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## Disaster Preparedness Plan and Response Strategy as a Panacea for Effective Information Resources Preservation in University Libraries in North East, Nigeria.

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**Disaster Preparedness Plan and Response Strategy as a Panacea for Effective  
Information Resources Preservation in University Libraries in North East,  
Nigeria.**

**BY**

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**ABSTRACT**

The objective of the study is to determine the types of disaster preparedness plan and response strategy in university libraries in North East, Nigeria. Descriptive survey research design was adopted for this study. The study covers university libraries in North East, Nigeria. Questionnaires were used to elicit data from the respondents. The population of the study comprised of university libraries in the six states in the North East zone of Nigeria such as; Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe states. The researchers employed a purposive sampling technique in selecting the university libraries. 215 copies of the questionnaires were distributed to the respondents; 200 copies of the Questionnaire were retrieved representing 93% response rate. The data collected from the respondents were analysed using simple percentage and frequency count. The study revealed that the types of disaster preparedness plan in university libraries in North East, Nigeria are; creating and updating contingency plans, insurance of library collections, identifying alternative storage sites and providing adequate fire protection apparatus. The study also identified response measures as a panacea for effective information resources preservation such as; taking emergency response activities, production and documentation of disaster plan, up-to-date keeping

of disaster plan and establishing of disaster response team. The study recommended that all university libraries in North East, Nigeria should ensure constant surveillance of their library stocks to identify any damaged materials, all university library buildings in North East, Nigeria should provide emergency exit doors, university libraries in the North East, Nigeria, should mount electronic alarm system on their information resources for quick response in an event of any occurrence. The management of the university libraries should educate users on the impact of theft and mutilation of library resources.

**Keywords:** *Disaster, Effective Information, Nigeria, North East, Panacea, Preparedness Plan Resources Preservation, Response Strategy*

## **INTRODUCTION**

Libraries are organized institutions that maintain the record of the existence of different cultures. These records not only connect our present with the past, but also echo the research, educational, social and historical aspects of different generations. Libraries in general are experiencing unprecedented demands for change both in the way they work and the information and materials they provide. Libraries have tended to greet the need for change with feelings of insecurity and visions of ongoing chaos. The vitality and relevance of academic libraries according to Rehman (2014) are increasingly at risk. He stated that faculties and students expect more from libraries due to the growth of information available through electronic resources. These information resources must be adequately safeguarded against damage and therefore, university libraries are expected to establish disaster preparedness plan in order to realized effective service delivery.

University libraries, as essential educational resources Centre's, are expected to be proactive in direction control on information resources provision in order to be relevant on effective and efficient service delivery required by the university communities. According John and Paul (2003), defined university libraries as a library or libraries of a university which obtains and maintains collections of books and other media and provides information services to users. They are established in a physical or digital location to preserve scholarly research resources in support of universities' academic operations. University libraries in Nigeria have been making significant contribution to the mandates of their parent institution. These mandates are teaching, research and community services which are geared towards social, political and economic development of the country. Fabunmi (2002), described university libraries as an organised collection of information resources (print and non-print) which form an integral part of any tertiary

institution. Therefore these print and non-print information resources must be well preserved against any disaster in libraries.

Disaster preparedness is an indispensable plan for the efficient functioning of any library. Hanse (2019) described disaster preparedness plan as a written document that describes the procedures devised to prevent and prepare for disasters, and those purposed to respond to and recover from disasters when they occur. The author posited that a written disaster preparedness plan will relieve much of the confusion that arises during a crisis situation. The plan prioritizes what should be salvaged and what should be dealt with immediately in case of an emergency. Disaster preparedness plan are important for libraries, as they collect and provide access to information and knowledge of human intellectual scholarly ideas and work. The plan is prepared to minimize the impact of losses caused by disasters. In other words, the basic concept of a disaster preparedness plan is to minimize risks and maximize the efficiency of response if a disaster occurs (McIlwaine, 2005). They are response strategy taken to prepare for and reduce the impacts of disasters.

