Evaluation of Communication Strategies Employed By Taraba State Government during the 2011 Flood Disaster Awareness Campaign

[1]Jibril G. **Isa** and [2]Abubakar **Shehu**

Abstract

This study evaluated communication strategies employed by Taraba State Government during the 2011 flood disaster awareness campaign. The study was premised on risk communication theory and survey; method was employed to obtain data from asample of 379 respondents across various flood prone areas in Jalingo Metropolis. The Findings show that radio, television, newspapers and magazines were the major channels of communication used by Taraba State Government. Among these communication channels, radio was found to be the major channel of communication through which quick campaign warning messages were sent to the people at risk. Likewise, the study found that the strategies Taraba State Government used before, during and after flood disaster during the campaign awareness were advocacy visit to the flooded communities and door-to-door strategies. Against this background door-to-door communication is considered a very good medium for communicating disaster information in the studied area. Finally the study among others, recommended that the State Emergency Management Agency (SEMA) should intensify the use of radio and door-to-door methods in managing flood disaster in the state. Thus, the study further recommended that SEMA and the broadcast media should work together toward production of quality programmes that will go a long way in informing and educating the populace in the state about flood disaster.

Keywords: Evaluation, Communication, Strategies, Flood Disaster, Awareness Campaign.

Introduction

Nigeria, like most other countries of the world, is faced with increasing threat of natural disaster from flooding epidemic. In the last three decades, the impact of flooding have increasingly assumed from significant to threating proportion. The resultant effects of this are loss of lives, collapse of buildings/bridges, destruction of farmlands, causing water shortages, affecting human health among others. The case is similar in Taraba State, where the 2005 flood disaster left serious social and economic impacts on affected communities. Flood disaster affected people's lives and livelihoods in many ways. According to Bantaje (2005) about one hundred (100) people were feared dead during the flood, particularly during the collapse of the Nukkai Bridge.

Almost every year, Jalingo experiences flooding, but the 2005 and 2011 appeared to be the most severe. The severance of flood occurrence in Jalingo is attributed to be associated with its

[1] Jibril G. Isa is a lecturer in the Department of Mass Communication, Taraba State University Jalingo.
[2] Abubakar Shehu is a lecturer in the Department of Mass Communication, Ahmadu Bello University, Zaria.

topography, which is an undulating plain interrupted in place by low rising hills and traversed by two different rivers as well as the poor/inadequate drainage network within the town. This has been a source of worry and challenge to the government at various levels.[1]

Government over the years has continued to look for ways to mitigate the problem of flooding in Nigeria and Taraba State in particular. Government strategies center on informing and educating the citizenry regarding risk behavior that makes them prone to natural disaster like flooding as well as mitigating factors against flooding. Ochongor and Konye in Tsegyu (2015) assert that communication plays a major role in the enlightenment and education of the populace about the menace of disaster either to accept or reject any government initiative or programme. Shadrach (2013) reveals that communication plays important role in passing flood early warning messages to people. At all times, members of the public need to be aware of the realities of their environment and what happens within the environment; attaining this desire is the whole essence of public enlightenment.

Statement of the Research Problem

Natural disasters come without warning and they cause widespread devastation like economic damage and loss of thousands of human lives globally. For instance in Jalingo metropolis, the 2005 flood disaster caused extensive socio-economic dislocation with catastrophic consequences ranging from loss of lives and destruction of human habitation, Agricultural produce, water resources, terrestrial ecosystem, and biodiversity and affecting human health among others. Nevertheless, a study conducted in Jalingo Metropolis by Oruonye (2012) showed that only 23.7% of the respondents were aware of the flood prone nature of the study area. Hence, they are taken unexpected by flood devastation such as loss of farms, lives and houses among others.

Taraba State Government, through agencies like SEMA uses various communication strategies to enlighten the people about likely flood disaster and the need to take some measures that will protect them from the disaster. These communication strategies include placement of jingles on radio and television, documentaries, commentaries, news report, discussion programmes, distribution of printed materials, SMS and face-to-face discussions, which content flood messages. However, communication scholars like McQuail (2009), Okunna and Omenugha, (2013), Sambe, (2005) believe that communication process might be altered by so many factors if not checked. Issues like lack of access to media signals, lack of clarity of message are among factors that limit communication especially when engaging in behavioral change efforts.

[1] This assertion was generated from the field data collected in Jalingo through the means of interview and participant observation carried out in October 2016. My personal observations were that housing accommodations are constructed closely to the River Jalingo, the drainages, especially during rainy season are blocked with droplets of waste.

Based on the aforementioned, this paper assessed the efficacy of various communication strategies employed by Taraba State Government through its agencies like SEMA to educate the populace about flood risk in the state especially Jalingo metropolis in 2011, with the aim to compliment success and correct mistakes against future occurrence.

