A STUDY OF DIFFERENT PHASES OF DISASTER MANAGEMENT SYSTEM

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ABSTRACT

Any type of libraries is not free from the disaster situation. Library materials are either fully or partially lost due to facing both types of disaster conditions i.e. natural and man-made. Several times, library building and other infrastructure, human kind etc. are also affected. Disaster may occur anywhere and anytime. Nowadays, due to global warming and destructive activities of humankind, the occurrence of disasters is increasing. But our libraries attached with central universities situated at India are unaware to handle a disaster situation. The centre of the study will on the different aspects of risk management tasks such as training of employees, disaster plan, insurance of collection etc. There is no appropriate disaster controlling system available in these libraries. In this research, it is trying to know that which type of disasters are facing by these libraries and how can escape the library collection from its effect and what may the efforts for their survival.

KEYWORDS: Disaster Management System, disaster situation, Library materials, risk management, disaster conditions.

INTRODUCTION:

Any type of disaster is an unexpected incident whose timing is unknown and its result finds as serious destruction. Libraries require preparing themselves for handling any type of disaster. Awareness and adoption of measures are necessary factors to minimize the risk of a disaster incident. Generally, risk affects the library building, library records and library staff. Preparation of a system for risk management is compulsory for the preservation and safety of the library. The

disaster management system is a subject of basic security of library materials and library staff. To prepare a system, it is necessary to identify the risk arisen factors. Circumstances may be different but basic security measures are similar in every disaster situation. To minimize the risk, it is necessary for the libraries to adopt and follow the standards. In modern days, Libraries use technologies for automating their services and activities. But challenges and possibilities of disaster are similar to previous days. Now, Libraries are also facing technical disasters in the form of system failure, electric failure, gas leakage, network failure, computer virus etc.

The disaster management system should be prepared and followed in a planned way by each library. When we observed the previous history of libraries, then it was found that several libraries have affected and destroyed due to man-made and natural disasters. Based on the previous history, every library must practically adopt the disaster management system and reduce future losses. Risk management is deal management among requirements and available resources of conservation programmes. Disaster management system divides into four phases in which different activities are done. Various issues such as weak storage environment, lack of education & practical training, lack of administrative support, lack of preservation experts, unaware for the preparation of disaster plan, lack of resources to prepare an emergency plan etc. are the causes to reject a disaster management system. Generally, it is found that the administrators of the library provide importance to the safety of premises instead of a collection. But it is not a good way for libraries. In disaster planning system, every aspect of safety of all things should include. Survival of the library is impossible without disaster planning. Library Administrators should be aware of the importance of disaster planning system and applied in all the days instead of a disaster situation so that they can handle challenging situations of disaster easily.

RISK MANAGEMENT CYCLE:

Risk management circle is an endless process by which libraries and archives reduce the effect of disasters, react without delay on any disaster incidents and take proper actions for rehabilitation. This cycle represents all activities which reduce the possibilities of disaster. It also contains the strategies and plans that reduce the origin of disasters and their effect. A detailed, disaster management system should follow to avoid disasters in libraries. Disaster management cycle consists of four phases, namely mitigation (prevention), carefulness (preparedness), response (reaction) and rehabilitation (recovery).Mitigation (prevention) and preparedness activities

should adopt before the disaster incident. Reaction phase comes during the disaster incident while recovery measures should adopt after the disaster incidents.

In the case of libraries, a little incident can also convert into a major disaster. Therefore, every library must take all the small events seriously too. As per experiences, the possibility of a disaster occurring in the library can increase during the ten years time. Protection of library materials against disasters can be a challenging job for library employees. Disaster planning is used in a broad sense, in which all the measures related to library requirement, financial resources, and abilities etc. should be included. Disasters cannot be prevented from happening but reduce its effect related to damages after adopting a disaster planning system. Different concepts like Disaster Plan, emergency kit, disaster team, emergency suppliers etc. are included in the disaster planning system. It is very imperative to the library to adopt possible precaution steps to avoid the hazards without considering their size. The following figure presents the disaster management circle:-

