

# DISASTER CONTROL IN LIBRARIES

BY

ANGELA EBELE OKPALA (MRS) (PHD)

NATIONAL OPEN UNIVERSITY OF NIGERIA ABUJA

## ABSTRACT

The impact of a disaster upon a nation, society, individuals, establishments, and the world at large can be very grievous, for it to be ignored. This is the reason why adequate measures must be taken to prevent/mitigate, and recover whatever loss a disaster might have caused. The process of Disaster Management involves four phases: mitigation, preparedness, response, and recovery. This paper explains all the four phases of a disaster cycle with the view to educate every reader on what to do when faced with a disaster. A Disaster Control Plan must be in place in any organisation including the library so that arrangements can be made before any incident and they can be thought through to ensure a swift and effective reaction. Again, the content of a well documented disaster control plan justifies the need for it and convinces the management of the need to sponsor the project. Finally, apart from the management, the entire staffs of the organisation get to know and accept the plan which is also useful for training.

## INTRODUCTION

The Purpose of the library encompasses information and Knowledge creation, communication, identification, selection, acquisition, organization and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination and management. Proper disaster management will help to eliminate any threat to achieving this purpose.

Wikipedia(2012 defined disaster as a natural or man-made hazard that has come to fruition, resulting in an event of substantial extent causing significant physical damage or destruction, loss of life, or drastic change to the natural environment. A disaster can be defined as any tragic event with great loss stemming from events such as earthquakes, floods, catastrophic accidents, fires, or explosions(Harrald,2006). According to Hanks (1988), library disaster is defined as an event or series of events which can significantly disrupt a library's ability to support institutional activities and research over a period of a week or more. Sources of such disruption may include fire, flood, theft, vandalism, and explosion, the sudden unavailability of key staff or damage

by pests. Other causes of library disaster ranges from the dramatic, such as arson, lightning and earthquakes to the mundane, such as electrical faults and burst pipes.

From the various definitions of disaster above, it can be said that, disaster has the following main features:-

- Unpredictability
- Unfamiliarity
- Speed
- Urgency
- Uncertainty
- Threat

## **TYPES OF DISASTER**

### **NATURAL DISASTER**

According to Encyclopedia Britannica (2007), natural disaster is a disaster caused by nature, such as floods, volcanic eruptions, earthquakes, tsunamis, avalanches, lahars (volcanic mudslides), landslides, sinkholes, blizzards, drought, hailstorms, heat waves, hurricanes, tropical storms, typhoons, Ice Ages, tornadoes, and wildfires. Epidemics caused by bacteria or viruses are sometimes considered natural disasters, but sometimes put into a different category. A biological threat such as locusts or toxic fungi could also be considered a natural disaster.

A natural disaster therefore is a consequence of a natural hazard affecting human beings and/or the environment. Disasters occur when hazards meet with vulnerability". A natural hazard will hence never result in a natural disaster in areas without vulnerability, e.g., strong earthquakes in uninhabited areas.

Some disasters are on the edge of natural and non-natural. Famines, the chronic lack of food, may be caused by a combination of natural and human factors.

Various disasters like earthquake, landslides, volcanic eruptions, flood and cyclones are natural hazards that kill thousands of people and destroy properties worth billions of naira each year. With the tropical climate and unstable land forms, coupled with deforestation, unplanned growth proliferation, non-engineered constructions which make the disaster-prone areas mere vulnerable, tardy communication, poor or no budgetary allocation for disaster prevention, developing countries suffer more or less chronically by natural disasters.

These natural disasters are of (i) geophysical origin such as earthquakes, volcanic eruptions, landslides and (ii) climatic origin such as drought, flood, cyclone, locust, forest fire. Though it may not be possible to control nature and to stop the development of natural phenomena but the efforts could be made to avoid disasters and alleviate their effects on human lives, infrastructure and property.