Objectives of the Study

The aim of this study is to evaluate communication strategies used by Taraba State Government to enlighten populace about flood disaster in the state. The specific objectives are to:

1. Identify the communication channels employed by Taraba State Government to enlighten people about flood disaster in 2011;

2. To know the major communication strategy used by Taraba State Government before, during and after the 2011 flood disaster;

3. Assess the effectiveness of these communication strategies on the affected communities.

Significance of the Study

Flood is a global issue which requires continuous search for measures to manage. It is hope that the findings of this study will assist the Taraba State and in particular SEMA to know the impact of their previous communication campaign efforts against flood disaster in the state. Thus, the study will help them to improve the campaign efforts in order to have better result in the future. Similarly, Federal government and NEMA among other agencies will find the work useful in designing policies and programmes to manage flood hazards speedily and in a coordinated manner all over the nation. The study will also assist International agencies that are interested in developing a sustainable response procedure to fight flood hazards and other natural disasters. Through the findings, they will know effective channels of communication to use in their campaigns against natural disasters in Nigeria. Furthermore, media organizations particular broadcast media will find the work useful in producing programmes aimed at educating the people about natural disasters especially flood.

The concept of Communication Strategies

Communications strategies are defined as a holistic planning approach to engage a target audience to ensure greater effectiveness (Murphy, 2014). According to Wash-Cluster (2008), communication strategy needs to be established to guide the awareness campaign and ensure coordination among stakeholders. Different communication channels will be used depending on the target audience and cultural considerations. It is important for communicators to realize that messages regarding flood risk are competing in an environment of information bombardment.

However, Walaski (2011) confirmed that the methods used in communication strategy varies from oral methods such as press conferences, television, radio, drama, interview, art and photography exhibitions, disaster day campaigns, adverts songs public meetings and safety meetings. While the written communication methods range from the traditional press release to brochures, safety posters, leaflet drops, newspapers and magazines and newsletters. And the new methods include: rob calls podcasts, websites, blogs and social networking sites.

In the same vein, UN/ISDR (2002) believed that when designing a communication strategy it is necessary to understand the literacy and language skills of the intended audience. It is argued that this is a critical factor in communication strategy design. For instance, Afghanistan is prone to earthquakes and droughts, as well as floods. Partly because of its mountainous geography, the country has some of the most isolated villages in the world. As around 80 % of Afghans have radio sets in their homes, the approach adopted was to integrate disaster risk reduction (DRR) messages into BBC world services educational radio programme called New Home, New Life. The programme has been found to be a cost effective and efficient way to reach the large section of the population who have radio sets in their homes, given that direct engagement with isolated communities is otherwise extremely difficult (UN/ISRD, 2007).

Thus, care should be taken to select media which will not only reach the sectors of the population most at risk, but also those best able to target hard to reach audiences. This may be due to the nature of the audience or their locations; for instance is the targeting of women led households in Cambodia (MRC and ADC 2007). In Senegal, the methods used to communicate included plays, exhibitions media broadcasts, interviews, photo exhibitions and open air conferences (IFRC 2010). However, in Nigeria the pattern is similar with the rest of the developing countries of the world, no medium is all sufficient for this purpose, all are means to a common goal and any one can be used in combination with another to produce results. For instance newspaper and magazines cannot make much impact at the grassroots level where more than 56% of the population can neither read nor write. Besides, out of the literate audiences about 30% cannot read English but indigenous languages. Notwithstanding, community, newspaper can serve this purpose but the question is how many of such community based papers are published in Nigeria (Owolabi and Ekechi, 2014).

The Concept of Communication Channels

Communication channels use of flood disaster management and other campaigns are numerous but the major channels include the following:

Conventional Channels

Communication, entertainment and information are important for rural living, as they are for urban. Bame in Omogor (2013) noted that access to modern communication media, makes rural lives more productive and comfortable. Today, rural projects, businesses, schools and growing

number of households make daily use of audio-visual equipment like radio, television, video, mobile phone and so on. The services are wide, and they could be as crucial as a 2-way radio link between a remote clinic and an urban hospital or a computer for a rural NGOs office or a radio cassette player used in a household for entertainment. The modern communication equipment for rural people such as radio, telephone, video and video-player and public address system GSM are very important channels of information acquisition and dissemination to rural people. The use of GSM by the rural dwellers enables them to communicate timely and accurately with people outside their environment. Furthermore, households' demands for television, video and radio may increase in the rural areas if indigenous language is used for transmission, (Omogor, 2013).

