

Communicative Resilience and Desert Encroachment in Northern Borno

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Abstract

Tackling the persistent challenge of desert encroachment in Northern Borno, Nigeria which has threatens livelihoods and ecosystems in the region, yet government and institutional responses have remained weak due to gaps in policy implementation and inadequate communication strategies. Drawing on the Extended Parallel Process Model (EPPM), the study analyzes how communication influences public awareness, risk perception, and proactive engagement in environmental management. Employing a library research method, the study shows that new media platforms offer real-time, low-cost, and interactive opportunities for disseminating environmental messages, mobilizing stakeholders, and promoting collective action, sustainable for mitigation of desert encroachment by integrating indigenous knowledge systems, participatory communication, and digital media into strategic development plans. It recommends strengthening environmental education policies, encouraging advocacy through digital platforms, and fostering inclusive community engagement to build long-term resilience.

Keywords: *Communicative resilience; Desert encroachment; Environmental communication; New media.*

Introduction

From Erosion blowing and washing away the south region into the ocean to desert encroachment eating up the northern region of Nigeria. Every region in the country is affected by one form of environmental problem or the other, battling its peculiar nature of problem. Harrison, Bisong, Akintoye, Ukata, Inyang, & Harrison. (2015). Identified that the environmental problems in Nigeria can simply be categorized into water problems, air problems, land problems, and waste management problems. The root causes of desert encroachment and other environmental problem are but not limited to poverty, socio-cultural practices, and habit. Because these problems are under development issues, it is of paramount significance to make people aware of the need to protect their environment. Nassir & Ezekiel. (2022). Opines that the policy documents have proposed that there is a need for the Nigerian government introduction of environmental education in formal and informal sectors both at primary, secondary and tertiary institutions. Strategies and consider ways to raise public awareness, strengthen participation and decision making and encourage a change in people's behaviour on these problems. In the field of communication, Environmental communication is central to assessing this challenges and preferring developmental solutions.

Environmental communication means using communication approaches and tools to promote a safer environment for all floras and faunas. Anonopoulos and Karyotakis (2020). see environmental communication as an international relationship between humans and the environment. This includes a wide range of possible interactions, from interpersonal communication and virtual communities to participatory decision-making and environmental media coverage. The onset of environmental

communication was just a narrow area of communication; however, it has become a broad field that includes research and practices regarding how different actors such as institutions, states, and people interact with regard to topics related to the environment and how cultural products influence society toward environmental issues. In Nigeria, major environmental problems are not receiving the necessary media attention as it should. Omenyeonu and Mohammad (2018) stressed that environmental journalism in the country has been one-sided when it comes to reporting environmental issues and that environmental journalism in Nigeria has paid more attention to global warming/climate change as environmental issues at the detriment of other issues.

According Boyle (2024). Nigeria produced 0.71% of greenhouse gas emissions in 2021. This amounts to 334 million metric tons of carbon dioxide equivalent to (MtCO_{2e}), which is less than 1 percent of global emissions in 2022. This means that Nigeria's emission per person per year is less than 2 tons, compared to the global average of over 6 tons. While environmental issues such as climate change, global warming, pollution, etc. are receiving media attention both in Nigeria and across the world. This research focus on the strategic development plan that will mitigate Encroachment in Northern Borno. The Northern Borno comprising Ten (10) Local Governments areas of Abadam, Gubio, Guzamala, Kaga, Kukawa, Magumeri, Marte, Mobbar, Monguno and Nganzai. This semi-desert Sahelian savanna region is being threaten by Desertification as a result of both natural and artificial factors. The state is roughly on latitude 10 degrees East and 14 degrees. The geographical location of this area, is in the extreme North Eastern part of Nigeria, gives it a unique character of being the most arid area in Nigeria. (verinumbe, 1985).

Statement of the Problem

The inability of the development institutions, Federal, state and even local governments as well as Stakeholders to respond, reverse and change the problem proactively to deploy measures in combating the imminent threat of desert encroachment eradication or Mitigation plan to reach its full course of implementation in accordance with the National Action programme on desertification in line with the United Nation Convention to Combat Desertification (UNCCD) strategies calls for need to systematically measure communicative Resilience towards this problem.

Objectives of the Study

1. Examine the role of developmental communication in addressing desert encroachment.
2. To explore the potential indigenous knowledge play in communicating sustainable land practices.
3. To recommend strategies for enhancing the communicative approaches to addressing environmental challenges.