## **MAN-MADE DISASTER**

**According to Wikipedia (2012)** Man-made disasters are disasters resulting from man-made hazards (threats having an element of human intent, negligence, or error; or involving a failure of a man-made system), as opposed to natural disasters resulting from natural hazards. Man-made hazards or disasters are sometimes referred to as anthropogenic. Simply put a man-made disaster is disaster that is caused by man.

Man-Made disaster is a disastrous event caused directly and principally by one or more identifiable deliberate or negligent human actions. Man-made disasters cost the most in terms of human suffering, loss of life and long-term damage to a country's economy and productive capacity. Whether directly or indirectly, intentional or unintentional, through negligence or even with due diligence, humans are especially skilful at creating disasters, a truth that is quite evident throughout history

History is not short of stories of man-made natural disasters. While it's easy to laugh at the mistakes of the past, it's downright scary to realize how many similar disasters are just waiting to happen, right now. Wikipedia(2012) listed manmade disaster as; Nuclear and Radiological Accidents, Home and Building Fires, Hazardous Materials Accidents, Terrorism, Aviation Accidents, Ship/Maritime Accidents, Train/Railroad Accidents, Riots/Civil Unrest, Bridge and other structural collapses, Dam Breaks

Much as human beings abhor natural disasters, man-made disasters are the greater evils, as they could cause greater long-term harm.

## **DISASTER MANAGEMENT**

Disaster management is a process or strategy that is put in place to prevent or to manage any type of catastrophic event that may take place. It is the generic name of an interdisciplinary field dealing with the strategic organizational management processes used to protect critical assets of an organization from hazards and risks that can cause disasters or catastrophes, and to ensure their continuance within their planned lifetime. Sometimes referred to as disaster recovery management, the process may be initiated when anything threatens to disrupt normal operations or puts the lives of human beings at risk.

All heads of establishments through the help of their management teams should create some sort of disaster plan that makes it possible to overcome any catastrophe

and return to normal function as quickly as possible. According to Alexander (2002) disaster management involves:

- pre-disaster planning, preparedness, monitoring including relief management capability
- prediction and early warning
- Damage assessment and relief management.

There is a need for both discipline (structure, doctrine, process) and agility (creativity, improvisation, adaptability) in responding to a disaster (Harrald, 2006). Discipline and agility should be combined with the building of a high functioning leadership team that will quickly coordinate and manage efforts as they grow beyond first responders indicating the need for a leader and his or her team to craft and implement a disciplined, iterative set of response plans. This allows the team to move forward with coordinated, disciplined responses that are right and adapt to new information and changing circumstances along the way.

Disaster Management is a strategic process, and not a tactical process, thus it usually resides at the Executive Level in an organization. It normally has no direct power, but serves as an advisory or coordinating function to ensure that all parts of an organization are focused on the common goal. Effective disaster Management relies on a thorough integration of disaster plans at all levels of the organization, and an understanding that the lowest levels of the organization are responsible for managing the disaster and getting additional resources and assistance from the upper levels.

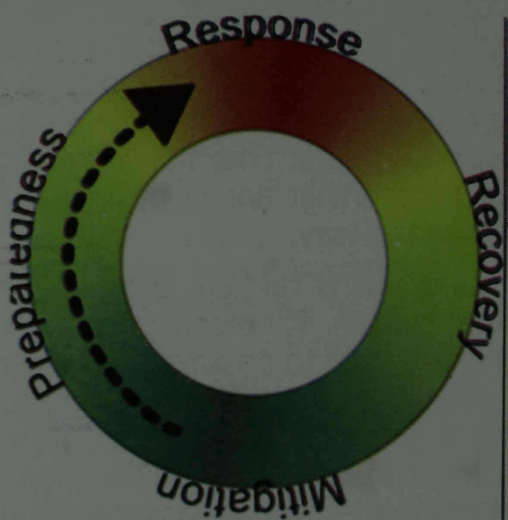
## **PRINCIPLES OF DISASTER MANAGEMENT**

