

**STRATEGIC PLANNING AND PREPAREDNESS TOWARDS
DISASTER MANAGEMENT IN COLLEGE LIBRARIES OF
AIZAWL: AN ANALYTICAL STUDY**

*A dissertation submitted in partial fulfilment of the requirement for the
Degree of Master of Philosophy in Library and Information Science*

Submitted by

STEPHEN LALFAKZUALA

MZU Registration No. 4290 of 2013

M. Phil registration No. MZU/M.Phil./523 of 07.05.2019

Supervisor

Dr. Manoj Kumar Verma

Associate Professor



DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

MIZORAM UNIVERSITY, TANHRIL : AIZAWL

2020



(A Central University)
Department of Library and Information Science)
Tanhril, Aizawl-796009
Phone- (0389) 2331608.

CERTIFICATE

This is to certify that the dissertation entitled “Strategic Planning and Preparedness towards Disaster Management in College Libraries of Aizawl: An Analytical Study” submitted by Stephen Lalfakzuala for the award of the degree of Master of Philosophy in Library and Information Science is carried out under my guidance and incorporates the students bonafide research. This is the candidate’s original work and is worthy of examination.

Date:

(Dr. M.K. Verma)

Place: Aizawl, Mizoram

Supervisor



(A Central University)
Department of Library and Information Science)
Tanhril, Aizawl-796009
Phone- (0389) 2331608.

DECLARATION

I, Stephen Lalfakzuala, hereby declare that the subject matter of this dissertation entitled, “**Strategic Planning and Preparedness towards Disaster Management in College Libraries of Aizawl: An Analytical Study**” is the record of work done by me, the content of this dissertation did not form the basis of the award of any previous degree to me, or to do the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other University/ Institutes.

(STEPHEN LALFAKZUALA)

HEAD

(Dr. M.K. Verma)

Dept. of Library and Information Science

Supervisor

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(Unless the Lord had been my helper, I would soon have dwelt in the abode of silence. When I said my foot slipped; thy mercy, O Lord, held me up. In the multitude of my thoughts within me thy comforts delight my soul. Psalms 94:17-19)

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ABBREVIATIONS

Term	Description
ALA	American Library Association
BCP	Business Continuity Plan
CRED	Centre for Research on the Epidemiology of Disasters
CREEFCO	Centre de Recherche et de Formation en Français et Communication
DM	Disaster Management
DRT	Disaster Response Team
EAC's	Encoding Archival Content(s)
EAD	Encoding Archival Description
EMDAT	Emergency Events Database
GAC	Government Aizawl College
GANC	Government Aizawl North College
GAWC	Government Aizawl West College
GJC	Government Johnson College
GJTC	Government J. Thankima College
GMLC	Government Mizoram Law College
GTRC	Government T. Romana College
GZRSC	Government Zirtiri Residential Science College
HBC	Government Hrangbana College
ICT	Information and Communications Technology
IFLA	International federation of Library Association
INFLIBNET	Information and Library Network
IPM	Integrated Pest Management
ISIS	Islamic State of Iraq and Syria
MLIS	Master of Library and Information Science

MZU	Mizoram University
NBC	National Building Code
NDMA	National Disaster Management Authority
NDMO	National Disaster Management Office
NGO's	Non- Governmental Organizations
NIELIT	National Institute of Electronics and Information Technology
PUC	Pachhunga University College
SOUL	Software for University Libraries
UGC	University Grants Commission
UNDRR	United Nations Office for Disaster Risk Reduction
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

It is generally understood and clear to almost all that a Disaster Management refers to how we can protect or preserve maximum number of lives and property during a natural disaster. Disaster management plans are multi-layered and are aimed to direct such issues as floods, hurricanes, fires, mass failures of utilities and even bombings or the rapid spread of disease. “By failing to prepare, we are preparing to fail”- Benjamin Franklin.