Literature Review

As outlined that Africa is one of the most hit continents climate change particularly desertification. From sub-regions, nations or state to isolated means of livelihoods are being threatened continuously due to desert encroachment in the areas, mostly attributed to land degradation processes is indeed a thing to worry. Similarly, Hundreds of millions inhabitants of these area globally are mostly likely to losing their means of income in this arid regions, about million hectares (10) of available land is being degraded yearly; from the quantum of 130 million land seriously affected, and Africa has 50 percent of that. Omar, Edinam &Luukkanen (2013). Significantly, sub saharan has countries hat are most vulnerable climate

hazards, concentration in last 30 years on places like Niger Republic and Northern Nigeria which are experiencing drought just as it is in places like Ethiopia, drought have become a recurrent event. Delicate combination of poor land Management such removal soil cover, burning of Plantation areas, clearance of farm residue and uncontrolled of chemicals in Northern Nigeria for instance accompanied by increased aridity calls for the need conserving the environment that has become desert like one to bring about sustainable development is imperative. Nassir &Ezekiel (2022). Therefore, in other to make communities less exposed to these natural hazard there is need for an environmental understanding and conservation with regards to its structure, diversity and function. While those caused by humans such as chemical accidents, pollution of water and air, desertification and even technological equally leads to disaster. Nassir &Ezekiel pins that an estimate of thousands of hectares of land is being lost to human and natural hazardous activities every year. Human induced changes through their activities on the environment made them to greatest perpetrators in the distortion of the habitation.

The two kind of hazards affecting the environment (human and Natural) as identified above, Bobrowsky (2013) categories human induced to include: land degradation through poor land management, indiscriminate disposal of industrial and domestic waste, pollution of water, air and land, bush burning Consequently escalation of soil erosion, desertification and dam failures while the naturally induced may include: floods, drought and soil nutrients leaching. Other few natural sources that are unpredictable like the earthquakes and volcanic eruptions, happens with less precise prediction and can cause damage any nation regardless of it technological advancement, and when such occur, people are hurriedly evacuated to safe zones, drought though

natural and climate related hazard cant be predicted as well.

It is well known that disasters are aftermath of hazards such as floods, hurricanes and droughts particularly in the last few decades. Its as a result of the on-going environmental degradation, additionally phenomenon like that aren't considered in Making decision and planning developmental strides, and how human settlements uses land planning, Mercy Corps report (2018) additionally in the case of desertification increase in sub-saharan regions which northern Borno is not an exception pinpoints that more efforts needs to be geared towards resolving the problem, due to this phenomenon water scarcity is not the only concern, but also ecosystems destruction.

In Nigeria, fifteen Northernmost states is faced with rapid desert encroachment ranging from a mild to severe level. Olagunju (2015) says about 580,841 km² accounting for 63.83% of the 909,890km² of the country's total land is infringe by degradation as a result of Climatic variability and anthropogenic activities such as bush burning, fuel wood extraction, deforestation, extensive cultivation, overgrazing, cultivation of marginal land, faulty irrigation system and urbanization are major causes of desertification. These are exacting on aspects of life directly or indirectly and the environment including the ecological, health, geo-chemical, hydrological and socio-economic facets. Moreover, several governmental efforts to end desertification seems not to, the problem still persist due to the gap between the formation of policy and strategies of combating drought and desertification. That integrated approaches will remedy the problems through awareness programmes, protection of marginal lands, tree planting, sustainable agricultural practices and use of alternative energy source.

Strategic Development Plan that will help Mitigate Encroachment in Northern Borno

Understanding all hazards in an environmental pretext is vital, be it the human or naturally induced. For a sustainable development there ought to be risk reduction strategies in place coupled with environmental management that must synergized with sustainable development strategies. Thus, Humanity is faced with environment that is deteriorating that could lead to disastrous ecological balance, However, remedies to these risks can be achieved eliminating the causes, or by reducing effects of the hazard.

Harrison et'al (2015). In discussion methods of mitigating environment problems such as desert encroachment, they identified education as key strategies and outlined the following to archiving it especially amongst Non-school public and Children, these are:

Communication Strategies for Educating Non-School Public- Effective strategies for this category depend on the age and educational level of the target group. School graduate and illiterates (Never attended school). The strategies which may be used include: play/popular theatre (enter-educate), Targeted message on Radio, Television, posters/pictorials, Newspapers advert and hand bills, Campaign trains/puppets shows, Use of town criers, Use of guests speakers and Use of youth clubs

While communication Strategies for Educating the School Children school children should be taught Environmental management education through the following ways: Story telling, Singing of Songs, Field trip/excursion, Environmental awareness/Conservation clubs, Lecture/discussion as well as Projects based approach.