Response strategy enhances effective information resources preservation in libraries through taking quick action to any threat which can affect library resources and consequently, loss of lives. Disaster response is crucial during and after the catastrophe. McIlwaine (2006) categorised disaster responses into primary and main disaster responses. He stated that when disaster strikes, it is advisable for libraries to follow established emergency procedures for raising alarm, evacuating personnel and making the disaster site safe for recovery. It is therefore, important for university libraries to adopt response measures in order to curtail or mitigate any occurrence to their libraries, as well as damage to information resources. When adequate response measures are put in place, information resources can be protected from damage by preservation.

Preservation of information resources is an essential aspect for safety, access and consultation of particular material by our present and future users in libraries. Without preservation, information resources are not secured and cannot be effectively accessed by our present and future generation patrons. The term preservation can also be described as a process by which all actions of safeguarding library materials and other resources are taken into consideration to reduce deterioration by the library management. Muboful, (2020) described preservation of information resources to encompasses all the managerial and financial considerations such as

storage, accommodation provision, staffing levels, policies, techniques and methods involved in preserving library and archives information resources and the information contained in them. Therefore, university libraries must adequately preserve their information resources against any danger and for future use. Thus, Libraries preserve information resources of great thinkers of the past, present and future for the purpose of future use and for safeguarding the information resources from damage. It is therefore, obvious that libraries have responsibilities to preserve, conserve, and restore materials in form of print and non-print format for posterity, access and use.

### **Statement of the problem**

The libraries are pivots of information and learning centres in academic institutions and are very vital for advancement of education and training. One of the primary focuses of every library is the provision of quality information resources for the pursuit and sustenance of quality service delivery to its users. This also underscores its relevance in the system and justifies the huge investment in it. However, with the hard economic situation in the country which has resulted in dwindling budgetary allocations to many libraries, as well as difficulties encountered in replacing lost or damaged information resources has compelled libraries to take quick response to protect its resources from destruction as a result of any disaster.

However, the state of disaster preparedness and response strategies in many academic libraries leave much to be desired. Many university libraries that are aware of library disaster do not have an established disaster preparedness plan and articulated response strategy for combating disaster. Most of the university libraries in the North East, Nigeria prefer a fire brigade approach rather than taking proactive measures in preventing or mitigation of disaster. Furthermore, library staff are not given training on how to handle disaster equipment's and prevention strategy. A situation such as this will definitely lead to unpredictable destruction of library and its resources in the event of disaster. These factors among others prompted the reason for the investigation of this study on "disaster preparedness plan and response strategy as a panacea for effective information resources in North East, Nigeria".

### **Objectives**

1. Examine the types of disaster preparedness plan in university libraries in North East, Nigeria

2. Ascertain the preservation measures employed to safeguard information resources against disaster in university libraries in North East, Nigeria
3. Find out the response measures adopted for the prevention of disaster on information resources in university libraries in North East, Nigeria
4. Identify strategies to be adopted for effective disaster preparedness and response measures for enhanced information resources preservation in university libraries in North East, Nigeria

### **Research Questions**

1. What are the types of disaster preparedness plan in university libraries in North East, Nigeria?
2. What are preservation measures employed to safeguard information resources against disaster in university libraries in North East, Nigeria?
3. What are the response measures adopted for the prevention of disaster on information resources in university libraries in North East, Nigeria?
4. What are the strategies to be adopted for effective disaster preparedness and response measures for enhanced information resources preservation in university libraries in North East, Nigeria?

## **LITERATURE REVIEW**

### **TYPES OF DISASTER PREPAREDNESS PLAN IN UNIVERSITY LIBRARIES**

Disasters are generally unexpected events with destructive consequences to a collection. Therefore it is vital for any library to take every possible precaution to prevent the occurrence of an unavoidable disaster. A disaster preparedness plan is an essential element of preventive conservation. It is also necessary to identify any external and internal threats that might cause problems for the collection and measures to meet those threats. Without existing disaster

preparedness plan the librarians will be unable to act quickly to organise salvage efforts. From the earliest times until the present, libraries around the world have experienced disasters. Disasters can be caused by a variety of natural and manmade events. Some are small-scale and common to all, like those caused by water from leaky roofs and malfunctioning plumbing (Chaudron, 2016; Lupkin, et al., 2015; Superio and Alayon, 2014). Others are catastrophic, caused by floods (Hamlin, 1967; McGregor and Bruce, 1974), fires (Matthews, 1988; Gugliotta, 2007; Superio and Alayon, 2014), earthquakes (Butler, 1988; Kumagai, 2012), hurricanes or typhoons (Jordon, 1970; Cassell, 2004; Skinner, 2007; Newman and Harris, 2015), tsunami (Amarasiri, 2005), volcanic eruption (Cassell, 2004) and wars (Johnson, 2005; Riedlmayer, 2007; Hasenay and Krtalic, 2010). A disaster of any magnitude can cause damage to libraries.