Alexander (2002) listed the following as some of the principles that must be observed in disaster management. According to him disaster management must be:

1. Comprehensive disaster managers consider and take into account all hazards, all phases, all stakeholders and all impacts relevant to disasters.
2. Progressive disaster managers anticipate future disasters and take preventive and preparatory measures.
3. Risk-driven disaster managers use sound risk management principles (hazard identification, risk analysis, and impact analysis) in assigning priorities and resources.
4. Integrated disaster managers in establishments should ensure unity of effort among all levels
5. Collaborative disaster managers create and sustain broad and sincere relationships among individuals and organizations to encourage trust, advocate a team atmosphere, build consensus, and facilitate communication.
6. Coordinated disaster managers synchronize the activities of all relevant stakeholders to achieve a common purpose.

7. Flexible disaster managers use creative and innovative approaches in solving disaster challenges.
8. Professional disaster managers value a science and knowledge-based approach; based on education, training, experience, ethical practice, public stewardship and continuous improvement.

The process of Disaster Management involves four phases: mitigation, preparedness, response, and recovery.



A graphic representation of the four phases in disaster management  
[en.wikipedia.org/wiki/wildfire\\_emergency\\_management](http://en.wikipedia.org/wiki/wildfire_emergency_management)

### **DISASTER PREVENTION / MITIGATION**

The objective of the prevention phase of disaster planning is, to as much as possible, foresee and avert potential disasters by assessing areas of vulnerability through orderly risk management, and taking preventive action.

Prevention is better than cure says the old adage, and this cliché does apply to activities in the library. When some preventive measures are applied in the management of library services, the resources will serve the users better. Such measures require that:

- Materials should be shelved at least six inches (6in) above the floor
- No valuable materials should be stored in areas prone to flooding.
- An important preventive measure is electronic backup of digital data. Bibliographic records for catalogued materials in the library electronic files should be backed up regularly and duplicated off-site
- Back- up power generator can be installed to give uninterrupted power supply.
- Electronic shelf list should be saved on CD ROMs, Zip drives or external hard drives and stored away from the Library building. Manual shelf list must be up-to-date and comprehensive (ie ISBN, Accession number, Location holdings, classification number(s))

with other bibliographic details). For every record created a manual shelf list card must be kept and preserved for a long time, until the system is perfect and working well.

- Security is essential to prevent accidental or intentional damage to both data and equipment
- Operational fire extinguisher should be placed in strategic positions
- Staff should know what to do when disaster strikes.

## **RISK ASSESSMENT**

The first step in disaster prevention is to undertake a risk assessment. It should be noted that disasters - other than natural catastrophes - are seldom caused by a single incident (Cuny, 1983) and are therefore to some extent preventable. The risks to each institution may vary, but the following should be considered: fire, flood, theft, vandalism, document deterioration, environmental conditions, and infestation and bomb threats. Expertise to help in undertaking the risk assessment may be available in-house, or from local emergency services e.g. fire and crime prevention officers. It is also possible to retain external consultants to carry out the work. Where archive collections are held, the advice and assistance from a local archives repository should be sought, and particularly the services of a conservator.

When completed, the risk assessment is likely to highlight several areas in which improvements need to be made or where more information is required. Implementation of the recommendations which come out of the risk assessment, as well as ensuring that your plan works smoothly if it should ever have to be implemented, will almost certainly involve liaison with other departments within the organisation. It is very important that good rapport with these departments is maintained at a senior level. This underlines the need for the staff member responsible for Disaster Management to hold a senior position within the Library and Archive structure.

The results of the risk assessment should be noted in the prevention section of the written Disaster Control Plan along with the status of any necessary remedial action and all maintenance or security routines, etc. Often, you can avoid or minimize the damage caused by disaster by proactively examining the possible threats or risks to your library collection. Think about common disasters that may occur in your area. Water is the most common destructive force affecting libraries (Wilson, 2009).

Simple good housekeeping practices can mitigate the likelihood of many disasters.

