
UNIT 9 DISASTER MANAGEMENT

Structure

- 9.0 Objectives
- 9.1 Introduction
- 9.2 Historical Background
- 9.3 Causes of Disasters
 - 9.3.1 Natural Disasters
 - 9.3.2 Man-made Disasters
- 9.4 Disaster Management Planning
 - 9.4.1 Aims and Objectives
 - 9.4.2 Disaster Prevention Measure in Building Design
 - 9.4.3 Disaster Management Plan
- 9.5 Security System
 - 9.5.1 Insurance
- 9.6 Summary
- 9.7 Answers to Self Check Exercises
- 9.8 Keywords
- 9.9 References and Further Reading

9.0 OBJECTIVES

Protection of library resources from damages caused by various kinds of disasters has now become an integral part of preservation. Natural disasters such as flood or earthquake or manmade disasters such as negligence of maintenance of library building and the various equipments have often led to the total destruction of a library.

After reading this Unit, you will be able to:

- describe the nature of disaster and know about some disasters that have affected libraries;
- explain national and international measures to safeguard libraries against disasters;
- describe disaster management planning including provision for disaster management in library buildings;
- identify the stages of disasters and prepare suitable plan for each stage; and
- highlight the security measures against manmade disasters.

9.1 INTRODUCTION

Disaster is an event that inflicts sudden disruption to the functioning of a system under its impact. It causes such a wide spread, material and environmental losses which exceeds the ability of the body affected to cope with, using only its own resources. In the context of library it has been described as “an unexpected event with destructive consequences to their holdings. It may be a small scale incident

or a full blown emergency, but in either case it requires prompt action to limit damage”. Disaster causes harm not only to holdings, it might cause harm even to buildings, staff, and users and disrupt normal services for considerable period.

9.2 HISTORICAL BACKGROUND

Libraries have suffered damages due to disaster of one kind or other throughout the history. The famous Alexandria Library, established around 300 B.C. is said to have contained between 400,000 and 700,000 documents in its peak period with literature from Assyria, Greece, Persia, and India. The Library was completely gutted in wars during the reign of Caesar (100 BC-44 BC) The libraries of Nalanda and Texila which had attracted scholars from China, Mongolia and Sri Lanka are now found in the pages of books only. Lightning in 188 AD in Rome, in 1300 AD in France and in 1674 in Spain were responsible for the destruction of several libraries in the respective countries. The libraries that flourished during the medieval period in India and were established by Kings of Vijyanagar, by the Great Mughals, Tippu Sultan and by Nawabs of Awadh, were vandalised by the British who later transferred the entire booty to England. To this day scholars working on Indian history have to travel to England to look at the basic sources on Indian history now available in the British Library.

The story of disasters did not end with the medieval period. The modern period has also witnessed destruction of libraries world over through wars, lightning, floods, tsunamis, theft and vandalism. The two World Wars are responsible for the destruction of many famous libraries in Europe. One example is of the library of the University of Louvain, Belgium which was destroyed in German invasion in the First World War resulting into loss of about 300,000 books. The Serbian attack on Bosnia-Herzegovina in 1992 is reported to have destroyed the National Library of Sarajevo resulting into loss of almost its entire collection of 1.5 million volumes including some 70000 rare manuscripts. Large scale destruction was caused to archives, libraries, and other cultural institutions during American invasion on Iraq in 2003. It included Iraq’s National Library, National Museum the National Archives. *Bait-al-Hikma* in Iraq lost, according to IFLA, 500,000 books and serials including 5000 extremely rare books.

The flood in River Arno, in 1966, damaged one million volumes of Florence Biblioteca Nazionale Centrale of Italy. Floods in Europe in 2002 damaged libraries in Austria, Germany, Hungary, Slovakia and Czech Republic. In 1985 a fire caused by lightning at the library of The Dalhousie Law School, Nova Scotia destroyed 60000 volumes, much of the library’s furnishing and fittings, including its card catalogue. The library of the USSR Academy of Sciences lost about 400,000 volumes in fire in 1988. Flood in Hyderabad in 2005 submerged in flood water Sunderayya Vignana Kendra library’s more than 1.25 lakh books, periodicals, manuscripts and other rare materials.

The library of the Sanskrit University, Dang, Nepal lost its valuable collection of manuscripts in an attack by mob in 2003. The library of the Bhandarkar Institute of Oriental Research was ransacked by an ill-informed mob over publication of a book on Shivaji which contained some reference to a manuscript available in the Institute’s library. A fire started by arsonists in 1986 destroyed about 400,000 books of the Central Library of the Los Angeles Public Library system.