Figure 1 Disaster Management Circle
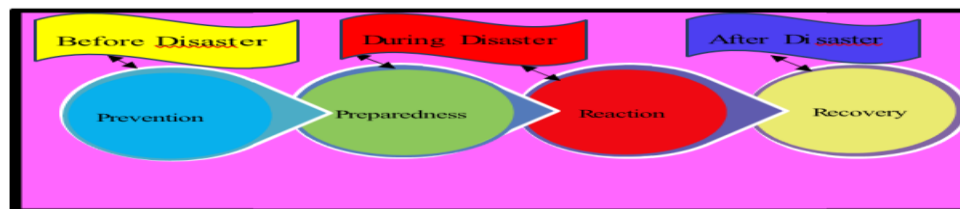
PREVENTION PHASE:

In this phase, two aspects i.e. prevention and protection are to include. Prevention includes activities to stop a disaster event, and protection covers activities to reduce material losses during a disaster event. In other words, the prevention phase means those measures which should adopt by the library as a precaution steps to minimize the effect of the disasters. In this phase, various protective steps should always keep in mind of library staff to identify different types of disasters. At this stage, first of all, measures should be taken according to the same after estimating the risk prospects in the library. In this phase, different actions, related to the inspection of library premises, drainage pipes, security system, storage, insurance and various types of attached equipment etc. to be done.

1. Identification of the factors of risks:

It is an intellectual work, in which all possible factors of risk to be pointed out and classified based on the probability of seriousness of damages. The physical valuation is necessary for its

identification. The valuation should help to recognise the geographical location of the institution and identify the probability of upcoming natural disasters. It should also identify the probability of factors of disaster happening due to human activities. The risk factors relating to premises such as roof falling, broken windows and security doors, electric short circuit etc. should also point out. The valuation work should be done in a fixed period because risk factors change from time to time. After the valuation, a systematic list is prepared for the pointed hazards and should take attention seriously. To identify the risk factors in the library can take help from various experts of emergency services. After the determination of risk factors, follow all precautions to avoid these disasters. All records of inspection should be kept safe. Several methods for identification of risk are available such as brainstorming, experiment, checking, reports of prior disaster, scene analysis, observation, audit reports etc. Combination of two or three methods can use for it.

2. Measures related to the security of the library:

Safety is a significant issue in the library. Every library should prepare an outline of the security policy. It is essential that different types of equipment such as alarms, CCTV etc. should be installed in all parts of the library for the security of the library premises and its collection. Alarms always send intimation to security rooms; therefore its employees should familiar with their functioning. These devices are very beneficial to provide safety from criminals. It should ensure that the security equipment always keeps in working condition. Lighting arrangement should do in the entire area. Checking of locks in every door, windows, and staff rooms should do at the time of closing. Special attention is required on expensive equipment, so it is kept in the lock. The security guards should employ for 24 hours, and it should ensure that they do their duties by patrolling an entire building instead of sitting in one place. If few outsider workers enter the library premises for their work, then special attention should pay at the time of their leaving from premises. It should also ensure that they never use the equipment which can damage the library collection. A powerful checking system in the library should strictly follow by library employees. Library staff should train to prevent and handle criminal activities against the library collection. It should always ensure that users cannot take their bags into the library. The security system should always revise based on prior experience.

3. Regular checking of library premises and other infrastructure:

It is necessary to observe continuously at those places after pointing out the factors of risk to avoid the tremendous disaster incident. The weak points of the building are to find in the form of roof leakage, broken glass of the window, ventilation, emergency gate, leakage in water pipelines and faulty electrical circuit. Civil engineers should examine library premises in the fixed period and submit their report. If few loopholes find, then renovation and remodelling work should implement immediately. Library premises should always keep neat and clean and can avoid the problem of a biological disaster. Long trees near the library premises should cut periodically. To avoid the biological incident, regular checking of humidity in those places should do where the probability of occurrence is more.