The conservation of some natural resources that have economic value is a concern for the environment and These have spatial supply. Nassir and Ezekiel (2022) said environment issues are no longer community issue but have

expanded to global concern therefore, it is advocated on the premises of protection the stratosphere ozone layer, the ocean, the great forests and the world's climate. Activities that damages the environment is to be discouraged with those that environmental friendly in order to achieve sustainable development through employment of development communication tools of greater awareness to preservation and restoration of a quality placing much pressure on everyone to becoming ambassadors of natural and biological resources. The specialist while making such strategies for school children should have in mind what is discoursed here and know vulnerability to drought is increased and decreases productivity as a result of degradation of the environment like desertification.

The Policy Making and Professional Communicator: what needs to be known as Strategies

The United Nation General Assembly Resolution 2997 of the 15th December 1972, and subsequent amendment in 1992, the United Nations Environmental Programme (UNEP) is to encourage governments across the world to pay more attention to the protection and conservation of the Environment. Part of the mandate given to the UNEP was that of monitoring the status of the global environment and gathering and disseminating Environmental information (UNEP 2004). Particularly, to cater for the countries that are hit by desertification. It is this urgency that led to the setting up of the United Nation Convention to combat Desertification (UNCCD) in 1992 at Rio Earth summit on environment. The convention was charged with the responsibility of ensuring that the threats of desertification are reduced generally. It's on this note that affected countries such as Nigeria were charged to produce National Action Plan, in tandem with (UNCCD). Nigeria being an active member of the Conference of Party (COP) which is the decision making body on desertification

related matters and policies, comprising of over 100 country members UNCCD (Batta, 1999).

In an effort to achieve the encroachment mitigation the study deploy the framework plan for National Policy on desertification as formulated by Nigerian government cut across several sectors. These include Environment, agricultural policy, forestry policy and conservation. The policy accommodate public awareness and education on the causes and dangers of desertification into strategic communication plan considering the cultural orientation and relationship with their environment. For the policy framework to succeed a carefully planned communication and strategic approach cannot be compromised (Coldevin, 1990). The communication components of the plan is to involve key actors and stake holders which cut across public and private sectors, NGOs, academia and development partners. Their role is to advocate on environmental education, public sensitisation and awareness creation, mobilisation resources and grassroots participation as well as extension services, including capacity building for stakeholders (Federal Ministry of Environment, 2008). The peculiarities of the policy programme to meet the form of coloration of the community in which it is applied. The application of strategic communication component in Northern Borno will involve traditional rulers, NGOs, local media community opinion leaders and academia. As such the plan will be tailored to the National Action Plan on Combating Desertification.

Ostensibly, the actualisation of policies aimed at the creation of an enduring effort to combat desertification depend on the capacity of agencies involved to inform people about the environment and enlighten them on the method necessary for their participation. Several countries have implemented several strategies in line with the (NAP) to combat desertification and have variously identified communication strategies

that could be tailored to suit their peculiarities (Saigal, 2013; UNDP, 2013; Whang, Zeng & Yang, 2000).the National Action plan also emphasises communication between agencies and organisation charge with responsibility of combating desertification and affected communities. The policy clearly shows that certain cultural and social practices are responsible for desertification making it imperative for the action to include adopting an integrated approach to address physical, biological and socio economic aspect of desertification and drought it mean, therefore, that the effort to combat desertification can only be achieved if affected communities are effectively mobilise, especially through existing communication channels. The policy also seeks to encourage the involvement of community members in the process of policy formulation and implementation on how they should relate to and with their environment. The policy stated that for community participation to be successful people must be adequately inform and enlightened on matters related to desertification they also need to be actively involved in the conceptualisation, creation and implementation of policies geared toward curving desertification.