Overview of Previous Communication Strategies used by Taraba State Government in Flood Disaster Management

Taraba State is one of the flood prone areas over the years. Flood has been a recurrent phenomenon in the state in almost all senatorial zones of the state. In the Southern part of the State, places such as Ibi among others places have suffered flood, in the central places like Bali, Gassol among others have fallen victim to several disasters while in the Northern places like Lau and Jalingo metropolis among others have their share of the disaster. The worst of all is the 2005 flood, which cleared the popular Nukkai Bridge in Jalingo leading to the death of many people.

After 2005 flood disaster, the Taraba State Government responded to the problem of flooding in the study area by embarking on a number of activities through the State Emergency Management Agency (SEMA) and ministry of Environment and Urban Development. Media in the state such as NTA, Taraba Television (TTV) and Taraba State Broadcasting Service (TSBS) were used to create awareness of the danger of dumping waste/refuse into drainages in the study area. Casual labourers were employed to evacuate the waste/refuse dumped into the drainages to allow for free flow of water. The government had also embarked on annual advocacy visit to the flood prone communities with the aim of creating awareness. SMS alert was also employed by the Taraba State Government to sensitized people about flooding as well as sent early warning signals.[1]

Risk Communication: Nexus with Flood Disaster Awareness Campaign

According to Owolabi and Ekechi (2014), the frequent manner at which flooding disaster happens in Nigeria, leaving scores of deaths and monumental devastation has provoked the questioning of the media's role in disseminating vital disaster warning information to the vulnerable population. Nevertheless, UNISDR (2002) is of the view that risk communication is "the processes of informing the general population, increasing their levels of consciousness

[1] Interview with the Administrative Secretary of State Emergency Management Agency (SEMA) in October, 2016.

about risks and how to take action to reduce their exposure to hazards" (p. 340). According to Covello (2008), risk communication is a science based approach to communicate effectively in high concern situation. In this context, Wallaski (2011) refers to risk communication as process of communicating information by a public or private organisation to an audience. This means that risk communication helps the audience understand their risk as well as what activities they can undertake to prepare for the hazard.

Moreover, Richard, Reilly and Jones (2003) provided a valuable contribution to the on-going refinement of risk communication in flood management. According to them, in order to reach a greater percentage of the population at risk an increasingly sophisticated approach to communication is required. This approach needs to recognize the difference within the general public and target messages and technique to meet the needs of those different groups. Furthermore, successful risk communication opens up new ways of working with the community such as building trust with community, encouraging self-help; utilizing community expertise, and more effective public participation in decision making.

Many studies detail the low level of flood awareness exhibited by occupants of flood plains and other flood prone areas (Mendel, 2011). Awareness may be naturally high in areas where flooding occurs regularly but is often deficient in locations subject to low frequency but high impact events. In an ideal situation, heightened awareness of flood risk would lead to mitigation activities and preparedness, which in turn reduce the impact of flood events. In Afghanistan, for example, a drama-based disaster awareness campaign was conducted via the medium of national radio. This was found to have been very successful in raising awareness of flood risk and in maintaining natural forest flood barriers (United Nations, 2007). The secret of success in such campaigns is to trigger local debates around issues that are relevant to the communities at risk.

In a nutshell, raising awareness is only one part of a wider strategy of flood risk interventions. It should be accompanied by information on measures and steps which will mitigate the flood risk. According to United Nations (2007), this was illustrated in a Vietnamese scheme, which was targeted at a range of interest groups (including builders, teachers and school children); this provided success in encouraging home owners to invest in flood and other related hazards resistant buildings. It is important for any awareness campaign to try and engage local communities so that maximum benefit can be obtained for the people at risk.

Review of Related Empirical Works

Numerous empirical studies have shown the power of communication to enlighten and educate the populace regarding different social issues and natural disasters. For instance, Mlozi, Churi, Tumbo, and Casmir (2012), conducted a "*Research on Understanding Farmers' Information Communication Strategies for Managing Climate Risks in Rural Semi-Arid Areas in Tanzania*." They argued that crop production risk caused by climate variability cannot be managed in the

absence of climate information. Despite the use of various communication strategies by rural communities in Tanzania, access and use of agricultural information is inadequate to cope with challenges in crop production. The study which was aimed at assessing farmers information needs, examine communication strategies used and hence recommended information and knowledge sharing strategies for improved decision making. In addition, the study examined how modern ICT used together with tradition methods can reduce risks and improve crop productivity of smallholder farmers.