Risk assessments will need to be repeated and documented regularly, particularly after building alterations.

## **MITIGATION**

Mitigation efforts attempt to prevent hazards from developing into disasters altogether, or to reduce the effects of disasters when they occur. The mitigation

phase differs from the other phases because it focuses on long-term measures for reducing or eliminating risk (Wilson, 2009). The implementation of mitigation strategies can be considered a part of the recovery process if applied after a disaster occurs (Lindell, 2006).

Disaster mitigation mainly addresses the following:

- Minimize the potential risks by developing disaster early warning strategies
- Prepare and implement developmental plans to provide resilience to such disasters,
- Mobilize resources including communication and tele-medical services
- To help in rehabilitation and post-disaster reduction.

## **PREPAREDNESS**

Preparedness is a continuous cycle of planning, organizing, training, equipping, exercising, evaluating and improvement activities to ensure effective coordination and the enhancement of capabilities to prevent, protect against, respond to, recover from, and mitigate the effects of natural disasters, acts of terrorism, and other man-made disasters (FEMA).

The creation of an institution-specific, written Disaster Control Plan must form the basis for the preparation phase of disaster management planning.

## **DISASTER CONTROL PLAN**

A disaster control plan is a clear, concise document which outlines preventive and preparatory measures intended to reduce potential risks, and which also provides details of reaction and recovery procedures to be undertaken in the event of a disaster to minimise its effect (Matthews and Eden, 1996)

A disaster control plan is the written documentation that records the countermeasures taken against an event which is wholly unexpected and damages the collections of an institution. It is a document which all organisations, not just libraries, should have.

## **THE PURPOSE OF A DISASTER CONTROL PLAN**

According to Mathew and Eden (1996), there are many reasons why an organisation should have a Disaster Control Plan. Below are some of the reasons:

- Arrangements can be made before any incident and they can be thought through to ensure a swift and effective reaction. In a disaster, there is usually rapid deterioration of items which can be minimized if quick action is taken.
- The content of a well documented disaster control plan, justifies the need for it and convinces the management of the need to sponsor the project
- Apart from the management, the entire staff of the organization get to know and accept the plan. The plan is also useful for training.

The Library's disaster control plan must be compatible with other relevant plans elsewhere in the organisation. The plan should be written to take into account several levels of disaster as each emergence is a unique event. The plan should contain devised procedures to respond to and recover from disasters. The procedures for conducting a risk analysis should be well articulated in the plan and must be accomplished. Existing preventive and preparedness procedures must be identified in the plan.

A designated person must be made responsible for its accuracy and currency, and a clear timetable for reviewing and updating the plan must be agreed upon. The plan should ideally be kept in a loose-leaf binder to allow for easy updating, and if a version is available via the Library's Internet, care should be taken that the electronic and hard copy versions remain in step. Any major revisions of the plan should result in it being reprinted in its entirety, to avoid confusion. Pages should be numbered and dated. Any updates to the procedures manuals should be signed and dated. The plan should be divided into four sections: prevention, preparedness, reaction and recovery. It should be clear, succinct, flexible and easy to understand, whilst also including all the information necessary to inform a speedy reaction in a disaster situation. Jargon should be avoided, so that the plan may be easily understood by other professionals such as fire officers. Flow charts may be used where they will aid understanding of the procedures to be followed. It may help to use appendices for charts, plans and other local information, to keep the plan succinct.

All members of the Disaster Reaction Teams, the Disaster Manager, Disaster Reaction Manager and the Disaster Recovery Manager should have two copies of the plan, one to be kept at work and one at home. Senior management and site managers may also need copies of the plan. Each site should have access to the plan, although some sections (such as the location of rare or valuable items or home phone numbers) may be kept out of general circulation. All holders and locations of the Disaster Control plan should be listed.

Another aspect of preparedness is casualty prediction, the study of how many deaths or injuries to expect for a given kind of event. This gives planners an idea of what resources need to be in place to respond to a particular kind of event.