Disaster preparedness plan needs to be done well ahead of time so that adequate training can be implemented and the response to the disaster can be quick and effective.” The development of a disaster preparedness plan is an essential requirement in disaster management. It is an important policy and training document, which requires continued managerial commitment and support by an organizational culture of disaster awareness and prevention (Muir and Shenton, 2002). According to McIlwaine (2005), the basic concept of a disaster preparedness plan is to minimize risks and maximize the efficiency of response if a disaster occurs. Therefore, it is paramount for management of any university libraries to have clearly defined and articulated framework for combating disaster in their library in an event of any occurrence.

According to Solomon-Uwakwe (2019), described disaster preparedness as the process of organizing a system to cope with disaster and its management either in the library or any other organization. Disaster preparedness enables the library to minimize potential damages of its resources, shorten library recovery time and provide temporary and or permanent cushion to both staff and library users. Lyall (2013) emphasizes over the significance of preparedness in disaster management and effective information preservation. He says that preparedness plans are the most important in confronting with disasters. Preparedness plan includes, creating and periodically updating contingency plans, insuring collections, allocating restore priorities, identifying alternative storage sites, providing adequate fire protection, and providing opportunities for staff to be aware of what their responsibilities are, in the event of a disaster. Buchanan (2013) highlights the ignorance shown by libraries towards disaster preparedness, even if it is fundamental to the

protection of resources of a library. Amarasiri (2005) emphasizes that Librarians should always be prepared for disasters rather than wait for events such as the tsunami or Hurricane that completely destroys a Library.

## **PRSERVATION MEASURES EMPLOYED FOR SAFEGUARDING INFORMATION RESOURCES IN UNIVERSITY LIBRARIES IN NORTH EAST, NIGERIA**

Preservation measures are applied to safeguard the information resources in libraries from further decay and deterioration. Preservation can be described as the process in which all actions are taken to check and retard deterioration. Aina, (2014) opined that preservation of library information resources means taking care of library materials to avoid deterioration. In addition, preservation can be viewed as a process that effectively extends the life or useful life of a living or non- living collection, the individual items or entities included in a collection, or structure, building or site by reducing the likelihood or speed of deterioration. Therefore, in preservation, consideration must be given to every element that promotes the protection of the materials including the library building, storage system and security of the resources against any threats from disaster. Preservation measures in university libraries will not only enable the library to support the teaching and research goals of the parent institutions, but will ensure that core materials are kept in useable conditions for longevity. This implies that preservation enhances effective information resources lifespan and usage. Khin (2019) defined Preservation as the task of minimizing or reducing the physical and chemical deterioration of documents.

Preservation allows libraries to address the prospective preservation challenges that are constantly changing in response to the patterns of frequent use of information resources. Preservation of information resources safeguards the document from deterioration. Long-term preservations of items are carried out by libraries while considering its end user to access the material easily. But all library collections experience damage from use and decay from aging and also from disaster occurrence. So there is a need of preservation of library materials. Furthermore, the growing popularity of modular courses is also placing a greater pressure on university libraries and the rising needs of users' quest for a particular material at the same time. Isa (2012) posited that It brings upon the academic libraries not only the task of meeting the varied needs of users, which includes all sorts of programmes in the university community, but also to ensure that such materials needed to meet the needs of users are by no means threatened with any sort of destruction



arising from heavy usage of these materials. Sahoo (2021) identify two types of preservation techniques in libraries thus; the preventive and curative or interventive preservation. He stated that preventive preservation is concerned with taking sufficient measures to protect materials in a controlled environment where such variables are maintained within a range of damage-limiting levels while curative deals with any act by a conservator which involves a direct interaction between the conservator and the cultural material. These curative or interventive treatments involve cleaning, stabilizing, repair, or even replacement of parts of the original object or consolidation such as securing flaking paint. Therefore the library information resources must be properly preserved until they are replaced by newer ones or editions. Without doubt, with adequate planning like a written disaster preparedness plan and response strategy confirming description of emergency procedure, emergency suppliers list, disaster response outline, disaster could be avoided (Ishola, 2017).