Prevention is always better than cure which proves to be true in terms of disasters. While many disasters cannot be prevented, being prepared for certain disasters helps to moderate both the risk and the damage and also builds up resilience to face it. Prevention involves risk assessment, taking qualifying measures and disaster planning which may include response or rescue and recovery operations. The focus of disaster prevention is generally a disaster plan in which policies, procedures and practices to manage with a disaster are brought out. The need for disaster planning is sometimes questioned. “Proponents of this view take the attitude that disaster will occur whether we like it or not”. Therefore, it is better to let nature take its course, and use all available means of assistance to build a better tomorrow. The vast majority of international experience directs to a fact that where disaster plans did not exist, or where planning was inadequate, then the effects of disaster on countries gets worse and sometime leads to a catastrophic event.

1.2 DISASTER AND ITS TYPES

Researchers have been studying disasters for more than a century, and for more than forty years on disaster research. The studies reflect a common opinion when they argue that almost all disasters can be seen as being human-made, their reasoning being that human actions before the strike of the hazard can prevent it developing into a disaster, although natural disasters happen at a certain point. Disasters are therefore sometimes the result of human failure to introduce appropriate emergency management measures. Disasters are characteristically divided into two main factors- natural or human-made disasters, while in many of the disasters where there is no single origin or definite cause, are more common in developing countries. A specific disaster may brood a secondary disaster that increases the impact. The most distinguished types of disaster may be discussed as follows.

Natural hazards are the phenomena that arises naturally from the physical occurrence caused either by hasty or deliberate inception events which can be geophysical (earthquakes, landslides, tsunamis and volcanic activity), hydrological (avalanches and floods), climatic (extreme temperatures, drought and wildfires), etc.

Technological or man-made hazards (conflicts, robbery and theft, displaced populations, accidents of various kinds, building deficiencies, etc.) are events that are caused by humans and occur in or close to human settlements. This can include environmental degradation, pollution and accidents. Technological or man-made hazards (complex emergencies/conflicts, famine, displaced populations, industrial accidents and transport accidents). There are a range of challenges, such as climate change, unplanned-urbanization, under-development/poverty as well as the threat of pandemics that will shape humanitarian assistance in the future. These aggravating factors will result in increased frequency, complexity and severity of disasters.

1.3 DISASTER MANAGEMENT AND STRATEGIC PLANNING

In the years since the mid 1990's, while proponents of disaster management have continued to encourage its acceptance and implementation as an integral part of library and archival management, they also have had to incorporate within this the implications and impact of new developments within libraries and archives and the society in which they operate. As there may be various disasters and chaotic events that can or might occur, a disaster plan is necessary for the society, organisations and especially libraries and archives which acts as a prominent storehouse and centre of information, data and the cultural heritages. A variety of terminology is used to refer to disaster plans namely Disaster Control Plan, Disaster Response Plan, Disaster Management Plan, Emergency Operations Plan, Disaster Preparedness Plan, Library Disaster Plan, Collection Disaster Plan, Disaster Recovery Plan or simply Disaster Plan. These plans are fairly similar in contents although there are differences in the details given. Even in the case of library disaster, it is better that staff accepts and understands the advantages of emergency preparedness rather than learn through hard experiences. Disasters not only damage the library collections, the library building, and harm the library staff and the readers but also disrupt the services. If libraries are prepared, it will help the library to minimize the impact of a disaster and restore collections and resume services at the earliest.

1.4 STEPS OF DISASTER MANAGEMENT

In terms of disaster management, various steps could be taken which is found to be a relevant factor in course of library and archives. Experts had categorized some of the most important and practicable steps in disaster management which includes

1.4.1 Planning

The goal of disaster planning is to reduce the effect of disasters on susceptible populations, to equipped an organization or the community for an arrival of catastrophic events and activities, and to project a corresponding plan that condenses the excess of resources, time, and efforts.

- a) Recognize and lessen the risks posed by the building, its apparatus and fittings, and the hazards of the area.
- b) Inspection of building construction and alter issues which create a potential hazard.
- c) Establish routine housekeeping and maintenance measures to withstand disaster in buildings and surrounding areas.
- d) Install automatic fire detection and extinguishing systems, and water-sensing alarms.
- e) Taking special precautions during unusual periods of increased risk.
- f) Making provisions to ensure the safety of library or archival material when exhibited.
- g) Provide security copies of vital records such as collection records, and store off-site.

1.4.2 Preparedness

Preparedness basically means getting ready to deal with various forms of factor and activities. The term must not be collated with prevention. Preparedness is the state of being prepared while prevention is (obsolete) the act of going, or state of being, beforehand.