## **DISASTER RESPONSE**

This section addresses the issue of response when disaster occurs. A response must occur swiftly to minimize damage and to maximize recovery efforts. As much as the library's database is central to the library's operations, it is very sensitive because it is very prone to damage if not properly handled. It should therefore, be well protected for the task of rebuilding a database is excruciating. The following factors can cause data



loss; power failure; virus attack, operating system error and mistakes from the operations of the system, or migration from an old software system to a new one.

A brief guide for immediate disaster response should provide answers to the following questions;

- Who is in charge?
- What is the extent of the disaster?
- How many records are affected?
- How serious is the damage to the records/materials?
- Is the cause of the disaster being addressed?
- Have all relevant library staff been notified?
- What supplies, equipment and services will be needed?
- Will additional staff be drafted into the established team and will they require training? Who is doing this?
- What recovery methods are appropriate?
- How will service be restored and when? Who is in charge of this?
- Do you stop processing of new materials?

## **RECOVERY**

- The aim of the recovery phase is to restore the affected area to its previous state. It differs from the response phase in its focus; recovery efforts are concerned with issues and decisions that must be made after immediate needs are addressed. Recovery efforts are primarily concerned with actions that involve rebuilding destroyed property, re-employment, and the repair of other essential infrastructure. Efforts should be made to "build back better", aiming to reduce the pre-disaster risks inherent in the community and infrastructure (Fred, 1983) An important aspect of effective recovery efforts is taking advantage of a window of opportunity (Alexander, 2002) for the implementation of mitigative measures that might otherwise be unpopular. Citizens of the affected area are more likely to accept more mitigative changes when a recent disaster is in fresh memory.

## **DISASTER RECOVERY-WATER DAMAGE**

Water damage is the most common form of damage to library and archive materials and a side effect of fire based disasters. However, improved technology and awareness by the fire service has greatly reduced the amount of water damage, which follows a fire. It is essential to work quickly as mould growth can be expected on the wet stock within 48 hours. In hot humid weather mould will appear in less than 24 hours.

Depending on institutional salvage policy, decisions will need to be made as to how to dry the wet material. Specialist firms exist, which will dry material using the techniques listed:

- i. Protect undamaged materials and equipment.
- ii. Consult salvage priorities.
- iii. Assess where material is most wet and in conjunction with the salvage priorities list decide where to begin work.
- iv. Begin clearing the shelves from the top down if water has come in through the ceiling; where there is standing or rising water; clear from the bottom up. NB the latter procedure will reduce the stability of the shelves.
- v. Where shelving is, or could become unstable some team members should push against the bookcase whilst others remove the materials.
- vi. Work systematically and list basic bibliographical details of the material, the damage, crate number and destination/action taken on the damage lists provided.
- vii. Wet material is delicate. Handle with care and use minimal force to remove tightly packed material.
- viii. Pack and list different types of material separately. Take care not to pack wet material in with dry.
- ix. The Disaster Reaction Manager should decide on the action for each item and supervise the packing and distribution.
- x. Time is short: If in doubt send material for freezing as frozen material can be air dried at a later date if necessary.
- xi. Any books or papers which have stuck together must be sent for freezing.
- xii. Material sent for freezing should be wrapped in polythene or placed in polythene bags, tightly secured to exclude as much air as possible.
- xiii. Material with vellum bindings should be wrapped in crepe bandages to prevent distortion. Start the wrapping at the lower edge, work from the spine to fore edge to spine with a small overlap. Then place in polythene as above.
- xiv. Pack material into crates upright and tightly enough to minimize distortion.
- xv. Volumes too large for the crates should be wrapped well and placed flat in the van for transport to the freezing facility.
- xvi. Do not pack crates with items protruding over the top edge.

### **DISASTER RECOVERY-LIBRARY'S DATABASE**

In the case of the library's database, electronic back-up can be used to restore lost or damaged data. Adeyemi (2008) recommended weekly back up; a minimum of three backups should be maintained at all times-the current ones, the previous weeks and the week before that.