A cross-sectional research design and simple random sampling techniques were used for the study. Interviews using structured questionnaires and focus group discussion were conducted to collect primary data from farmers and extension workers. Data were analysed using descriptive statistics where Statistical Package for Social Science (SPSS) was used. The findings showed that smallholder farmers require climate, market and agricultural inputs information to make strategic and tactical farm-level decisions for managing climate variability and extreme events. Climate information was found to be important factor for making decisions. Radio was found to be an important communication channel by the respondents in the study area, for communicating climate information. In addition, the respondents used extension officers and fellow farmers to access climate, market and agricultural input information. Mobile phones were noted to be preferred by surveyed farmers for communicating agricultural information. The study concluded that efforts to improve adaptation capacity of smallholder farmers in rural areas should target the extended use of information technology for improved access to climate information and advisories. Furthermore, development initiatives for managing risks of climate variability should focus on improving climate forecasts issued by Tanzania Meteorological Agent (TMA).

In another study, Farooqi (2014) looked at *Institutional Approach to Flood Disaster Management in Nigeria: Need for a Preparedness Plan*. Failure of the country's intervention strategies to satisfactorily ameliorate the sufferings of flood victims and speed-up the recovery processes justify the need for the adoption of a more efficient and innovative response plan to tackle flood emergency conditions in Nigeria. Going through the history of institutional response arrangements during flood episodes, the paper discovered the absence of well-articulated, organized institutional structure to co-ordinate response activities during emergency conditions. Existing response procedures were found to be ad-hoc, ineffective and poorly coordinated notwithstanding the plethora of agencies involved. Lagos state government has, however, developed a preparedness plan which is currently assisting all stakeholders, including those living in flood-prone areas, to anticipate/ implement recovery measures speedily in order to reduce flood damage potentials. Using the Lagos model as a case study, the paper appreciates the value of a preparedness plan and highlights its centrality in flood disaster management. Based on the positive effects of the Lagos model, the paper suggested that the federal and other state governments in Nigeria should follow the footsteps of Lagos state government by developing similar flood disaster management preparedness plans. This would enhance their ability to develop and speedily implement effective response and recovery measures.

Similarly, Oruonye (2012) conducted a study on *Assessment of Flood Risk Perception and Response in Jalingo Metropolis Taraba State, Nigeria*. The study revealed that flooding is now an annual occurring event in Jalingo metropolis especially after heavy rainstorm which is further worsened by the nature of topography of the area. The study area consist of undulating plain interrupted in places by low rising hills as well as poor/inadequate drainage network. The knowledge of the public flood risk perception is considered a crucial aspect in modern flood risk management as it steers the development of effective and efficient flood mitigation strategies. The study examined the level of individual flood risk perception and behavioural response in Jalingo Metropolis. The survey design method was employed by the study. The study interviewed people living in the study area using structured questionnaires with 252 respondents randomly selected from three of the most affected areas in the Metropolis. They included Mallam Gabdo, Mafindi and Low cost areas. In each ward/unit, 84 structured questionnaires were administered. Descriptive statistics were used to analyze the data. The result of the findings showed that 23.7% of the respondents were aware that the area was prone to flooding, while 76.3% were not aware. Also about 67.6% of the respondents said that they have evacuated their houses and shops to flooding in the area while 32.4% have never evacuated their houses or shops to flood problems in the area. The study, therefore, recommended the need to educate the people living in the flood plain on the dangers of continuous occupation of the area.

Again, Mavhura's (2011) thesis entitled: *Community Strategies to Enhance Flood Risk Communication in the Zambezi Valley, Zimbabw*e, explores the social vulnerability related to risk communication gaps at the community level and discussed the creation of strategies to enhance information sharing, bottom up activities and partnership development. These objectives were achieved using mixed methods of interview, survey and a workshop discussion. The study identified potential physical and socio-political vulnerabilities from all hazards occurring in the valley and reviewed that the valley residents were affected by lack of communication regarding forecast information and emergency plans and procedure during the 2008 flood disaster. The results also highlighted a number of external pressures exerted by national flood plain policies and procedures that restrict risk communication and affect social vulnerability in Zambezi valley.

Likewise, a study titled: *Towards Improved Public Awareness for Climate Related Disaster Risk Reduction in South Africa: A Participatory Development Communication Perspective* by Chagutah (2009), detailed majors to limit the adverse impacts of natural hazards such as, the increase of public awareness among communities of risk prone areas and how they can effectively minimize the risk of natural hazards. Results from the study showed that the capacity for the execution of successful communication for development campaigns in disaster risk reduction activities should be bolstered at all levels of government.

Another study titled: *Analysis of Editorial Discourse on Environment Challenges in Nigerian Newspapers: The Case of 2012 Flooding,* conducted by Okoro, Odoemelam and Martin (2013) revealed that flooding has become a serious challenge in Nigeria because it is among the most

frequent and costly natural disasters in terms of human hardship and economic loss. Their study noted that most flood victims do not get compensation or relief due to the politics involved in the allocation processes. They concluded that flood control needs the cooperation of government, community efforts and enlightenment programmes through environmental education and mass media.