- a) Develop a written preparedness, response and recovery plan.
- b) Keep the plan up-to-date, and test it.
- c) Save together supplies and equipment required in a disaster and maintains them.

- d) Establish and train an in-house disaster response team, which would include training in: disaster response techniques, identification and marking on floor-plans and enclosures of irreplaceable and important material for priority salvage.
- e) Preparing and keeping an up-to-date 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, list of names, addresses, and home telephone numbers of personnel with emergency responsibilities, etc.
- f) Institute procedures to notify appropriate people of the disaster and assemble them rapidly.

1.4.3 Response

Disaster response is another phase of the cycle on disaster management. It consists of a number of elements, for example; warning/evacuation, search and rescue, providing immediate assistance, assessing damage, continuing assistance and the immediate restoration or construction of infrastructure. The aim of emergency response is to provide immediate assistance to maintain life, improve health and support the morale of the affected population. Such assistance may range from providing specific but limited aid, such as assisting refugees with transport, temporary shelter, and food, to establishing semi-permanent and other locations and may involve initial repairs to damage or diversion to infrastructure.

The focus in the response phase is on putting people safe, prevent need disasters and meeting the basic needs of the people until more permanent and sustainable solutions can be found. The main responsibility to address these needs and respond to a disaster lies with the government or governments in whose territory the disaster has occurred.

1.4.4 Recovery

The response phase of an emergency may commence with search and rescue but in all cases the focus will quickly turn to fulfilling the basic needs of the affected population. Disaster response refers to actions taken during and immediately after a disaster to ensure that its effects are minimized, and that people affected are given immediate relief and support.

Disaster recovery section which contains information about the techniques and methods that can be used for recovering different damaged materials. The final rehabilitation stage refers to the steps to be taken once materials are dried and ready to be returned to the stacks.

1.5 MODEL OF DISASTER MANAGEMENT AND PLANNING

A number of studies on Disaster Management and Planning identify a consistent amount of facilitating characteristics that have an impact on disaster management and planning in Libraries. A few authors and experts have grouped these characteristics into clusters or models to understand the major factors that affect disaster management and planning of libraries and to begin to identify a model that explains Disaster Management and Planning in Libraries.

Fleischer and Heppner (2009) specify that at the minimum a good disaster plan would include following sections: Contents of a Disaster Plan Introduction and Statement of Purpose, Scope of the Plan, Distribution, Review, and Update, Emergency Information, Telephone Tree and Procedures for Contacting the DRT (Disaster Response Team), Collection, Equipment, Office Files, and Other Salvage Priorities, Prevention and Protection Measures, Disaster Response Instructions and Plans, Disaster Recovery Instructions and Plans, Disaster Rehabilitation after Recovery, Appendices - DRT Roles and Responsibilities, Floor Plans - Temporary Collections, Records, and Service Operation Relocation - Internal Emergency Equipment and Supplies - External Emergency Equipment, Facilities, Supplies, and Services – Bibliography.

Interworks(1998) provided that each of the countries that have established disaster management structures have operated a dual system comprised of a National Disaster Committee to provide authority and ministerial coordination and a National Disaster Management Office (NDMO) to implement disaster preparedness and response. The National Committees are typically composed of representatives from different ministries and departments and the Red Cross/Red Crescent and possibly representatives of donor agencies, NGOs and the private sector.

1.6 COLLEGES IN AIZAWL

Mizoram is a disaster prone area and many have suffered and lost their homes and materials due to certain disasters. The approximate number of categorization and development pattern is the ultimate cast and expectations of the numerous data. The total number of populations in Mizoram is estimated to be around 12 lakhs.

With such a population, there are certain number of colleges, as mentioned under the UGC report(2019) with a total of 43 Colleges, 2 Universities and some special institutions and some libraries developed by different organisation which might varied according to sizes, infrastructure, collections, etc depending upon the size of the organization. There are number of technological aspect within the state and leads to ascertain and numerous flows of current and tremendous disaster that can happen at any certain period of time. Such libraries needed to be exempted and well established and equipped with various management skills and enhancement so as to be prepared for any type of disaster that can happen at any level. Mizoram as mentioned as a Red Zone area in disaster, many types of disasters can eventually happen at any moment, any place or anytime. The number of disasters and its related events are many and adjourned to be a number of countless times. Restrictions on a wider basis needed to be ensured to how buildings and certain types of infrastructures are build or carried out, which includes the libraries. The study will prefer to libraries in Aizawl which will include institutional libraries such as colleges, special institutions and university libraries.