The terrible tsunami that hit coastal areas of the Indian Ocean in December 2004 caused damage to 177 school libraries, 53 public libraries and 68 religious libraries in Sri Lanka alone. Libraries in Maldives also were reported to have suffered damage. Water damage was also reported by the Madras University Library. A devastating Hurricane, Katrina in the Gulf of Mexico, caused considerable damage to libraries in the area.

National and International level awareness

Though the occurrences of disasters have long history, the planning for preventive measures to meet the situation, both at national and international level are not very old. According to Ross Harvey “it was not however until the late 1970s that it could be said that disaster planning was widely recognised as an essential part of good library management.” The planning at the national level began in Canada, US, and UK towards the end of the last century. At the international level organisations like the International Council on Monuments and Sites, International Council of Museums, IFLA, International Council on Archives joined hands to form an International Committee of Blue Shield in 1996. The Committee is to collect and disseminate information on disaster management policies and, coordinate action plan in emergency situations. The main objectives of the Committee are:

- To facilitate international responses to emergencies threatening cultural properties.
- To encourage safeguarding and respect for cultural property especially by promoting risk preparedness.
- To train experts at regional and national levels to prevent, control and recover from disasters.
- To act in an advisory capacity for protection of endangered heritage items.
- To consult and cooperate with other bodies including Unesco, International Committee of Red Cross, etc.

The activities and functions undertaken by the Committee to fulfil its objectives are:

- Collecting and sharing information on threats to cultural property worldwide;
- Raising public awareness about damage to cultural heritage;
- Promoting good standard for risk management among those responsible for cultural heritage at all levels, from institution to government;
- Working to make decision makers and professional staff aware of the need to develop preventive preparedness, response and recovery measures;
- Providing professional expertise to help meet emergencies;
- Identifying resources for disaster prevention and for rapid intervention in emergencies;
- Encouraging the establishment of National Blue Shield Committees’.

The Unesco launched its Memory of the World Programme in 1992, with the objective that “world’s documentary heritage belonging to all should be fully preserved and protected for all and with due recognition of cultural mores and practicalities should be permanently accessible to all without hindrance.” It has also published a book with the title, *Lost Memory: Libraries and Archives Destroyed in the Twentieth Century* written by J. Van Albada and H. Van Ha.

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

1) Give a brief summary of disasters in Europe in modern period.

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2) List objectives of Blue Shield Committee.

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9.3 CAUSES OF DISASTERS

Libraries like any other institution are exposed to various kinds of disasters which destroy building, burn or submerge books and other valuable records in water. Many a times these damages are irreparable. Fire and or water as source of disaster may be the primary factor or they may follow a disaster like earthquake, flood, lightening, etc. The causes of disasters have been categorised by nature of their origin. Those that occur in the form of natures' fury, such as earthquake, tsunami or flood in rivers are called natural disasters. Natural disasters are so unpredictable that they often take the organisation by surprise. These include flood, earthquake, volcanic eruption, wind or rain storm, lightning and tsunami. Disasters that are caused due to negligence or deliberate criminal acts of human beings are called manmade disasters. These include arson, vandalism, war, theft, building deficiencies, and/or negligence of staff of their assigned duties.

9.3.1 Natural Disasters

Some examples of natural disasters are:

Floods: As mentioned earlier, flood in River Arno, in 1966, resulted into flooding of the Florence's Biblioteca Nazionale Central of Italy. During August 2000 flood in Hyderabad priceless collection of Sunderayya Vignana Kendra Library was submerged in water. Flood waters destroyed basic source materials on famous Urdu poet Iqbal's original letters preserved by the Jammu University.

Earthquake: An earthquake in Muzaffrabad, Pakistan-held Kashmir, in 2005, made people who were rendered homeless, burn 1000 books to keep themselves warm in the biting cold of the winter months.

Tsunami: Tsunami in 2004 destroyed school, and public libraries in Sri Lanka and Maldives.

Lightning: Lightning in 1985 destroyed 60000 books of the Dalhousie Law School US, library.

9.3.2 Man-made Disasters

Under this category we may put such emergency situations that occur due to an unintentional or deliberate action of people (staff and users). It includes act of war and terrorism, fire following short circuit, flooding of library due to pipe burst or leakage. Building design deficiency and poor maintenance of the building also may lead to an emergency situation. Sometimes power failure also leads to emergency situation. Flooding, once the water subsides, leaves dampness in its aftermath which becomes cause of biological agents that inflict damage to the books.