From the preceding revelations, it was established that scholarship has established the fact that communication is central in creating awareness and influencing needed behaviour regarding natural disaster like flooding. It was indicated that, mass media among other channels have a significant role to play in creating awareness, knowledge and behavior change that will mitigate the risk of flooding in our society. However, it was discovered that there is scarcity of works that examined the effectiveness of communication strategies in Taraba State.

Theoretical Framework

This study is anchored on Risk Communication Model. The Risk Communication Model was propounded by Covello Vincent in 1980. The Risk communication model is about exchange of information on risk caused by environmental, industrial, agricultural process, policies or products, individual groups and institutions (Glik, 2007). According to Covello (2008), an effective risk communication model is based on several models that describe how risk information is processed, how risk perceptions are formed and how risk decisions are made. The several models that encompass risk communication model are four, namely risk perception model, mental noise model, negative dominance model and trust determination model.

The risk perception model identifies that the risk which kills or harms people and the risk that alarms and upsest people is often very different. For example, Covello (2008) clarified that there is virtually no correlation between the ranking of hazards according to statistics on the annual mortality and the ranking of the same hazards by how upsetting they are to people. This means that they are many risks that make the public worried and upset but cause little harm. Similarly, they are risk that kill or harm many people, but do not make them worried or upset. This model highlighted factors that influence an audience's perception of risk.

The mental noise model focuses on how people process information under stress (Covello, 2008). Mental noise is caused by the stress and strong emotions associated with exposures to risk. This means that when people are stressed and upset, their ability to process information can become severely impaired. Similarly, the model holds that when people are in a state of high concern or perceive a significant threat, their ability to process information effectively and efficiently is severely impaired (Covello and Sandman, 2001; Covello, 2008). In other word, in high stress situations, people typically display a substantially reduced ability to hear, understand and remember information. For example, Covello and Sandman (2001) stated that when people are stressed and upset they typically can attend to no more than three messages at a time.

Processed information at four or more level below their educational level and focus their attention on information they hear first and last.

The third model is trust determination model. A central theme in the risk communication model is the importance of trust in effective risk communication. Glik, (2007) maintains that when people are upset, they commonly do not trust authority. Trust, therefore, must be established well in advance of an actual crises event. Research indicates that proactive community outreach is one of the most effective means of achieving this goal (Santos, Covello, and McCallum, 1996).

The last model of risk communication, according to Covello and Sandman (2001), is the negative dominance model. The negative dominance model describes the processing of negative and positive information in high concern and emotionally charged situation. The model is based on a central theorem of modern psychology. When people are upset they put greater value on losses and other negative information or outcomes than on gains or positive information and outcomes (Maslow, 1970).

The relevance of risk perception model captures the fear and anxiety generated among inhabitants of Jalingo, especially during the 2005 flood disaster. Therefore, in setting any strategy the policy makers have to consider the fear and anxiety of the target audience, of the models under risk communication theory, these theories, as a matter of fact, form bedrock for media campaign planners in planning campaigns of this nature. The campaign is to sensitize the populace about flood and the risk involved. Therefore, the theory will go a long way in juxtaposing the campaign and the concomitant dangers involved in not heeding advice of Taraba State risk awareness campaign. The most relevant are the risk perception model and trust determination model. The trust determination model is central to explaining the strategies used in raising awareness campaign by the Taraba State on disaster management. There is need for trust in the campaign if the flood prone communities are to accept any information from the government.

Research Methodology

This paper adopted survey research method. According to Berger (2000) surveying is a research method researchers use to get information about certain groups of people who are representation of some larger group of people of interest to them. Hence, the design is useful to this work because it will enable the researcher gather information from large portion of the population. Population of the study is the residents of Jalingo Taraba State but the population of interest is people live in flood prone areas within Jalingo Metropolis. According to SEMA (2015), the estimated number of people living in the four flood prone areas in Jalingo metropolis is twenty four thousand three hundred and fifteen (24,315). Data were gathered using questionnaire from a sample size of 379. The sample size was determined via Raosoft online calculator with the margin error of 5% and confidence level of 95%.

Occupation	Frequency	Percentage
Traders	70	19.3
Farmers	91	25.1
Civil servants	152	42
Others	49	13.5
Total	**362**	**100**

Source: Field Survey, 2016.

