

PLACE OF INFORMATION IN DISASTER MANAGEMENT: A CASE STUDY OF FEDERAL CAPITAL TERRITORY (FCT) ABUJA

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Abstract

A survey research method was used in conducting the study. The population of the study consists of information professionals and residents of Abuja. Random sampling procedure was adopted to administer the research instruments. The research used questionnaire and interview as instruments for collecting data. A total of two hundred and twenty (220) copies of the questionnaire were administered but only two hundred and ten (210) were duly completed and returned which formed the basis of analysis. Frequency and percentage were used in analysis of the data. The research result showed that the challenges against reaching public with quick information were public inaccessibility to media facilities, lack of network services in remote areas and illiteracy/ignorance of the importance of information. Based on these findings, it is recommended that the government should ensure all information infrastructures are put in place so as to get information on disaster management across to public. Also, a disaster management information source should be such that public can easily have access to it.

Keywords: Information, Disaster Management, Federal Capital Territory.

Introduction

Every society is vulnerable to disaster either natural or man-made and due to the devastating nature of disasters on society, there is need for proper information dissemination to caution and create awareness among people concerned. Disasters are unforeseen circumstance that affects the day to day activities of the community. Wattergama (2007), defined disaster as “an impact of a natural or manmade hazard that cause human suffering or creates human needs that the victims cannot alleviate without assistance”. Similarly, Huang, Chan and Hyder (2010) added that “disaster, regardless of etiology, exceeds the ability of the local community to cope with the event and requires specialized resources from outside the area impacted from”. From the above definitions, it can be said that when disaster occurs, either natural or man-made, the effect of such occurrence might be so devastating that the affected community may need to seek assistance from foreign or local authorities. Due to the devastating nature of disaster on the society, such menace needs to be treated with great concern. These disaster menaces that are threats to life and properties include: flood, hurricanes, fires, bombings, typhoon, earthquake, volcanic eruptions, chemical spill, civil disturbance, terrorism, war, sandstorms, mass failure of utilities and the rapid spread of disease.

To avoid the devastating effect of disaster on society, there is need for proper information dissemination for preparedness, mitigation, response and recovery. Information as a concept bears a diversity of meanings, from every day usage to technical settings. Adeel (2009) stated that, psychologists have described information dissemination or communication as a need comparable with other basic needs while philosophers are of the view that the free flow of information is the right of the people which enables them to participate effectively in the process of enhancing the society's awareness, education, knowledge and learning process. For people to take calculated and appropriate decision on issues that affect them, it is believed that the presence of information create opinions and set the stage for meaningful decision-making.

Information constitutes the raw materials from which options or alternative emerge. The aim of information or communication is to educate, enlighten and provide knowledge which in turn transform people's outlook by what they know. The knowledge enhances understanding and gives good orientation which invariably generates the transformation of self.

The reduction, readiness (prevention), control and relief strategies are what are embedded in disaster management in the society, Ezekiel (2008) asserted that a single disaster could wipe away many years of developmental efforts that fails to appreciate the inclusion of measures for prevention, mitigation, responses and recovery which is embedded in disaster management.

Therefore, the first important steps towards reducing disaster impact are to correctly analyze the potential risk and identify measure that can prevent, mitigate or prepare for emergencies. By this, one will know the right media to educate the society about such disaster. The following are some of the media that can be effectively used for disaster warning purposes: radio and television, telephone (fixed and mobile) town cryer, short message service(SMS), satellite radio, internet, amateur and communication radio, geographical information system (GIS), Remote sensing (RS), Global Positioning system (GPS) and so on.

Nigerian environment has been affected adversely both by natural disasters and human activities. There is evidence that unregulated and unguarded exploitation and excessive consumption of natural resources in Nigeria has inflicted severe damage to the environment (UNEP/GRID, 2011). Urbanization, agricultural and industrial activities, unsustainable hunting of wildlife, air, water and soil pollution, flooding, deforestation, desertification and emission of various greenhouse gases are all evidence of the adverse effects of continued human activities in the environment today, in most urban areas, extensive flooding is experienced almost every rainy season in many towns in Nigeria. Furthermore, occurrence of disasters and emergencies has increased in frequency and intensity in the last decade and especially in recent time.