1.7 SIGNIFICANCE OF THE STUDY

The main aim of the study is to provide information that will or might assist in the design, development and formulation of disaster management and planning policies in the changing global situation, and in particular to highlight those factors that should be emphasized in order to further encourage academic staffs to be aware of various disasters that might occur and have a better disaster management, planning and preparedness for the organisations and mostly, the libraries. It is anticipated that this investigation will provide new perspectives on this issue. Such information is vital to this study for improving the libraries and heritages. To most effectively achieve this aim, the various obstacles to increasing the output for library staffs as well as the users need to be identified in their own terms.

This study has been designed to address these issues, and will solicit information directly from library staffs, members and professionals regarding their perceptions of reasons for non-participation or unawareness of disaster management and planning in libraries, and to invite suggestions about the ways to overcome and provide a better. The results of this study will provide benefits to the studied colleges and university. Further, present study will able to help and show the current trend of disaster management as well as display the various forms of strategic planning and preparedness. The disaster management and planning will help the library staffs, educational institutions and every users to assess themselves for further improvement and aware of various disasters and protect at the very best when it eventually strikes.

1.8 SCOPE OF THE STUDY

The present study is confined to the college libraries in Aizawl. The study will cover colleges situated within the boundary of Aizawl only. There are 15 colleges situated within the boundary of Aizawl. However, the other different colleges which pertains to be a medical colleges and other special colleges are not included in the study. The list of 15 colleges covered under the study is as follows:

Table- 1.1: Colleges covered under the study

SN	Name of College
1.	Pachhunga University College, College Veng, Aizawl
2.	Govt. Aizawl College, Sikulpuikawn, Aizawl
3.	Govt. Hrangbana College, Chanmari, Aizawl
4.	Govt. Zirtiri Residential Science College, RamtharVeng, Aizawl
5.	Govt. Mizoram Law College, Zomi Villa, Tuikual 'C', Aizawl
6.	Govt. Saitual College, Saitual, Aizawl
7.	Govt. Aizawl North College, Ramhlun, Aizawl
8.	Govt. Aizawl West College, DawrpuiVengthar, Aizawl
9.	Govt. T. Romana College, Republic Veng, Aizawl
10.	Govt. J. Thankima College, Bawngkawn, Aizawl
11.	Govt. Johnson College, Shivaji Tillah, Khatla, Aizawl
12.	Aizawl City College, C/o J. L. High School, Khatla, Aizawl
13.	Divine Mercy College, Bawngkawn- Lunglei Road, Aizawl
14.	St. Xavier's College, Lengpui, Aizawl
15.	Helen Lowry College, Vaivakawn, Aizawl, Mizoram

(Source: <https://mzu.edu.in/index.php/about-mzu/affiliated-colleges/details-colleges>)

1.9 REVIEW OF LITERATURE

The Sendai framework for Disaster Risk Reduction (2020) states that the policies and practices for disaster risk management should be based on the level of understanding disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment and that such knowledge can be leveraged or used for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate and effective preparedness and response to disasters.

The National Disaster Management Authority (2019) stated that the national vision is to build a safer and disaster resilient country by developing a holistic, proactive, multi-disaster and technology driven strategy for Disaster management which will be achieved through a culture of prevention, mitigation and preparedness to reduce the impact of disasters on people and the entire process will centre stage the community by providing momentum and sustenance through the collective efforts of all government agencies supported by Non-Governmental Organisations (NGOs).

Davies(2017) studied and analysed various disaster utilitarian and volunteering during a disaster and found that the magnitude of the commitment made by ordinary citizens, often with little or no specific technical training or experience when volunteering at the time of a disaster and may choose to help a regular disaster organisation, formally create an ad hoc organisation for dealing with the circumstances of the specific disaster, use their pre-existing, non-disaster organisation for disaster work or carry out disaster-related tasks within a loose, informal network. **The United Nations Office for the Coordination of Humanitarian Affairs (2016)** presents the idea that it would play a fundamental role in operational coordination in crises, but its coordination concepts do not suffice as project direction.