In terms of age distribution, Table 1 shows that most of the respondents are within the age bracket of 28-37 years. This is connected to the fact that 129 respondents representing (35.9%) fall within the age bracket of 28-37 years. Looking at the table very closely, we can see also that about 96 respondents representing (26.7%) fall within the age bracket of 38-47 years. Going by this, it can be projected that most of the respondents at the flood prone communities in Jalingo metropolis belong to active class because two age (28-37 and 38-47 years) distributions had the highest frequencies represent (62.6%) of the total number of respondents. In respect of gender distribution, 275 respondents equaling (76%) are male respondents at the four selected flood prone communities in Jalingo Metropolis are male, while 87 respondents representing (24%) are female as seen in Table 1. Looking at the figures in the table, majority of the respondents are males this is because the areas under study are dominated by Muslims of which the researcher had limited access to females than males.

In terms of educational distribution, 92 respondents with (25.4%) have OND/NCE, 75 respondents with (20.7%) had secondary school level certificate, 71 respondents representing 19.6% had B.Sc. certificate (Table 1). These results revealed that most of the respondents are educated. Table 1, shows that 152 respondents representing (42.2%) are civil servant followed by 56 respondents representing (22.31%) are farmers, the first two categories of the respondents represent about (64.54%) of the respondents, 70 respondents with (19.3%) are traders and 49 respondents representing (13.5%) had other occupation. This is a true representation of the areas under study because majority of the habitants are either civil servant of low cadres or peasant farmers who are involved mostly in dry season farming known as “Lambu”.

RQ1. What types of communication channels employed by Taraba State Government to enlighten people about flood disaster?

Table 2: Types of channels respondents got their Flood warning

Types of channels	Frequency	Percentage
Interpersonal channel	5	5.5
Radio	51	56.7
Television	18	20
Ward head	6	6.7
Newspaper and magazines	10	11.1
Total (no. those that got the msg.)	**90**	**100**
Total	**362 (100)**	

Source: Field Survey, 2016.

In Table 2, 5(5.5%) claimed they received warning information through interpersonal channel; a total of 51(56.7%) received it through the radio; 18(20%) through television, 6(6.7%) through ward head, and 10(11.1%) through the newspaper and magazines. From the interpretation of data, it showed that those who received warning through the radio constituted the majority. The reason attributed to this is that, majority of the people in Jalingo are enthusiastic radio listeners.

Table 3: Frequency on channels of communication with SEMA

Response	Frequency	Percentage
Yes	162	66.7
No	81	33.3
Total (no. of yes to rescue)	**243**	**100**
Total (no. of questionnaire)	**362**	

Source: Field Survey, (2016).

Table 3 shows that 162(66.7%) respondents said that there was channel of communication between them and the government during the resettlement process, while 81(33.3%) respondents said there were no channel of communication between them and the government during the resettlement process.

RQ2. Which were the major communication strategies used by Taraba State Government before, during and after the 2005 flood disaster?

Table 4: Distribution of respondent's opinion on the best information strategy

Response	Frequency	Percentage
Door to door communication	187	51.7
Phone calls/SMS	37	10.2
Leaflets delivery	8	2.2
Radio/Television/Jingles	115	31.8
Faith based organization	15	4.1
Total	**362**	**100**

Source: Field Survey, 2016.

Looking at the Table 4, 187 respondents representing 51.75% of the respondents identified door-to-door communication, 37 (10.2%) identified phone calls/SMS, 8 (2.2%) identified leaflets, 115 (31.8%) have chosen radio/television/jingles while 15(4.1%) respondents have identified Faith Based Organisations as strategies adopted by the Taraba State Government before, during and after the 2011 flood disaster.The results have indicated that although door-to-door communication was the most used communication strategy, other strategies communicatively inclined were also adopted by the government in the management of the 2011 flood disaster.

Table 5: Frequency on respondent's preference of the information strategy

Response	Frequency	Percentage
No language barrier	162	44.8
Reliability	71	19.6
Easy and fast	83	22.9
Made in Places of worship	46	12.7
Total (no. of response)	**362**	**100**
Total (no. of questionnaire)	**362**	

Source: Field Survey, 2016.

Table 5 shows that 162(44.8%) respondents said they chose the best strategy to pass information as mentioned in table 5 because of no language barrier. However a total of 71(19.6%) respondents, said the strategy chosen is reliable. Nevertheless, 83(22.9%) respondents said it is easy and fast, while 46(12.7%) respondents said it is made in places of worship.

Table 6: Frequency on receivers of the warning messages

Option(s)	Frequency	Percentage
No	272	75
Yes	90	25
Total	**362**	**100**

Source: Field Survey, 2016.

From Table 6, only about 90 respondents representing (25%) said they got warning either from the government or a non-government organization, while 272 respondents representing 74 % did not get any warning before the flood disaster. This indicates that most of the respondents did not have acces to warning messages prior to the flood disaster.

RQ3 How did Communication Strategy Address the Needs of the Communities?