According Pardeep (2013), highlighted the following technologies that can be used to enhance preservation of information resources in libraries as: Remote sensing technology; which can detect possible threats of any weather disturbances through its spectrum; the geographic information system; can integrates, stores, edits, analyses and shares geographically reference data and is helpful during floods, landslides and earthquakes; also, the global positioning system is another technology which is applied by pinpointing the exact place where disaster has struck and the exact damage site can be visited for rescue; the warning and forecasting system is another technology which determines the possible action of disaster, the people in the affected area and their resources can be evacuated to a safer place before disaster strike; and the last technology to be used for preventing disaster and enhancing preservation of information resources is communication technology; this technology is effective in mitigation, preparedness, response and recovery. Internet, Fax, mobile phones, e-mail, radio and television can be used to spread and share information during and after disaster. There are also, latest technologies like weather forecasting, satellite images and other relevant data for sharing and exchange. Therefore, library holdings can be properly preserved through these modern technologies to safeguard it from disaster. Furthermore, Osunride and Adetunla (2016), that most of preservation practices in university libraries in South East Nigeria, are dusting, cleaning and proper shelving to allow free flow of air. Other measures according to the researcher are; lamination of materials, photocopying of library books, cloud saving of library materials, binding etc.

## **RESPONSE MEASURES TO BE ADOPTED FOR THE PREVENTION OF DISASTER ON INFORMATION RESOURCES IN UNIVERSITY LIBRARIES IN NORTH EAST, NIGERIA**

Response measures address immediate threats presented by the library management. The measures include initiatives taken to ensure that the needs and provisions of victims are met and suffering is minimized. Responses can be divided into early and late phases. Early responses are believed to be rescue and relief while later responses are rehabilitation and reconstruction. Early responses reduce the impact of the disaster occurrence and protect the information resources of the library from damage. Suleiman (2022) stated that the activities taken under this stage are called emergency response activities. Examples: search and rescue; emergency relief. Disaster response depends on the scope of the disaster, nature of the disaster, timing of the disaster, part of the facility and collection of affected staff available for response, available supplies and equipment, and checklist of First Response. Early response minimizes the impact of disaster and prepares management for recovery in the aftermath.

According to Harvey (1993), the response phase is concerned with producing and documenting the disaster plan and keeping that plan up- to- date. The first step are to form a disaster response team whose members are likely to be available at the time of an emergency, to train these personnel and to institute procedures to notify and assemble them rapidly when a disaster occurs. Materials for priority salvage, needs to be identified and marked. Documentation needs to be assembled, for example, building floor plans and lists of personnel and their addresses and telephone numbers, list of equipment's and of suppliers of item needed during an emergency such as crates, newsprint or generators. Equipment required in a disaster needs to be assembled and maintained. Arrangements should be made for access to freezer capacity and for a mechanism to pay for emergency needs. Measures should be adopted which ensures that damage should be minimized if a disaster happens. Hlabaangagi (2008) said that response to disaster team typically includes the chief administrator or director, the head of security, the building engineer or equivalent, the research librarian, archivist or other person in charge of collection development and the head of technical services. The list will vary depending on the institution but the object is to have people who can fulfill a variety of duties. Buchanan (2013) asserted that when disaster

strikes a library, fire and water are almost always involved. Knowing what action to take will save time, personnel, cost and content. The presence of firemen being part of the library need and priorities will immediately take charge in case of fire outbreak. Buchanan stated that the first step after gaining access to a building is to assess the damage as precisely and completely as possible. Therefore, early response measures will mitigate the effect disaster on information resources preservation in university libraries in North East, Nigeria.