Back up must be tested to confirm that it is in good order. Immediate steps must be taken to protect materials/records which have not been affected by the disaster. This will prevent additional damage. Where a system fails and back-ups are not properly prepared records will have to be reprocessed all over again.

## **STOCK TAKING OF COLLECTIONS USING THE SHELF LIST RECORDS**

Stock-taking is a thorough inventory process which identifies missing items. A shelf list is complete records of all titles in a collection arranged by call numbers as the library materials are found on the shelves. The shelf list also indicates the location of materials and number of copies.

- a) A material whose record is found in the shelf list catalogue is noted.
- b) For materials not found in the shelf list a record is created.
- c) Those whose records are found in the shelf list catalogue tray, but are not physically present on the shelves are noted as 'Missing'.
  - These shelf list records are checked against bibliographic utilities such as Library of Congress, etc to down load data in MARC format for onward import to the system.
  - The missing records must be established by checking their details against the loan records in circulation, books in bindery and the weeded or stolen ones, when confirmed, treat as above.
  - When the system is re-installed, backups should commence immediately and should be properly handled.

## **CONCLUSION AND RECOMMENDATIONS**

It should be noted that disasters other than natural catastrophes are seldom caused by a single incident and are therefore to some extent preventable. For proper disaster management in establishments, all heads through the help of their management team should create some sort of disaster plan that makes it possible to prevent and overcome any catastrophe and return to normal functions as quickly as possible.

## REFERENCES

- Adeyemi, B.M (2008) "Disaster Planning: Response and Recovery in Cataloguing" Paper presented at the 28<sup>th</sup> Annual seminar/Workshop, Kwara State Library Board, Ilorin, 26<sup>th</sup>-31<sup>st</sup> October
- Alexander, David (2002). Principles of Emergency planning and Management. Harpenden: Terra Publishing.
- Buchanan, Sally(2000). "Emergency preparedness." In Preservation Issues and Planning by Banks,P&Pilette,R. Chicago: American Library Association pp159-165.
- Cuny, F. C. (1983). Disasters and Development. Oxford: Oxford University Press.
- Civil Defence Emergency Management Act 2002, s4.. Retrieved 3 August 2008.
- David, A; Moisan, A.M (2005). Strategic Forum No. 218. Institute for National Strategic Studies, National Defense University.  
Disaster control plan and recovery procedures.Dept of Library, University of Cambridge.UL <http://www.lib.cam.ac.uk/libraries/disaster>
- Eden,P. And Mathew,G(1997)".Disaster Management in Libraries".Facilities,Vol.15 Nos1 &2.p.43 Encyclopedia Britannica (2007)
- Hanks, Patrick, ed. The Collin's concise dictionary of the English Language. London: Collins, 1988, p. 319.
- Harrald, J(2006)'Agility and Discipline: Critical Success Factors for Disaster Response,' The ANNALS of the American Academy of Political and Social Science; 604; 256
- Jaffin, B. ( 2008). "Emergency Management Training: How to Find the Right Program" . Emergency Management Magazine . <http://www.govtech.com/em/articles/400741>. Retrieved 2008-11-15.
- Maliszewski, P.J (2008) Modeling critical vaccine supply location: protecting critical infrastructure and population in central Florida
- National Civil Defence Emergency Management Strategy (2007), Department of Internal Affairs, Wellington, New Zealand 2008. Digital edition. Retrieved 3 August 2008.
- National Preparedness Guidelines, FEMA Department of Homeland Security
- Walker, Peter (1991). International Search and Rescue Teams, A League Discussion Paper. Geneva: League of the Red Cross and Red Crescent Societies.  
[Wikipedia.whhttp://en.wikipedia.org/wiki/List-of-man-made-disasters](http://en.wikipedia.org/wiki/List-of-man-made-disasters)