The Federal Capital Territory (FCT) is at significant risk of natural and technological disaster. Demand for land for commercial and residential purposes in the FCT has led to the use of unsuitable terrain prone to natural hazard. Many informal settlements are therefore located on dangerous or unsuitable areas such as sewage lines, unstable slopes etc; escalating population growth, poorly planned satellite towns with increasing number of inadequately constructed and badly maintained buildings increase the level of vulnerabilities in the FCT. The imperative to prepare for and protect against these threats touches every community in the FCT.

Disaster result when an extreme natural event coincides with a vulnerable human settlement. In the FCT today, the frequency of disasters like flood and fire is increasing therefore, any effective strategy to manage disaster risk must begin by identifying the hazards and the areas in the community that are particularly vulnerable. This will help to determine the longer term needs of the population that are exacerbating vulnerability and will therefore contribute to the development of sustainable relief strategies.

Problem Statement

The importance of information to any society can never be over emphasised. Information is a very essential commodity, and whoever is in possession of it, is in possession of power of knowledge. In light of this, Okoro (2004) posited that information is knowledge transmitted to a sentient being. Knowledge is therefore expanded when the right information is acquired by the right persons at the right time. However, the researcher observed that several studies have been carried out on disaster generally but less has been done on information for disaster preparedness and recovery especially in urban cities like Federal Capital Territory (FCT) Abuja. This study therefore, is to investigate the place of information in disaster management in terms of preparedness, response and recovery in FCT Abuja.

Study Objective

The purpose of the study was to investigate information as tool for disaster management in FCT. The study is to achieve the following objectives.

1. To examine the relevance of information to management of disaster in FCT.
2. To identify the channels/media used for disseminating information for disaster management in FCT.
3. To ascertain the extent of information for recovery in FCT.
4. To identify the factors militating information dissemination in FCT.

Literature Review

Information in many societies is an agent of awareness and it can create an attitude change in man. As a matter of fact, information and its various aspects will profoundly affect individual and organization that communicate and use it. According to Afolabi (2004) information means knowledge given or received of some fact or circumstance. This definition simply implies that one becomes aware of situation or circumstance through information disseminated and received. Thus, knowledge is a product of information and it is a unique and critical source of living without which human life may be heading for crises and isolation. Aguolu (2002) posited that information can be described as a response caused by external stimulus that conditions a person's behaviour or the amount of impact received from the exterior that modifies our knowledge state. Thus, information can be described as a process by which we receive the event of the external, giving us the opportunity to have informed judgment and decision.

In disaster management, information is a major stake. It's fundamental for the authorities to inform the public in real time at the different steps of the crises, from the prevention, occurrence, response and rescue actions or infrastructure restoration progressions. Actually, different systems can be used by the authorities to progress in the information dissemination. It can be active or passive systems. In the active situation, the authorities record their messages in a specific record and people have to call an emergency number to get the information. But the new technologies make it possible to develop passive systems in which the information is directly sent to a specific geographical area. With these systems, the service in charge of the people information can decide to select a specific geographic area and send a vocal or written message to all the phones fixed or cell phone. The same application can be used to send information to specific groups of population, like rescuer teams, volunteers, local authorities etc.

Disasters are sudden happenings that often subject lives, properties and the entire environment to risks and hazards of different sources and dimensions. Alegbeleye (1994) described disasters as events whose occurrence is sudden and unusual and the consequences are hazardous and destructive e.g. fire, flood, bomb threat, theft, lightning, earthquakes, electricity faults etc. Emmanuels (2007) also define disaster as "a sudden disruption and destruction of normal livelihood that has impacted negatively on the lives, properties and the environment". From the above definitions disasters are unannounced and sudden events which cause great damages, enormous calamity, loss of large sums, and untold hardship to the victims involved both at local, state, national and international levels and having long-term adverse effects on agency operations which makes disaster preparedness and recovery a necessity for mitigation and recovery in case it occurs. Thus, disaster preparedness activities include; planning, budgeting, training, communication, guiding, signing, prevention strategy and cooperative efforts. And when all these activities are observed and executed disasters can be prevented and the effects minimized.