Table 7: Frequency on reaction to the warning

Reaction	Frequency	Percentage
Moved part of my property	9	10
Planned to move but could not before the flood	23	25.6
Move to a safer place	18	20
No action taken	40	44.4
Total (those who got the warning message)	**90**	**100**
Total (number of questionnaire)	**362**	

Source: Field Survey, 2016.

From the Table 7, one can depict that the channels of warning has not made positive impact on the respondents because only 18 respondents who represent 20% of the respondent acted affirmatively to the warning message, while 23 respondents representing about 25.6 % of the respondents have planned to move to safer place but could not before the flood. This is in line with what Sullivan and Bradford (2011) observe that "for public at risk to process a warning effectively, they must trust the source of warning find the source to be reliable and also comprehend the message."

Table 7: Frequency on communication strategy used by Government in Disaster management

Response	Frequency	Percentage
No	156	65.4
Yes	84	34.6
Total (no. of yes to rescue)	**243**	**100**
Total(no. questionnaire)	**362**	

Source: Field Survey, 2016.

In Table 7, 156 (65.4%) respondents are of the opinion that their communication with government has not addressed their challenges, while 84(34.6%) respondents are of the view that the communication by government did not address their needs. This implies that in spite of the communication strategies embarked upon by the government, the needs of people in the face of the 2011 flood disaster were not met.

Discussion of Findings

The research question 1, which sought to know the communication channels employed by the Taraba State Government to educate people about flood disaster, the data presented in Table 2 provided the answer to the question. Amongst the various channels, respondents got their warning information, 56.7% indicated that they got their information through Radio. This finding indicates that radio has the capacity to cut through the barriers of illiteracy (Baran, 2002).The findings seems to be in line with DTF report (1994) that explains that Radio is the most used while the local Televisions is used to a lesser extent. On the other hand the internet is hardly used for the purpose of information dissemination in disaster preparedness in Africa.

The second research question was to determine the major communication Strategies used by Taraba State. In this regard, 51.7% of the respondents identified door-to-door communication as one of the major strategies of communicating flood disaster information. The door-to-door communication strategy might have been in order to pass information, perharps, because it overcomes linguistic and other barriars that are associated with communication. This is in line with Omoger (2013), who argued that door-to-door communication dominates our activities at home, office, market and elsewhere. It helps to break the barrier of formal relationships, generates warmth and creates harmony that is necessary for socio-economic development. Therefore, the finding indicated that door-to-door communication strategy is considered a very good medium for communicating disaster information.

The third question which was to generate assess whether the communication strategy used by the government was able to address the challenges of flood in the communities. In Table 6, it could be seen that the communication strategies adopted by the government have failed. This is evident

with a total of 40(44.4%) respondents who indicated that communication from government on the flood warning was not taken widely circulated among the residents, while 23(25.6%) respondents planned to vacate the territory upon communication of warning on the tendency of flood but could not because government communication was not thought to be trustworthy. The finding here suggests that subsequently, residents would have to take warning on flood and related disasters seriously. This assertion is in line with Osullivan and Bradford (2011), who argued that for the public at risk to process warning information effectively, they must trust the source of the information to be reliable.

Conclusion

From the analysis of data generated and the various findings, it can be concluded that radio is the most widely acceptable means of communication. Door-to door-channels of communication was also proven to be one of the most effective methods for the disseminating of information in the study area. However, even if the information channels were effective, the people were not serious about the information that was provided prior to the flood disaster, asking them to evacuate the danger zones or embark on activities that would either prevent or minimize the effects of the flood. This is not a good development.

Recommendations

Based on the major findings and conclusion above, the study, therefore, recommends as follows:

1. The use of radio in flood disaster management should be intensified. State Emergency Management Agency (SEMA) and the local radio station in the state should work together to produce educative and enlightening programmes regarding flood disaster management in the state.

2. SEMA and other respective bodies in charge of disaster management should endeavour to employ other communication channels such as face-face strategies like market square, town hall meetings, village square to sensitize people about flood disaster management.

3. Notwithstanding, government should develop synergy between SEMA, traditional leaders, religion leaders and other Civil Society Organisations (CSOs), so that communication strategies can be effective.

4. Governments should also develop a good and trustworthy relationship with the citizens so that they can accept any call to disaster and also implement government program without any hitches.

5. People should adopt the culture of regarding information from government and relevant agencies seriously to mimimize the devastating effects of natural disasters.

References

Aspinwall, L. (1999). Introduction of section: Persuasion of the purpose of cancer risk reduction: understanding responses to risk communications. *Journal of the National Cancer Institute Monographs, 25,* 88-93.

