, 2010). In the same vein, the country's 853-kilometre long coastline is subject to coastal erosion and inundation due to sea level rise (Folorunsho & Awosika, 2010). This indicates that almost every state in Nigeria is at risk of the impact of some level of climate change.

Flooding is arguably the most prominent impact of climate change in Nigeria, and particularly with the country's long coastline and the massive flood plains across the Northern parts. The areas that are prone to flooding in the country include the "coastal areas of Southern Nigeria; flood plains of major rivers including Niger, Benue, Sokoto/Rima; Gongola, Ogun, Anambra etc.; flat, low-lying urban areas of Dutse, Enugu, Ibadan, Kano, Lagos, Maiduguri, Onitsha, Owerri, Port Harcourt, etc." (Olajide, Quadri & Ojatorotu, 2018:186). With the devastating floods in the country in recent years being linked to climate change, Carrington (2022), for example, pointed out that the 2022 floods were 80 times more likely because of climate change. In the same vein, Olagunju (2022) argues that climate change has increased the intensity of rainfall in Nigeria, with many states experiencing severe floods. Hence, flooding poses serious threats to the well-being of Nigerians, and according to Echendu (2019) it is the most significant challenge to the achievement of the Sustainable Development Goals (SDGs) in the country. This is because it is worsening the already precarious situation of the downtrodden around Nigeria. The United Nations declared the 2022 floods as the worst in the annals of climate events in the country (Olagunju, 2022).

Nigeria has included the early warning system as part of its climate change adaptation strategy. The country is also a signatory to the Sendai Framework for Disaster Risk Reduction 2015–2030. WMO (2020:5) asserts that "as climate change continues to threaten human lives, ecosystems and economies, risk information and early warning systems (EWS) are increasingly seen as key...(to) reducing (the) impacts of these hazards". As a result, many countries, including Nigeria, noted the importance of an early warning system in their Nationally Determined Contributions (NDCs), as part of their climate action plans. The import of these international commitments to the early warning system is that it is critical to improving community preparedness and aiding better safety decision-making on impending climate events (Nkwunonwo, 2019). Therefore, environmental stakeholders in Nigeria have been making efforts to process an early warning

system to empower the people against the gory realities of climate change.

The establishment of the Nigerian Meteorological Agency (NiMet), Nigeria Hydrological Services Agency (NIHSA) and corresponding bodies at the federal and state levels in Nigeria had the creation of early warning systems as part of their core objectives. Article 7 (1i) of The NIMET Act of 2003 states that the body is established to “collect, process and disseminate all meteorological data and information within and outside Nigeria” (NIMET, 2021). This establishes the fact that an early warning system is a core mandate of the Nigerian state, to ensure that climate information is readily available to citizens. The Climate Change Act of 2021 also notes the importance of an early warning system. Article I, covering the objectives of the Act, states that it is established for “identifying risks and vulnerabilities, building resilience and strengthening existing adaptive capacities to the impacts of climate change” (Federal Government of Nigeria, 2021). The foregoing demonstrates that Nigeria has always developed early warning instruments to tackle environmental and climate events.

The early warning system has four stages. These are risk knowledge, monitoring and predicting, disseminating information and response (Grasso, n.d.). While it is true that NiMet and other environmental institutions effectively engage in risk knowledge, monitoring and predicting, however their information dissemination efforts are not effective and as a result, they have poor responses, as the behavioural expectations of early warning systems are not usually met. Owolabi & Ekechi (2014), dwelling on the message–channel–receiver framework, note that there are already many media pathways for communicating disaster risks in Nigeria, including television, radio, newspapers and social media. They opine that despite this array of communication media, disaster risk communication has been of help in Nigeria’s quest for improved resilience of the people. This position is corroborated by Nkwunonwo (2019) in asserting that there is weak access to early warning systems and disaster information by the people.