Long(2011) studied number of Libraries that met disasters and offs and cited that there are number of factors for Library disaster response and such that when disaster strikes, a true leader reacts with knowledge and effectiveness for the Libraries and society as well which acts an important backbone of the structure. **Young(2011)** discussed and studied that another element often overlooked when developing a thorough disaster plan is the people – library staff members and patrons and that a disaster plan must always be brought to enlighten and made aware of to the users, community and the staffs.

Dawson (2011) studied the damages caused to communities by Hurricanes Katrina and Rita of 2005 and finds that Staffing shortages in South Louisiana libraries continue to exist and how the program “Project Recovery” funded by a grant from the Institute of Museum and Library Services, is responding to the aftermath of these natural disasters. **Destin (2011)** discussed the aftermath of the Haitian earthquake on January 12, 2010 the formation of CREEFCO and its role in the support of both private and public university libraries in the efforts to conserve and preserve as much of their collections as possible and to get the libraries back up and running for their users and discovered that there were several presentations on how the Haitian libraries dealt with the problems caused by the massive earthquake and that all of which contributed to the understanding of the participants as to the challenges faced by these librarians and the Haitian people.

McCook(2011) examined that emergency management organizations tend to operate in a monetary based system, reducing all disaster impact and loss to a dollars-and-cents value. Because much of the value in libraries goes well beyond the physical collections to the services provided, staff knowledge and wisdom, etc., it becomes exceedingly difficult to place a monetary figure on the cost and thus making it problematic at best for emergency management professionals to grasp the true worth and value of what can be lost when disasters hit libraries.

Seipel(2011) emphasize that coordination in disaster response has always been complicated, especially regarding civil–military cooperation. Dealing with military personnel brings the need for a frame that would suffice and prove to be useful correctly positioning a responsible authority. In a due proportion, this fact is also valid when dealing with the independent organizations present at the event, because they may have a tendency to exercise independent work in an uncoordinated manner. Also, very often, during the response, no matter the will of the involved actors of working together, they are not included in the planning processes, either.

Patkus & Motylewski (2008) advised that “disaster planning is complex; the written plan is the result of a wide range of preliminary activities and that the whole process is most resourceful if it is formally dispensed to one person who acts as the disaster planner for the institution and is perhaps aided and supported by a planning team or committee. The institution's director may play this primary role or may delegate the responsibility, but it is important to remember that the process must be supported at the highest level of the organization if it is to be effective”.

Kovács & Spens (2007) present the disaster in three different phases: preparation phase (before the disaster occurrence), response phase and recovery phase. The preparation phase is not time limited. Therefore, it is not initially suitable for management. **McIlwane's (2006)** advised and analysed that Indian libraries can develop their own comprehensive disaster plans according to their situation; alternately a range of simple guidelines for specific aspects of disaster planning can be created to fill in the gap of Indian libraries not having any such guidelines or checklists. **Gyankosh(2005)** examined that Metadata standards such as EAD (encoding archival description) for finding guides and EACs(encoding archival content) form the backbone of archiving of digital resource files, and are instrumental in validating digital archives.

The Heritage Health Index(2005) indicated that “2.6 billion items of historic, cultural, and scientific significance were not protected by an emergency plan” and that 70% of archives and libraries had no emergency plan or staff trained to implement the plan and thus, Watershed events have helped to significantly raise the awareness of the need to address disaster related issues in libraries. **Matthews (2003)** examined that human aspects of disasters management such as wars, armed conflict and terrorism leads to a parallel amount of disasters that might lead to a substantial amount and vital loss of information and the cultural heritages. **Adhikari (2002)** “Library preservation and automation” analysed that preservation of materials from certain disasters and threat is too easily dismissed and as the esoteric concern of the archivist or the rare book librarian, of little or no interest even in the mainstream of academic or public librarianship, let alone in the fashionable electronic world of information science.