Bantaje, S.M. (2005). Reporting Jalingo flood disaster by NTA Jalingo August–October 2000. Unpublished diploma project. Taraba State Polytechnic, Jalingo.

Baran, S. (2002). *Introduction to mass communication, media literacy and culture*. New York: McGraw-Hill.

Berger, E. (2000). *The practice of social research.* Belmont: Wards-worth Cengage Learning.

Chagutah, T. (2009). Towards improved public awareness for climate rotated disaster risk reduction in South Africa: A participation development communication perspective. *JAMBA*: *Journal of Disaster Risk Studies 2*(2), 113-126.

Covello, V. T. (2008). *Risk communication: principles, tools and techniques*. Retrieved on November, 23 from www.maqweb.org/techbriefs/tb49riskcom.shtml

Gilk, D.C. (2007). Communication for public health emergencies. *Annual Rev Public Health, 28*(1), 33-54.

International Federation of Red Cross and Red Crescent Societies (2002). *World disaster report: Focus on Discrimination.* Retrieved from http://www.ifrc.org/global/publication/disastersaccess on 25-6-13.

Maslow, A. (1970). *Motivation and personality*. Network: Harper and Row.

McQuail, D. (2009).*Theory of mass communication*. New York: Sage.

Mendel, G. (2011). *A guide to integrated urban risk management for the 21st Century integrated flood risk management: Non-structural measures.* Bangkok, Thailand: Thai Press.

Mlozi, M. R., Churi, A. J., Tumbo, S. D. and Casmir, R., (2012). Understanding farmers information communication strategies for managing climate risks in rural semi arid areas. *Tanzania International Journal of Information, 2*(11).

MRC and ADC (2007). Case study 3: Reaching out to public raising community awareness to flood risk reducing. Cambridge: Cambridge Press.

Murphy, G. J. (2014). *Mass communication practical theory*. Academic Press.

National Population Commission (2006). *2006 Nigeria population census*. Abuja: Federal Government Press.

O'sullivan, J. J. and Baradfoll, R. A. (2011). Improving communication strategies for effective flood risk management. A paper presented at National Hydrology Conference London.

Okaka, W., Migunga, G. A., Ngaira, J. W., & Mbego, J. (2009). The national biomass energy policy communication campaigns for community access to sustainable renewable energy in east Africa. *Journal of Geology and Mining Research*, *1*(4), 104-109.

Okoro, N., Odoemelam, C.C. and Martin, O.P. (2013). Analysis of editorial discourse on environmental challenges in Nigerian newspapers: The case of 2012 flooding. *New Media and Mass Communication, 15*(2), 35-40.

Okunna, C.S & Omenugha, K. (2013). Introduction to mass communication. Enugu: New Generation.

Omogor, M. (2013). Channels of information acquisition and dissemination among rural dwellers. *International Journal of Library and Information Science*, *5*(10), 306- 312.

Oruonye, E. D. (2012). Socio-economic impact assessment of flash flood in Jalingo metropolis, Taraba State, Nigeria. *International Journal of Environmental Sciences*, *1*(3), 135-140.

Owolabi, T.O.S, Ekechi, C.O. (2014). Communication as critical factor in disaster management and sustainable development in Nigeria: *International Journal of Development and Economic Sustainability 2*(3), 58-72.

Richardson, J., Reilly, J. and Jones, P.J.(2003). *Community and public participation: Risk communication and improving decision making in flood and coastal defence*. Presentation at 38th DEFRA Flood & Coastal Management Conference, Keele University.

Santos S., Covello, V.T. and Mccallum, D. (1996). Industry response to SARS Tile III: population prevention, risk reduction and risk communication. *Risk Analyse 16*(1). 57-65

Shadrach, I. (2013). An Assessment of the impact of public relations in flood management in Nigeria. Case study of Lau Local Government Area. A Bachelor of Science Degree project submitted to Department of Mass Communication, Taraba state University, Jalingo.

Tsegyu, S. (2015). An appraisal of mass media awareness campaign in curbing the spread of Ebola virus disease among residents of Minna, Nigeria. *Reviews of communication and media studies, 1*(1), 77-84

United Nations International Strategy for Disaster Reduction (2007). *Building disaster resilient communities: Good practices and lessons learned.* Switzerland: Geneva Press.

United Nations International Strategy for Disaster Reduction (2002). *Living with risk-a global review of disaster reduction initiatives*. Switzerland: Geneva press

Walaski, P. (2011).*Rise and crises communications: methods and message*. New Jersey: John Wiley and Son Inc.

Yates, R., Alam, K., Twigg, J., Guha-Sapir, D. and Hoyois, P. (2002). *Development at risk: Brief for the world summit on sustainable development*. London: Benfield Grieg Hazard Research Centre.