Theoretical Framework

Theories of Environmental Communication provide frameworks for understanding how environmental issues are framed, communicated, perceived, and acted upon by individuals, groups, and societies. These theories draw from communication studies, psychology, sociology, media studies, and environmental and this study pinned with the Extended Parallel Process Model (EPPM) is a communication theory that explains how people respond to fear-based messages, especially in health and environmental communication. It was developed by Kim Witte and is often used to design effective public awareness campaigns that motivate people to change harmful behaviors or adopt protective

actions. In the Context of Environmental Communication: The Extended Parallel Process Model helps communicators understand how people react to environmental threats (like climate change, pollution, flooding, deforestation, etc.) and what makes them take action, or ignore the message. EPPM says that when people receive a fear appeal (a message that warns of a threat), they evaluate two things:

1. Perceived Threat (How serious is the issue?)
2. Severity: How bad is the threat? (e.g., “Oil spills destroy marine life.”)
 - Susceptibility: Could this happen to me/my community? (e.g., “Flooding could affect your home.”).
 - Perceived Efficacy (Can I do something about it?)
 - Self-efficacy: Do I believe I can take the recommended action? (e.g., “I can plant trees.”)
 - Response efficacy: Will the action work to reduce the threat? (e.g., “Tree planting reduces erosion.”)

Two Possible Responses:

a) Danger Control (Positive)

If people perceive both high threat and high efficacy, they take protective action.

Example: “Climate change is dangerous, but if I reduce my carbon footprint, I can help.”

b) Fear Control (Negative)

If people perceive a high threat but low efficacy, they deny, avoid, or downplay the issue out of fear. Example: “The planet is doomed, and nothing I do will help - better not think about it.”

Message: "Deforestation is destroying our air and leading to deadly climate change. But you can make a difference by supporting reforestation

programs and reducing paper waste." If people believe the problem is real (high threat) and that their actions help (high efficacy), they'll act. But If they think the threat is real but feel powerless (low efficacy), they might ignore the message or feel hopeless.

Summary: The Extended Parallel Process Model helps environmental communicators:

Understand how people process fear-based messages. Craft messages that motivate action (danger control) instead of causing paralysis or denial (fear control). Ensure campaigns combine clear warnings with realistic solutions. This makes EPPM a vital tool for environmental education, climate change advocacy, disaster risk reduction, and sustainability campaigns.

Methodology

The paper adopted Library Research Method to gather relevant literature that comprised online and offline documented research papers and published journals. This study consulted relevant books and journals which documented issues related to in accordance with existing literature in order to interrogate, Strategic Development Plan that will help Mitigate Desert Encroachment in Northern Borno. As well as the descriptive research method. Most of the materials in the study were drawn from qualitative data collected from secondary sources such as pertinent texts, journals, official publications, historical records, and websites, which served as tangible sources of insight into the research process. The materials obtained from academic publications, books, the internet, and libraries.

Finding of the Study

In addressing research objectives, the role of Development communication is limited due to the kinds of media forms available, Environmental communication is rather slow or less effective, for instance, A door-to-door campaigns, newspapers, radio, and television.

These traditional forms of media had limitations and very high costs of production, long lead times, harder to target audiences, failure to deliver messages with a higher frequency, and communicating less information.

However, the study aligned with the view that suggested the upsurge in the digital environment or New Media and society's reliance on it (Pavelle & Wilkinson, 2020). With the New Media, people now easily communicate through websites, click of buttons, texts, tweets, podcasts, and other low-cost, real-time methods. These platforms have become powerful and central tools for disseminating and discussing news, engagement and coordination of stakeholders, and rapid deployment of communications campaigns related to the environment, growing body of literature recognizes the importance of social media in promoting community education and creating environmental awareness (Bramwell-Lalor et al., 2020; Rahim & Jalaladeen, 2016; Saepudin & Mulyono, 2019). At the same time, the New Media also presents challenges to effective and accurate environmental communication.

This assertion seats well with EPPM and agrees with scholars like Nassir and Asemah, Olagunju, Mohammad, that see mitigation of environmental problems needs a proactive communicative approach Utilizing the New media to bring about centrally a holistic developmental solution to these global issue.

Conclusion

Enthusiasm in Communication for development (environmental), that pertains the practice of communication of information dissemination and the implementation majorly concerning the environment, has become very important. To build social, economic and political action networks for public identification and definition to resolving the problem to achieving effective environmental information which are needed to

reverse present unsustainable and negative environmental trends. Reasons for the increasing importance of Environmental Communication include the need to advocate for environmental policy, raise awareness, change societal behaviour, influence public opinion, collaborate to address conflicts, pass legislation, and challenge assumptions.

Recommendations

- Government should revisit the national policy on environment and amend; incorporating it to education and development communication, this will help give room educational curriculum review, vocational training and adoption setting minds of school children towards Conservation, afforestation, erosion control amongst others.
- Advocates should adopt the trend of digital environmental campaign for creation of Government policies and awareness creation regarding environmental issues.
- Encourage environmental education through adoption of digital literacy so as to use the new media to promote environmental education by disseminating accurate and reliable information on impact of environment.

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