## **STRATEGIES FOR EFFECTIVE DISASTER PREPAREDNESS AND RESPONSE MEASURES FOR ENHANCED INFORMATION RESOURCES PRESERVATION**

Disasters are usually unforeseen events with unpredictable catastrophic effects most often, resulting in irredeemable loss. The world health organization [WHO]/ emergency humanitarian action [EHA] (2002), described disasters as occurrences that disrupt the normal environmental conditions of community, imposing significant level of hardship that exceeds the capacity of the affected community to recover completely. Similarly, Shi, Shuai, Chen, and Lu (2010) reiterated that the effects of Large-Scale Disasters (LSD) far outweigh the ability of the social ecological systems of the affected region to cope with. Thus, it is important that libraries should establish measures aim at minimizing vulnerability and maximizing efficiency of response for enhanced information resources preservation. In addition, since the nature of holdings in libraries is susceptible to disasters such as fire and flood than other forms of disasters, disaster preparedness and response strategy is therefore, very necessary for the prevention and mitigation of any catastrophe. Thus, university libraries need to take proactive steps towards preparing for disasters through the analysis of the peculiarity of their environment and resources with a view to formulating a disaster preparedness plan (McIlwaine, 2006). Some measures were developed to facilitate the effective information resources preservation, include: Surveillance of stock and reading areas by staff, use of human security guards at the library exit, Installation of burglary proof on all doors and windows, educating users on how the library suffers when theft and mutilation occur, and mounting of electronic alarm system on all books (Ozioko, 1997).

In a study conducted by Echezona, Ugwu and Ozioko (2010) on development of disaster preparedness plan, vulnerability analysis and risk assessment, they proffer some strategies which include; backing up library websites regularly, staff training and raising awareness of the need to protect document from damage or loss, are strategies employed for the control of disaster in the

university libraries in Nigeria. In the same vein, Davou (2014) highlighted that adequate security measures; proper library orientation; regular cleaning of the library and regular fumigation of the library are good strategies which will enhance disaster control practices and help to prevent possible occurrence in university libraries. While commenting on disaster management in libraries, Bansal (2015) lamented that libraries should follow an effective disaster preparedness policy; carry out periodic full scale mock drill; ensure Library buildings, equipment, collections and computers are completely insured; provide good drainage and flood-proof; carry out regular checks on library building regarding water leakages system; maintain library building and properties and also ensure that regular inspections of buildings and equipment are conducted; check fire-extinguishers for expiration and train staff members in handling the equipment in case of emergency; fit electrical installations in a safe mode and install single switch control; periodically carry out termite treatment and make sure that digitization of library materials are done are all a good strategies that can be employed to prevent disasters in libraries should be installed.

Response strategy addresses immediate threats presented by the library management. The measures include initiatives taken to ensure that the needs and provisions of victims are met and suffering is minimized. Responses can be divided into early and late phases. Early responses are believed to be rescue and relief while later responses are rehabilitation and reconstruction. University libraries should always be on alert and take quick response to curtail any occurring threat to their libraries. The libraries resourcefulness and resilience is the key to disaster mitigation. Therefore, early response reduces the impact or controls the disaster occurrence and protects the information resources of the library from damage. Activities taken under response strategies are called emergency response activities. Examples: search and rescue; emergency relief. Disaster response depends on the scope of the disaster, nature of the disaster, timing of the disaster, part of the facility and collection of affected staff available for response, available supplies and equipment, and checklist of First Response. Early response minimizes the impact of disaster and prepares management for recovery in the aftermath. Therefore, disaster preparedness and response strategies are important aspect for safeguarding the information resources from damage or loss in university libraries.

## **RESEARCH METHODOLOGY**

Descriptive survey research design was adopted for this study. Questionnaire was the major instrument used for data collection. The population comprised of all librarians of university libraries in North-East Nigeria, which is made of six states namely: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. A total of two hundred and fifteen (215) out of which two hundred (200) respondents from the Questionnaire were completed for analysis using SPSS specifically descriptive statistics. The Purposive Sampling technique was employed in selecting the university librarians using frequency counts and percentages.