War and Arson: The earliest example of destruction and damage to library due to war, as mentioned earlier, is that of Alexandria Library which was burnt in war during the reign of Caesar in the second century BC. In the first half of the last century the two World Wars inflicted irreparable damages to libraries in most of the European countries. The recent examples are those of the Serbian attack on Bosnia-Herzegovina in 1992, US attack on Iraq in 2003 and USSR attack on Afghanistan in 1979. In the US in 1980-81, there were 23 reported cases of library fires and of which 17 or 85% were listed as arson fires.

Theft: Thefts have caused damage not in terms of scale as in terms of value to libraries. Most of the books pilfered from libraries are scarce and very rare books with painting or some other artifacts. "Within a few days of forces entering Baghdad, the looters ransacked the National Museum and stole about 15000 priceless artifacts" (The *Hindu* 18. 9. 2010).

Building Deficiency and Negligence: The US National Fire Protection Association while investigating causes of fire at the Los Angeles Central Library of 1986 observed that the disaster could surely have been avoided by the utilisation of an automatic water sprinkler system. The cause of the 1988 fire in the Library of the USSR Academy of Sciences was traced to defective electric wiring. In the Patent Registration Office library, Government of India, Kolkata, 1.56 lacs Indian and 8 lacs foreign patent literature are facing decay due to lack of adequate preservation measures .

Self Check Exercise

- Note:** i) Write your answer in the space given below.
ii) Check your answer with answers given at the end of this Unit.
- 3) What are natural disasters? Give examples.

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9.4 DISASTER MANAGEMENT PLANING

Disaster planning is a matter of basic security for libraries and archives and has now become an integral part of library preservation planning. It has been called as one aspect of good library administration practice. Though called by names such as disaster control planning, disaster containment, contingency planning and risk management, in essence it is a set of rehearsed actions to minimise the effect of a disaster. It requires the library to always remain in a situation of emergency preparedness. Emergency preparedness is a continuous and integrated process and aims at:

- 1) Increasing the efficiency, effectiveness and impact of disaster emergency response mechanism;
- 2) Strengthening staff and user based preparedness through dissemination of guidelines for warning system, evacuation and exit routes, salvaging activities;
- 3) Developing activities that are useful for day to day preservation problems and also for responding to disaster situation.

The preparedness calls for taking certain basic steps which include:

- Study of the library for potential problem in consultation with local fire and safety services agency.
- Preparing a disaster planning manual and keeping it up-to-date.
- Develop list of items in the collection for storage with safety priority. (It is normal to put the materials into three levels, irreplaceable and costly materials, materials that are difficult to replace, rest of the materials).
- Preparing and keeping up-to date toll-free telephone phone numbers for use in emergency.
- Preparing and keeping up-to-date a complete inventory of library assets (excluding reading materials) to be used for insurance claim. The claim for collection can be based on accession record.
- Preparing a list of external resources experts, and organisations to be used in emergency and constituting a planning team for handling emergency situations.

9.4.1 Aims and Objectives

The aim of disaster management is the creation of a scheme to handle an emergency situation that may affect a library and its holdings. The objectives of such a scheme are: 1) to prevent a disaster whatever its magnitude, 2) to protect library materials in the event of a disaster and 3) In its aftermath to restore and stabilise library materials prior to restoration and conservation.

The disaster relief plan helps the situation in several ways:

- 1) By increasing the efficiency effectiveness and impact of disaster emergency response through:
 - Development and regular testing of warning system,
 - Plan for needed evacuation and other measures during emergency alert period,

- Education and training of staff and users and of first aid and emergency response team,
 - Formulating emergency response policies, standard, organisational arrangements and post disaster operations.
- 2) Developing activities useful for addressing both every day risks and for responding to disaster situation e.g. first aid and social welfare program me for affected people.
 - 3) Strengthening library based disaster preparedness education in and restoration work.
 - 4) Making staff confident that orientation and training given is sufficient to meet an emergency situation.
 - 5) Making staff confident that public and private agencies on the list for contact in emergency situation are aware of the special needs of library.
 - 6) Succeeds in restoring normalcy promptly and efficiently in post disaster situation.
 - 7) Makes staff able to reduce recurrence of disasters in the light of experience gained during a disaster.