Appropriate staff should regularly check drainage lines, water pipes and power circuits, and repair it. Library staff should know the location of the stop valve of the water system. Automatic turn off taps should install in the library. To avoid the fire incident, all power circuit and electric equipment should regularly check and maintain. All electric equipment should keep away from the storage area and switch off at night. Strictly follow the rule of "No smoke" in the library. Electric closing circuit system of every section at the library should have separate. Fire alarm, fire detectors and fire extinguisher etc. should install in entire Library premises.

4. Routine checking and maintenance of security furnishing:

Various types of furnishings are installed to achieve the safety of library premises and collection. These tools are helpful techniques for the human security system. These devices operate automatically and manually. Manual equipment should also keep in operation after installing the automatic system. Automatic fire alarm system, smoke detection system, fire suppression systems etc. are commonly known tools which should equip in the entire library building. Fire alarm and smoke detection systems are the warning tool, while the suppression tool is the controlling tool that prevents the incident from increasing. Several numbers of other equipment are available in the market that should use according to the need of the library. These equipments require periodic testing (On weekly basis) and proper maintenance. So this inspection should do by the experts and take their views seriously. A written copy of every report should properly keep. Library staff should provide training to the use of the equipment.

5. Guidelines related to storage of library materials:

Generally, some measures have prepared for the storage of library materials. It will appropriate to adopt these measures at the time of development of library collection. To prevent the flood

effect on reading materials, these should keep on 150 mm above the ground level. Similarly, height racks should avoid because it invites disaster incidents. The benefits and limitations of wooden and steel furniture should always keep in memory at the time of fitting of furniture. Wooden furniture burns easily and attracts insects, while the life of steel furniture is long. All types of waterproof materials should keep for the library materials. The basement and top floor should not use for valuable materials.

Major effects of different disaster on the library:

1. Earthquake:

• The collapse of the building's roof, wall and shelves

• Library material falls on the surface of the earth.

• Library material is covered in soil and debris.

• Library Materials also face fire and water damages due to the earthquake.

2. Fire:

• Books burnt slowly and converted into crumbles when handling it.

• Several times change the colour of books due to soot and smoke.

• Microforms and audio-visual materials are irreparable and fully damaged.

• Several times books are more damaged during the suppression of fire.

3. Water:

• Paper absorbs water based on its age and condition and it brittles the paper.

• Leather and parchment materials shrink.

• Wet material can face the mould problem. Mould growth is rapidly on humid material.

• The shape of material deteriorates.

• Photographs, microforms, audio-visual materials may also be destroyed depending on their absorption capacity.

• Inks and dyes spread.

- The paper swells and sticks.

4. Biological disaster:

- The effects are found in the form of discolouration and stains.

- The material may become brittle due to being eaten.

- Bad smell

- Black and brown patches on the material.

5. Chemical disaster:

- Paper colour converts into yellow due to the chemical reaction.

- Continuous deterioration of materials happens due to the long-time factor.

- Physical degradation of library materials.

- Paper brittles due to sulphur dioxide, nitrogen etc. available in the air.

- It deteriorates the binding materials of the books. It weakens the binding of the reading material.

6. Vandalism/War/Theft:

- Permanent loss of reading material, equipment and building.

CONCLUSION

Library building should create in single-storey instead of multi-storied. It should build in RC frame structure. If library building is to construct in multi-storied, then every floor should construct in medium height. The seismic-resistant norms of BIS published from time to time should apply to the construction of library premises. Take expert advice to know about risk zone of the area and construct the library building accordingly. Structural audit and special inspection are necessary for 50 years older building. Different scale of disaster should use to decide the vulnerable situation of the library. It is essential for identifying the preparation of the library. Potential risks and their effect should always keep in mind based on scale. Take expert advice to know about risk zone of the area and construct the library building accordingly. Disaster resistant techniques should use in the design of library architecture to avoid risks. Experts identify the risk

from library premises, collection, furniture and other infrastructure. All library materials should store in a digital format with their unique identification number. Dangerous materials should always keep away from sensitive and weak material. Appropriate distance and height should always keep in mind to store the library materials. Priority should determine for the library collection. Identify the importance of stock and prepare the list from highest to lowest relevant material. Its preparation is crucial as it guides the staff in prevention and recovery process of materials. But extra efforts should do by staff for the safety of all materials and premise.

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