The management of the major disasters necessitates to have a transversal approach and to take in account various parameters, like numbers and state of victims, social and economic information, list and detail of strategic infrastructures impacted. Geographic information systems (GIS) offer new possibilities for the disaster characterization, evaluation and management. By their integration capabilities of different data, basic maps, hazard maps and timely information, these tools can be used as veritable decision support systems (Dumaz 2007). Therefore disaster management is no longer a choice, but mandatory for all including individuals and organization. Because recent disasters happenings in and outside Nigeria like recent flood in the country and earthquake in Haiti in 2009 etc, poses numerous challenges to decision makers in developing as well as developed countries. However, with global technological development continuous process by individuals groups and countries to manage disaster, it is an effort to avoid or minimize the impact of disasters resulting from either natural or man-made hazards. And effective disaster management relies on thorough integration of emergency plans.

Disaster control and recovery plan which is part of the preparedness becomes a necessary to help in limiting or stopping the frequency of disaster occurrence, as well as reducing the impact of the disaster in case it occurs. A disaster control plan is a written documentation that records the counter measures taken against an event which is wholly unexpected and causes damages to lives, property and the environment. The "disaster plan" aims to provide simple and flexible guidelines for coping with an institutional or organizational hazard contained in the management policy document. And the plan should be written clearly and understood by everyone likely to be involved, updated regularly and stored copies on and off site. In a disaster, destruction of items can occur rapidly, and with a plan on ground and a quick action will be taken to minimize the degree of the

destruction. Blagg (2008) opined that disaster control plan is necessary because arrangements can be made before any incident and they can be thought to ensure a swift and effective reaction.

Lives and property worth millions of naira is destroyed on a daily basis due to the nonchalant attitudes towards safety and precautionary measures. Disaster preparedness in time like this becomes the only remedy. Disaster preparedness means all efforts put in place and articulated in readiness to counter the occurrence or mitigate the impact of disasters either natural or man-made disaster.

Disaster response information is communication made in reaction to disaster. This is the phase concerned with actualization of the preplanned activities in disaster occurrence to reduce or ameliorate the negative impact of a disaster. This could be in search and rescue operations aiming at salvaging lives, properties and the environment. The most difficult period of a disaster is the immediate aftermath. This period calls for prompt action within an exceptionally short period of time. In the aftermath of any disaster, a significant number of individuals will be injured and/or displaced. Many of them may still be living with the trauma they have encountered, including loss of loved ones. Affected individuals may also be without food or other essential items. They might be waiting in temporary shelters, with no idea what to do next. Some might need immediate medical attention, while the disaster aftermath environment also creates ideal breeding grounds for possible epidemics (Wattegema, 2007).

All these can be best managed if people are well informed because information is a tool of creating awareness among people involved. Example, radio can be used to inform people and victims of what to do, and also telephone can be used to call the attention of emergency agencies like relief organization.

A disaster reconstruction has to start as soon as the initial disaster cleanup has taken place. Disaster recovery includes actions that assist disaster victims to return to a sense of normalcy after a disaster. The fact that a plan has been carefully drawn up does not immunize the organization absolutely from a disaster. Recovery procedures are therefore necessary in case it occurs, it will be able to address it rationally and competently; and this is concerned with relief package, rehabilitation and reconstructions aimed at restoring normalcy. This is because in the aftermath of disaster, a significant number of victims will be injured and/or displaced. Many of them might still be living with the trauma they have encountered, including loss of loved ones. Affected individuals also are without food or other essential items. They might be waiting in temporary shelters, with no idea of what to do next. Some might need immediate medical attention. Disaster aftermath environment also creates ideal breeding grounds for possible epidemics that might warrant relocation. This entails that information for disaster recovery planning is an indispensable effort to forestall disaster management.