9.4.2 Disaster Prevention Measure in Building Design

You have already noted in brief the disaster prevention as part of planning the building in Unit 6. In fact, planning for disaster management is done at two stages: 1) While planning the building by incorporating features necessary for retarding the possibility occurrence of disaster. 2) In post-construction stage planning with all other measures and activities to face the disaster and also post-disaster situation. In designing the building, the first and the foremost is to select site outside the seismic zone. Site should also be slightly elevated and easily accessible for fire engines and other emergency vehicles. Other points for consideration include:

- Building structure based on the principle of compartmentalisation,
- Separate room for storage of inflammable liquids,
- Use of fire retardant materials in construction,
- No storage provision for rare materials in basement and at the top floor,
- Pitched roof with no water or drainage pipes over book storage areas,
- Provision of fire suppression system,
- Openings in building for air and light to be vandal and thief resistant,
- Provision of fresh air flow around HVAC areas.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with answers given at the end of this Unit.

- 4) Explain how disaster relief plan helps libraries in the event of disaster.

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9.4.3 Disaster Management Plan

A disaster plan involves activities under four phases, namely prevention, preparedness response and recovery.

Phase 1: Prevention

Prevention phase is primarily concerned with such measures as are expected to be taken at the stage of planning the building. These are to Identify and minimise the risks posed by the building, its equipments and fitting and the natural hazards of the area and include activities as below:

- Carry out a building inspection and alter factors which pose a potential hazard.
- Establish routine housekeeping and maintenance measures to withstand disaster in buildings and surrounding areas.
- Install automatic fire detection and fire extinguishing systems and water sensing alarms.
- Take special precaution during unusual periods of increased risks such as building renovation.
- Make special arrangements to ensure the safety of rare and archival material when exhibited.
- Provide security copies of vital records such as collection inventories and store these off site.
- Protect computers and data through provision of uninterrupted power supply.
- Have comprehensive insurance for library or archives, its contents the cost of salvage operations and potential replacement, re-building and restoration of damaged materials.

Phase 2: Preparedness

Preparedness is concerned with making preparations for facing an actual occurrence of a disaster. The activities to face the situation include:

- Develop a written preparedness response and recovery plan.
- Keep the plan up-to-date with regular test.
- Keep together supplies and equipment required in a disaster and maintains them.
- Establish and train an in-house disaster response team. Training should be in disaster response techniques, identifying on floor plan enclosures of irreplaceable and important materials for priority salvage.
- Prepare and keep a set of documentation including:
 - Building floor plans with locations of cut-off switches and valves.
 - Inventory of holdings, with priorities for salvage marked on floor plans.
 - Telephone tree i.e. List of names, addresses and home telephone numbers of 1) personnel with emergency responsibilities 2) In-house disaster response team 3) of trained conservators who could offer various technical supports.
 - List of disaster control services, in-house supplies and equipments, of suppliers of services and additional equipments/supplies.

- Arrangements for funding emergency needs.
- Copies of insurance policies.
- Keep the plan and documentation at appropriate places on and off-site.
- Institute procedures for notification to appropriate people of the disaster.

Phase 3: Response

The steps that should be taken when disaster strikes are termed as response and include:

- Following established emergency procedures for raising the alarms, evacuating personnel and making the disaster site safe.
- Contacting the leader of the damage response team to direct and brief the trained salvage personnel.
- When permission is given to enter the site, make preliminary assessment of the extent of the damage, and the equipment, supplies and services required.
- Stabilize the environment to prevent the growth of mould.
- Photograph damaged material for insurance claim purposes.
- Setup an area for recording and packing material which requires freezing, and an area for air drying slightly wet materials and for other minor treatment.
- Transport water -damaged items to the available facility centre.

Phase 4: Recovery

Recovery phase involves activities carried out to bring back normal situation in the library by taking the following steps:

- Draw a programme to restore both the disaster site and the damaged materials to a stable and useable condition.
- Decide priorities for restoration ,consult conservators about the best methods for restoration and options along with cost under each method.
- Determine item by item needs for retaining, discarding, and rebinding or needing special treatment.
- Clean and rehabilitate the disaster site.
- Replace treated materials in the refurbished site.
- Analyse the disaster and the steps taken in its wake for needed revision and modification of the steps for the future.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

5) List measures to be taken in prevention phase of disaster plan.

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9.5 SECURITY SYSTEM

The security of the library is concerned with the safety of the staff and the users. It is also provision against theft of library resources and assets and general protection of the library building. Studies in US revealed that loss to libraries through theft has been as serious as loss through fire and is estimated to be around 50 million per annum.

Safety and security provisions should be incorporated both at the time of design of building and on a regular basis.