## FINDINGS AND DISCUSSIONS

**Table1:** Questionnaire Response Rate

No. of Questionnaire Distributed	No. of Questionnaire Retrieved	Percentage (%)
215	200	93%

Table 1 above, represents questionnaire response rate. Out of the 215 copies of the questionnaires distributed to the respondents, the researchers were able to retrieve 200 copies, hence represent 93% response rate.

**Table 2:** Respondents by Gender

GENDER	Frequency	Percentage (%)
Male	132	66%
Female	68	34%
<b>Total</b>	<b>200</b>	<b>100</b>

From Table 2 above, 132(66%) of the respondents were male librarians, while 68(34%) were female librarians.

**Table 3:** Disaster preparedness plan in university libraries

Disaster Preparedness Plan	Frequency	Percentage (%)
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Creating and updating contingency plans	14	7%
Insuring library collections	23	11.5%
Allocating restore priorities	10	5%
Identifying alternative storage sites	15	7.5%
Providing adequate fire protection apparatus	26	13%
Providing opportunities for librarians to be aware of their responsibilities in an event of disaster	15	7.5%
Providing adequate funds for disaster preparedness plan	32	16%
Carrying out disaster drills	19	9.5%
Drawing up a disaster preparedness plan	18	9%
Data backup of information resources in the cloud	28	14%
<b>TOTAL</b>	<b>200</b>	<b>100 (%)</b>

Table three above, indicated responses on disaster preparedness plan in university libraries. Findings from the study shows that 32(16%) of respondents indicated providing adequate funds for disaster preparedness in university libraries, 28(14%) indicated data backup of information in the cloud, 26(13%) indicated providing adequate fire protection apparatus, 23(11.5%) posited that insuring library collections as their best disaster preparedness plan while 19(9.5%) indicated carrying out disaster drills. However, findings from the study revealed that highest responses from the respondents is 32(16%) while 10(5%) is the lowest.

**Table 4:** Preservation measures employed to safeguard information resources against disaster in university libraries

<b>Measures for Preservation of Information Resources</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Adequate security of information resources in libraries	10	5%
De-acidification	14	7%
Employing curative measures such as cleaning of library materials, stabilizing, repair or replacement of damaged books in libraries, etc.	32	16%
Ensure adequate security of information resources	12	6%
Cloud saving of information materials	30	15%
Proper shelving of library materials	10	5%
Lamination of information materials	27	13.5%
Photocopying of library materials	23	11.5%
Binding of damaged Books	24	12%
Fumigation of library	18	9%
<b>TOTAL</b>	<b>200</b>	<b>100%</b>

Table four above, depicted responses on preservation measures employed to safeguard information resources against disaster in university libraries. Findings from the study revealed that 30(15%) of the respondents indicated cloud saving of information resources, 27(13.5%) indicated lamination of information materials while 24(12%) indicated binding of damaged books. Other respondents indicated photocopying of library materials 23(11.5%), fumigation of library 18(9%) while 10(5%)

of the respondents indicated adequate security of information resources and proper shelving of library materials 10(5%).

**Table 5:** Response measures adopted for the prevention of disaster on information resources in university libraries

<b>Response Measures</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Taking emergency response activities e.g. search and rescue emergency relief.	16	8%
Producing and documentation of disaster plan	8	4%
Keeping of disaster plan up-to-date	12	6%
Establishing of disaster response team	27	13,5%
Training of library personnel on disaster mitigation aspects	29	14.5%
Identifying materials for priority salvage	32	16%
Assembling of library resources in a safe place	25	12.5%
Assembling of equipments and other important items required for disaster response in one place	18	9%
Arrangement for access to freezer capacity and mechanisms in case of emergency	16	8%
Repairs of leaking roofs	9	4.5%
Carrying out disaster drills	8	4%



<b>TOTAL</b>	<b>200</b>	<b>100</b>
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Table five above, revealed the response measures adopted for the prevention of disaster on information resources in university libraries. The study identified that 32(16%) of the respondents indicated that identifying materials for priority salvage as the measure that libraries should adopt for the prevention of disaster on information resources. However, 29(14.5%) indicated training of library personnel on disaster mitigation aspects while 27(13.5%) posited that establishing disaster response team as measures for prevention of disaster. Other respondents from the study indicated that assembling of library resources in a safe place 25(12.5%), 18(9%) indicated assembling of equipments and other items required for disaster response in one place, 16(8%) of the respondents are of the view that arrangement for access to freezer capacity and mechanisms in case of emergency as well as taking emergency response activities e.g. Search and rescue emergency relief; while 9(4.5%) indicated repairs of leaking roofs and 8(4%) indicated that carrying out disaster drills as a measure of response for disaster prevention on information resources in university libraries.