The following are some of the media that can be effectively used for disseminating disaster management information. Some of these information technologies can be effective, depending on the medium used. However, it is not a question of one medium against another. All aim at a common goal of passing disaster information as quick and as accurate as possible. Any one or combination of the following media can be used for disaster management information. This means that some of these information technologies can also be used in other areas of disaster management such as disaster preparedness, response and recovery.

When considering the most traditional electronic media used for disaster warning, radio and television have a valid use. The effectiveness of these two media is high because even in developing countries and its rural environments where electronic communication may be relatively low, they can be used to spread warning quickly to a broad population. The limitation of these media is that it is a one-way communication media in which the recipient might not get message on time, especially if the recipients are not around at the time the information is being relayed; such information may be urgent that needed immediate evacuation or action.

Telephone plays an important role in warning communities about the impending danger if a disaster. Example of how this technology has helped to save lives was provided by Wattegema (2007) that "Perhaps the most famous was an incident that occurred in one small coastal village of Nallavadu in Pondicherry, India. A timely telephone call – warning about the impending tsunami – was said to have saved the village's entire population of 3,600 inhabitants, as well as those of three neighbouring villages."

The drawback of this includes limited coverage in some areas; especially in rural and coastal area. The other drawback is the network congestion that usually occurs immediately before and during a disaster, resulting in many drop calls in that vital period that cannot be complete.

Short message service (SMS) is a service available on most digital mobile phones that permits the sending of short messages also known as "Text message" between mobile phones. During the 2005 Hurricane Katrina disaster in the US, many residents of affected coastal areas were unable to make contact with relatives

and friends using traditional landline phones. However, they could communicate with each other via SMS more easily when the network was functional.” This is because SMS works on a different band and can be sent to receive even when phone lines are congested. SMS also has another advantage over voiced calls in that one message can be sent to a group simultaneously.

The internet is a global network of networks enabling computers of the kinds to directly and transparently communicate and share services throughout much of the world. It constitutes a shared global resource of information, knowledge, and means of collaboration among countless diverse communities.

The role internet, email, web 2.0 such as face book, twitter, blog, and the like can play in disaster warning entirely depends on their penetration within a community and usage by professionals such as first responders, coordinating bodies, etc. Huang, Chan and Hyder (2010) gave a vivid account on how these technologies have helped in Tainwan Morakot Typhoon in 2009 when web users began reporting the real time situation using blogs. In addition, a forum was established where internet users living near areas battered by the storms were advised to gather information, such as sustained damage or assistance needed. Some users used Google maps on which residents who were waiting for rescuing could overlap information such as their current location and, the lasted situation of damage caused. Twitter users also sent messages to help rescuers acquire accurate position for their family and friends who lived in affected areas.

Geographical information system (GIS) systems used for storing, editing, analyzing, sharing and displaying geographic data. Adeel (2009) explained GIS as “a computer system capable of integrating, storing, editing, analyzing, sharing, and displaying geographically – reference information.” The technology allows emergency planners to easily identifies areas that are disasters prone and zoning them accordingly to risk magnitudes thereby enabling real-time monitoring for emergency early warning. Also, assists during emergency response times in the event of a natural disaster because it establishes a link between partners and critical agencies, which allow disaster managers to know where relevant agencies are stationed, however, the challenge of this technology required large amounts of information (input) to get useful output from the system.

This technology is used to acquire information about an object or phenomenon, with the use of electromagnetic devices. Adeel (2009) explained RS as “set of techniques used to obtain information about the earth's surface and atmosphere at some distance, usually by means of radiation from the electro-magnetic spectrum e.g. Earth observation and Weather satellite.” Information derived from remote sensing and satellite imagery plays an important role in disaster management and crisis prevention.