The foregoing brings the early warning system communication strategy of NiMet, Nigeria’s foremost meteorological institution, to the fore. A check on the institution’s website suggests that it relies on communicating early warnings about disasters to the people through the traditional media and social media. Its recent

warnings were reported across different media. The issue with NiMet's early warnings is that its channels of communication are not effective and they have their limitations, as noted by Owolabi & Ekechi (2014). For example, they noted that the effectiveness of newspapers in communicating early warnings is impacted by the fact that 56% of the people cannot read or write. Hence, the communication of early warnings cannot reach rural areas through the channel of newspapers. A cursory look at NiMet's Twitter handle shows that it has 46,000 followers, which indicate that it is elitist and not a viable means of reaching the generality of the people with communication about early warnings. While the foregoing demonstrates the rich literature on climate change, early warning systems and disaster prevention communication, there is a gap in existing research that shows that the channels of communication of early warning systems need to be expanded. This study intends to address this gap by exploring the possibility of framing early warning communication as political communication in Nigeria.

Flood Early Warning Systems (FEWS) is weak and often gets lost in the process of its communication. As a special form of communication that helps to ensure that communities are prepared to avert the problems that may arise from floods and other extreme climate events, there is need for a wholesome FEWS communication process. While the other aspects of the early warning system seem good, with regular climate data collection, transmission and evaluation, the communication of the findings in the form of a warning to the society is often weak and not effective in helping to build resilience, especially in communities. This is because, in the stage of encoding FEWS communication, the senders (federal and state environmental institutions) often fail to consider the kind of news that resonates with their receivers, in terms of the expected behavioural response. As a result, the nature of the message and the channel are compromised to the extent that the FEWS communication does not prevent loss and damage.

The traditional channels of FEWS communication have only achieved modest success (Owolabi & Ekechi, 2014) in preventing loss and damage, because of the dearth of creativity in creating FEWS messages, and then encoding and passing them through the various channels. So far, there has been a failure to see FEWS communication as political communication. Political communication as an interdisciplinary process that sees to the communication of political messages

through various sources and receivers would ensure the necessary creative deployment of political FEWS communication as a complement to the existing media, to drive resilience among the people.

While FEWS information is technical, the faceless nature of communicating it, as done through the existing channels, is proving to be ineffective. Only recently, an early warning communication by NiMet advised citizens to brace up for heavy floods in the coming weeks. This was also followed up by the different state environmental agencies, to ensure that people are resilient to the impacts of the imminent heavy floods. The advisory also noted that many locations across the country might be too unsafe for the people, as heavy rainfall is anticipated; hence people might need to relocate to safe places. While the timely efforts of NiMet and other bodies are commendable, a lot is not being done to ensure that the necessary information reaches the majority of the affected people to achieve the desired outcome. Putting a political face to FEWS messages in local languages holds a vast potential to drive greater climate resilience. Given this failure of FEWS communication, there is need for a systematic study to recommend the kind of FEWS communication that the people can relate to, in order to elicit the necessary cooperative reaction from them.

## **Framing Flood Early Warning Communication as Political Communication: A Proposal**

With the rising severity of the impacts of climate change, including flooding, which is witnessing a progressively worsening incidence across Nigeria, there is need for a creative response to the menace. Hence, the necessity of framing FEWS communication as political communication in the country. This is because FEWS communication has proven to be ineffective over time, to the extent that despite the efforts of NiMet and other environmental institutions to ensure the adequate dissemination of this communication through press conferences with the traditional and new media, the necessary information still gets lost in the communication process. While the coding of FEWS information to avert harm and loss from what has now become regular flooding across the nation is impressive, given the efforts

of the environmental institutions involved, the weakness in getting the full array of channels to disseminate the information has been a serious bane.