**Table 6:** strategies for effective disaster preparedness and response measures for enhanced information resources preservation in university libraries

<b>Strategies</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Constant surveillance of library stock	20	10%
Constant supervision of reading areas by library staff	10	5%
Use of human security guards at the library exit	18	9%
Installation of burglary proof on all doors and windows	12	6%
Educating users on the impact of theft and mutilation on library information resources	16	8%

Mounting of electronic alarm system on all information resources in libraries.	12	6%
Backing up library websites regularly	21	10.5%
Training of library staff on how to responds to disaster quickly	20	10%
Raising awareness of the need to protect information resources from damage or loss	10	5%
Installation of thunder arrestors in libraries	8	4%
Provision of emergency exit doors	12	6%
Conducting of vulnerability analysis	15	7.5%
Provision of adequate funds	26	13%
<b>TOTAL</b>	<b>200</b>	<b>100</b>

Table six above, revealed the disaster preparedness and response strategies for safeguarding the library information resources from damage. The findings from the study revealed that 26(13%) of the respondents indicated provision of adequate funding by the library management, 21(10.5%) indicated backing-up of information resources on library websites regularly, 20(10%) indicated the need for constant surveillance of library stock and training of library staff on how to quickly respond to disaster while 18(9%) posited the use of human security guards at the library exit. Further study revealed that 16(8%) of the respondents indicated mounting of electronic alarm system on all information resources in libraries, 15(7.5%) are of the view that conducting of vulnerability analysis should be taken in an emergency situation in libraries, 12(6%) indicated installation of burglary proof on all doors and windows, mounting of electronic alarms on all library information resources as well as provision of emergency exit doors respectively while

8(4%) of the respondents indicated that libraries should install thunder arrestors for mitigation of disaster.

## **CONCLUSION**

The following conclusions are drawn based on the findings of the study. The study examines disaster preparedness plan and response strategy as a panacea for effective information resources preservation in university libraries in North East, Nigeria. The study revealed that the most disaster preparedness plan and response strategies in university libraries in North East Nigeria are; providing adequate funds for disaster preparedness plan, data back-up of information resources in the cloud, insuring library collections, allocating restore priorities and providing opportunities for librarians to be aware of their responsibilities in an event of disaster occurrence. Findings revealed some preservation measures employed to safeguard information resources from damage such as; employing curative measures such as cleaning of library materials, stabilizing, repair or replacement of damaged books in libraries, de-acidification of libraries, cloud saving of information materials, lamination of the information resources, binding of damaged books, and fumigation of the libraries among others.

The study also, X-ray some response strategy for effective information resources in libraries which include; taking emergency response activities e.g. search and rescue emergency relief, identifying materials for priority salvage, training of library personnel on disaster mitigation measures, establishing disaster response team, producing and documentation of disaster plan as well as assembling of library resources in a safe place. Finally, the study recommended some strategies for effective disaster preparedness and response measures for enhanced information resources preservation in university libraries such as, constant surveillance of library stocks, use of security guards at the library exit, constant supervision of reading areas by library staff, installation of burglary proof on all doors and windows of the libraries, mounting of electronic alarm system on all information resources in the library, educating users on the impact of theft and mutilation of library materials among others.

## **RECOMMENDATIONS**

The following recommendations are made:

- All university libraries in North East, Nigeria should ensure constant surveillance of their library stocks to identify any damaged materials.
- All university libraries in the North East, Nigeria, should mount electronic alarm system on their information resources for quick response in an event of any occurrence.
- The management of the university libraries should educate users on the impact of theft and mutilation of library resources.
- All university library buildings in North East, Nigeria should provide emergency exit doors.
- All university libraries should establish a disaster response team to handle any occurrence
- Librarians should regularly conduct hazards and vulnerability an assessment in their university libraries.

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