At the stage of designing building:

- Avoiding unnecessary rear doors and strengthening essential access point.
- Interior layout design should allow for maximum visibility of public areas.
- Providing burglar resistant bar/grills on rear windows.
- Installing an alarm system and necessary emergency exits.
- Provision for installation of CCTV and RFID.
- Adequate provision for lighting both in the interior and exterior of the building.
- Fitting of turnstile door at the exit point.
- Intrusion alarm system in special collection areas.

On a regular basis:

- Adoption of closed access system for special/ rare collection.
- Main door and rare material room door keys should have authorisation and recorded transaction system.
- Use of standard quality locks.

9.5.1 Insurance

The financial loss suffered by a library under disasters are often huge and it includes loss of content, cost of salvage operations and potential replacement, re-binding and restoration of damaged materials and re-building of damaged portions of the building.

There is, therefore, enough justification for taking a insurance policy against disaster. The policy should be comprehensive enough to cover all likely losses. However, since the insurance cover negotiation involves use of many technical terms it must be negotiated by a person conversant with the insurance terminologies. In case of occurrence of a disaster the losses must be reported to the company promptly once the situation stabilises. The library therefore must preserve the records of all its valuable materials to be covered in the policy and it must be preserved at a safe place away from the site. The insurance schedule must be reviewed periodically for enhancement of the value of the items covered as they keep changing. In this regard a written disaster management plan is helpful in making claim with the insurance company.

9.6 SUMMARY

Disasters are disruption or damage to the library by natural factors such as flood or earthquake or due to negligence or deliberate action of human beings such as war, arson and theft. There is a long history of disasters which destroyed many libraries. There is now national and international level awareness and preventive measures to safeguard libraries from disasters. Disaster management has now become an integral part of library management.

9.7 ANSWERS TO SELF CHECK EXERCISES

- 1) Major disasters in Europe in modern period are:
First World War, Library of University of Louvain, Belgium.
Herzegovina, National Library of Sarajevo.
Flood in River Arno, Italy.
Second World War, Libraries in Austria, Germany, Hungary, Slovakia, Czechoslovakia.
Russia: Academy of Sciences Library.
- 2) The objectives of Blue Shield Committee are:
 - 1) To facilitate international responses to emergencies threatening cultural properties,
 - 2) To encourage safeguarding and respect of cultural property especially by promoting risk preparedness,
 - 3) To train experts at regional and national levels to prevent, control and recover from disaster,
 - 4) To act in advisory capacity for protection of endangered heritage items,
 - 5) To consult and cooperate with other bodies including Unesco, International Committee of Red cross, etc.
- 3) The examples of natural disasters are:
 - Flood: River ARNO, Italy 1966
 - Earthquake: San Francisco 1989 Los Angeles Library
 - Tsunami: 2004, Sri Lanka, Maldives
 - Lightning: US 1985, Dalhousie Law Library.
- 4) The disaster relief plan helps libraries during disasters in the following ways:
 - 1) By increasing the efficiency, effectiveness and impact of disaster emergency response.
 - 2) Developing activities use full for addressing both everyday risks and for responding to disaster situation.
 - 3) Strengthening library based disaster preparedness education and restoration.
 - 4) Making staff confident that orientation and training given is sufficient to meet an emergency situation.
 - 5) Making staff confident that public and private agencies on the list for contact in emergency situation are aware of the special needs of library.

- 6) Succeed in establishing normalcy promptly and efficiently in post disaster situation.
 - 7) Makes staff able to reduce recurrence of disasters in the light of experience gained during a disaster.
- 5) The measures to be taken in prevention phase of disaster plan are:
- Carry out building inspection to remove any potential hazard,
 - Establish routine housekeeping and maintenance measures to withstand disaster,
 - Install automatic fire extinguisher and detection system and water sensing alarm,
 - Take special precaution during unusual periods of increased risks,
 - Make special arrangements to ensure the safety of rare and archival materials during exhibits,
 - Provide security copies of vital records such as collection inventories, to be stored off site,
 - Protect computers and data by providing uninterrupted power supply, and
 - Take out a comprehensive insurance policy for total estimated loss.

9.7 KEYWORDS

- Compartmentalisation** : Construction of library building so that compartment/ unit can be sealed in case of emergencies like fire.
- Cultural Properties** : Items which display the life and culture of a social group.
- Heritage Items** : Products of craftsmanship and art such as old buildings, sculpture.
- Pitched Roof** : Sloped roof to allow quick water flow.
- Telephone Tree** : List of telephone numbers showing who will call whom in which order.

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