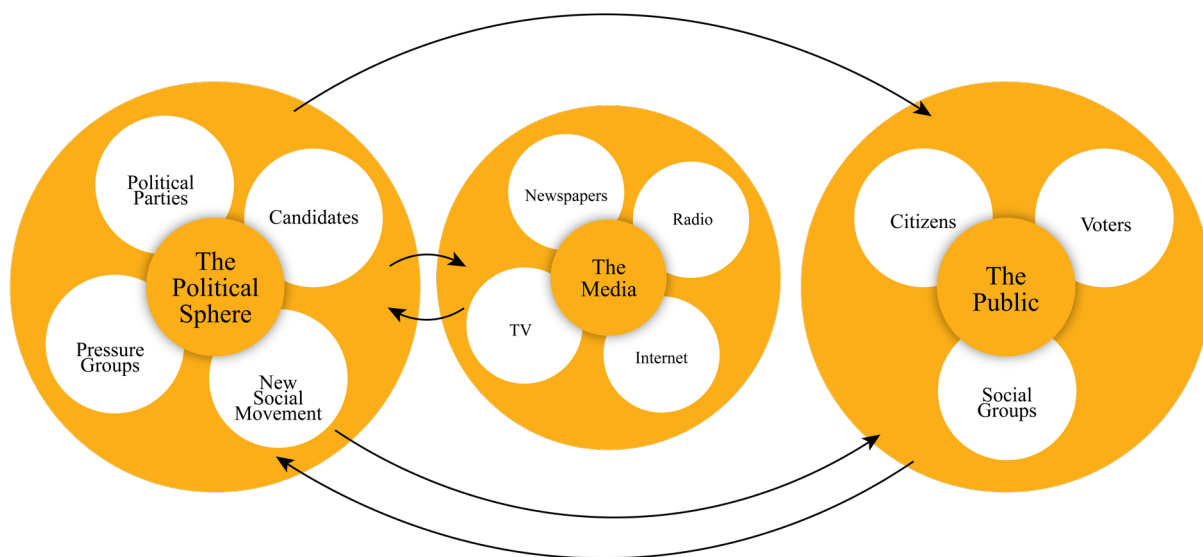
Generally, there is poor environmental and climate change awareness in Nigeria. Meribe (2017) notes that climate change awareness creation through the media is poor. Hence, rather than a vulnerability-based awareness creation, there is an impact-based awareness that only comes alive when there are catastrophic events. Unfortunately, there is what can be called environmental or climate amnesia, in which many stakeholders seem to forget about the vulnerability of communities to the impacts of climate change. This general environmental or climate change amnesia does not do the ability of NiMet and other environmental institutions any good. Thus, all the stakeholders, including the media, are not of serious help to these institutions in FEWS communication. Therefore, communities around the countries are almost perennially in the throes of flooding and other climate change impacts.

The foregoing necessitates the framing of FEWS communication as political communication – like it was earlier mentioned. While climate change and the FEWS process are not traditionally political matters, their communication can albeit be political. This is because the purpose of such communication is, in the final analysis, to reduce the pressures that could mount on the state and its institutions in situations of catastrophic climate events. It then means that while the source and content of FEWS communication are not political, such communication would serve political purposes. This aligns with the position of Denton & Woodward (1998) that the content and purpose of a message are the main elements of political communication. That is why they take political communication as “all forms of communication undertaken by politicians and other political actors for the purpose of achieving specific objectives (Denton & Woodward, 1990, cited in McNair, 2011:4).

Framing FEWS communication as political communication varies a little from the traditional model of political communication. In Figure I below, political communication is demonstrated as an interface between the political sphere, the media and the public. This shows that political information flows from political

characters to citizens through the media. Within this purview, the media is the intermediary between members of the political class and the various groups in the public sphere. As such, political communication is the interflow of messages between political actors and the public through the media.