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METHODOLOGY

Survey research design was adopted for the study and structured questionnaire was used to collect data. A total of two hundred and twenty (220) copies questionnaire were administered using random sampling technique to the residents of Federal Capital Territory (FCT) Abuja, Two hundred and ten (210) copies questionnaire were duly completed, returned and found usable for the study. Frequency and percentage were used to analyse the research questions.

A total of two hundred and twenty (220) questionnaires were produced and administered to the residents of FCT and information professionals as depicted in the below table:

Findings and Discussion

The data collected are tabulated in the table from using frequency distribution and percentage to analyze and interpret the findings.

Table 1 Relevance of disaster management information to the public

Variable	Frequency	Percentage
Relevant	170	81%
Fairly relevant	40	19%
Irrelevant	-	-
Total	210	100%

The relevancy of disaster management information to audience. The table 1 shows that the importance of information in any society cannot be relegated to the background. This is clear when about 83 (80.6%) respondents agreed that information on disaster management is much relevant to them, while only 20 (19.4%) respondent considered information on disaster management is fairly relevant

Tables 2 Type of media used to disseminate information to the public

Media	Frequency	Percentage
Radio	60	28.5%
Television	50	23.8%
Newspaper /magazines	40	19.04%
Bulletins / Newsletter	30	14.2%
Social network	30	14.2%
Total	210	100%

Type of media used to disseminate information to audience . The table 2 shows that radio is the commonly used medium to reach audience quick. Those that indicated radio constituted 30(28%) respondents, while Bulletin/Newsletter and social network have the least number of respondents with 15 (14%) respondents each. This indicates that people are much familiar with the radio.

Table 3 To what extent do public responded toward disaster management information

Variable	Frequency	Percentage
To a large extent	80	38.0%
To some extent	110	52.3%
No response	20	9.5%
Total	210	100%

To what extent do audiences respond toward your message? Audience response can be noticed through their attitude change toward the information disseminated to them either positive or negative. Those that indicated that to a large extent the information changed them constitute 40(37.4%), those that indicated to some extent were 50(46.7%) respondents while 17(15.9%) respondents did not respond. This may be because they do not have access to the information.

Table 4 Factors militating information dissemination

Factors militating information dissemination	Frequency	Percentage
Audience inaccessibility to medium facilities	48	22.8%
Lack of network services in remote area	47	22.3%
illiteracy/ignorance of importance of information	48	22.8%
All of the above	67	31.9%
Total	210	100%

Factors militating against reaching public with quick information. Table 4, shows the militating factors that confront information professionals in reaching the audience with quick information. Thus, majority of the 39(36.4%) respondents indicated all the above stated problems are factors distracting reaching the audience with quick information

Conclusion

The management of disasters necessitate to have transversal approach and to take into account various parameters to caution about disaster occurrence before and after because, disaster management is no longer a choice, but mandatory for all, including individuals and organizations. In disaster management, information is a major stake. It is fundamental for authorities to inform the public in time at the different stages of the crisis. That is, before it happens, prevention measures have to be taken and even when it occurs, rescue action should be taken. In this case, the power of information is enviable, information in many societies is an agent of awareness and it can create an attitude change in man. As a matter of fact, information and its various aspects will profoundly affect individuals and organizations that communicate and use it. This simply implies that one

become aware of situations or circumstances through information dissemination received, thus, knowledge is a product of information and it is a unique and critical source of living without which human life may be heading for crisis and isolation.

Recommendations

Based on the data analysis and presentation, the following recommendations were made:

1. The government should ensure that all information infrastructures are put in place so as to get information on disaster management across to the public concerning their environment.
2. Information professionals are to relate relevant information and the information should be in such a way that it will educate and create awareness among the public about disaster management.
3. The information professionals should be able to determine on the best medium to communicate to audience after considering their environment and the categories of people living in such area and the common spoken language in the area so as to relate the message in the way they will understand the information communicated to them and utilize it as expected.
4. Information on disaster management should be made in such a way that it will attract the attention of audience and make them have interest in listening to such.
5. Modern information communication technologies such as internet and its facilities, Geographical Information System (GIS), Remote sensing (RS) etc should be employed to manage disaster.

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