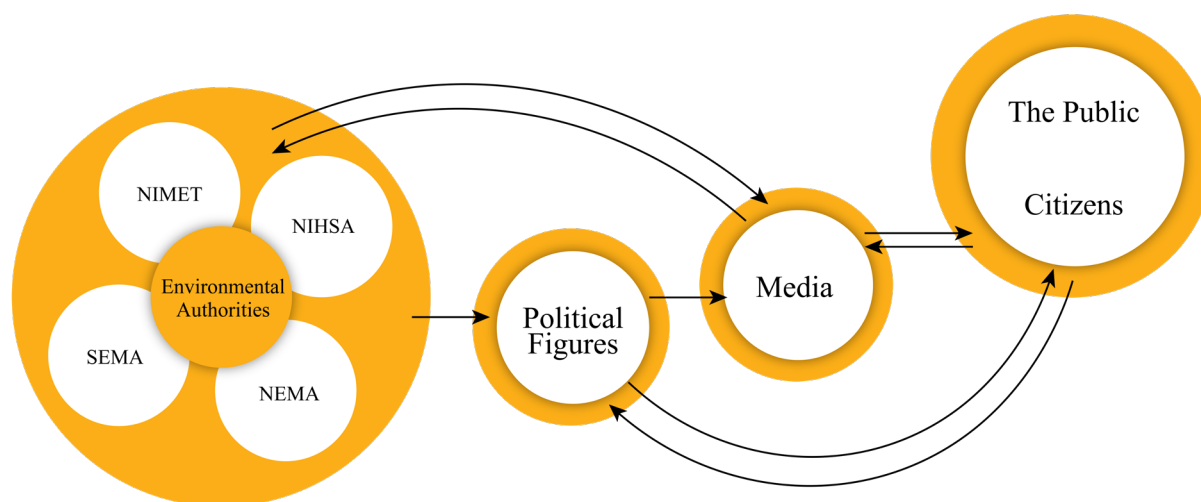
**Figure I: Political Communication Process**



*Source:Conçalves (2018)*

Deploying FEWS communication as political communication involves more than one group of channels. Figure II below shows that while the traditional model of political communication has one group of channels, which is the media, the FEWS-based political communication includes political figures and persons of high political value, who take the message from NiMet and other institutions and then go through the media to the public.

## Figure I: Political Communication Process



*Source: The Researcher*

What turns FEWS-based communication into political communication is the political stimulus that political figures can trigger in the communication process. In the former model, environmental institutions are impersonal bodies, which are scientific in character and aloof. This signals that the lack of interaction between the public and these institutions makes FEWS information weak upon announcement in the media. Such information hardly resonates with the people. The intervening channel humanises the FEWS communication to the extent that the environmental institutions can leverage the popularity of such political figures towards better outcomes.

It is unlikely that environmental institutions can relate with the public on the basis of the traditional political communication model. In contrast, with FEWS-based communication, popular political figures can relate directly with the public and pass on FEWS information, thereby creating an extra avenue for awareness creation. In the new model, the chances of FEWS communication being complete and effective are higher. This brings about the popular Laswellian question on propaganda, which was the first idea enunciated on political communication: “who says what to whom via which channels with what effects?” (Conçalves, 2018: 1).



This means FEWS communication based on the political communication model can help environmental institutions to measure their effects on the basis of actions of the public in terms of preparedness against hazard and a significant drop in harms and loss to the people.

Framing FEWS communication as political communication will benefit all stakeholders in climate change response and disaster reduction. This view supports the position of the United Nations (2022) that, “a successful FEWS saves lives and jobs, land and infrastructures and supports long-term sustainability. Early warning systems will assist public officials and administrators in their planning, saving money in the long run and protecting economies.” A successful FEWS is a well-communicated FEWS that can elicit a positive response from the public, such that the dangers and impending hazards are attenuated, preventing loss and damage and easing pressures on all stakeholders.

## Conclusion and Recommendations

The utility of environmental institutions is to call the attention of the authorities and the public to hazards that lie ahead, such that all stakeholders can avoid harm, loss and damage. Framing FEWS communication as political communication enlivens the tasks of NiMet and related institutions. Therefore, the institutions should devise creative ways of making the political class to buy into their awareness creation efforts. Therefore, they should appoint willing popular politicians across the states of the federation to act as FEWS information bearers. The fact that floods have affected almost all the states of the federation in recent years shows that environmental institutions need to act fast on this. This exercise should also be repeated across all local governments of the federation. The political ambassadors can become climate champions, which would aid the achievement of the country’s climate goals and targets. It is a means of enlisting political elites into the climate change response agenda, and with them as FEWS ambassadors, Nigeria will be demonstrating to the other developing countries its willingness and the creative force it is deploying in tackling climate change.

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