Law(1999) studied and explained that disasters are unpredictable and thus comes with certain and various types which might be an earthquake, fire or sometimes war. These affect not only the society but the cultural heritage and information system. **Petr(1999)** , in his article “War In Croatia : Impact on the Croatian Library and Information System” explained and studied how wars and disasters affect the society and the country by the downcast and torn of the information system and found that the wars in the country damaged and destroyed more than 70% of the total country’s informational data. **Marcum(1998)** published an article in The New York Times and outlined the stark facts and made a strong case that technology may be a greater problem than acidic paper, but concluded that acidic paper was also still a problem.

Petros Kostagiolas et al.,(1994) in their study of disaster management in academic libraries in Greece, found that staff were not adequately trained, users insufficiently informed, and that there were no rescue and evacuation nor fire protection drills carried out. There is also the need for more public awareness and campaigning to sensitise members of the public about disasters and their effects on both institutions and individuals, and the potential roles the public can have in both disaster preparedness and disaster management.

Jan Lyall(1993) the then-Director of the National Preservation Office of the National Library of Australia, recommended adequate training and orientation for all staff and patrons in disaster management at a conference in Nairobi. He also suggested press clippings, pictures and videos of relevant disasters in other institutions could provide a basis for learning from others mistakes, especially for members of an institution. **Michael Ahenkorah-Marfo and Edward Mensah Borteye** reported how in assessing disaster management in libraries in Ghana they identified inadequate training for members of staff as factors affecting their ability to prepare, prevent, fight or manage disasters in their libraries.

1.10 RESEARCH GAP

From the above literature, it has been observed that a number of research has been conducted towards disaster management and planning in libraries across the state and country. Many plans and strategies are still in the process while research and studies go intact. However, in terms of Mizoram, it has been found that no research had been conducted in the field of disaster management and planning of libraries in Aizawl.

So, the present study is an attempt to fill up the gap. Therefore, the study is an attempt to investigate the strategic planning and preparedness towards disaster management in college libraries of Aizawl.

1.11. RESEARCH DESIGN

1.11.1 Statement of the Problem

The disaster destroys almost everything in the place, wherever occur. It is very much difficult to assess the actual impact (negative) of disaster. It creates variety of problems and gives challenge to rebuild the disaster site after disaster.

Strategic planning and preparedness towards disaster management is a type of steps to cope up with the disaster, when it arrives. A proper planning against disaster reduces the negative impact of disaster on the place. Libraries and Information Centres are the place where we store and preserve knowledge and information which are the main driving source to civilize the society at large. The loss of such knowledge and information centres during disaster may cause the loss of human knowledge what we had generated and stored for the future generations.

In another way, disaster whether it is artificial or natural, may destroy the library resources which cannot be recoverable in certain conditions. The effect of disaster varies as per geographical location, and Mizoram is located at a very serious disaster prone location in Indian sub-continent where more chances for earthquakes, landslides, heavy rain, biological agents, etc. So, it is the duty of library staff as well as concerned administration to make a safer strategic plan to prevent from the variety of disasters. Mizoram is considered as the disaster prone area, so it is the need of the hour to study the strategic planning and preparedness towards disaster management by the college libraries of Aizawl as well to know the awareness level of library staff towards disaster management. There are no such studies found which deals with the strategic planning and preparedness towards disaster management in college libraries of Aizawl. This research gap prompted to take up this challenge and it is thus an interesting measure to analyse the strategic planning and preparedness towards disaster management in college libraries of Aizawl.

1.11.2 Objectives of the study

The objectives for the present study are:

- a) To know the level of awareness of library staff towards disaster and it's management.
- b) To find out the strategies or action plans for disaster management in libraries.
- c) To know the constraints towards making strategies related to disaster management.
- d) To suggest the most prevalent strategies to overcome disaster.

1.11.3 Research Methodology

The present study was designed to investigate how strategic planning and preparedness towards disaster management are carried out in the college libraries of Aizawl. The study covers 15 college libraries within Aizawl. The survey method (through questionnaire) of research was found appropriate to undertake the present study. The structured questionnaire containing a total of 46 questions designed for every college libraries in Aizawl was distributed to the Librarian/ In-charge of the librarians covered under study. The data obtained through filled-in questionnaire was tabulated and analyzed using suitable statistical tool.

1.12. TENTATIVE CHAPTERIZATION

The First chapter is introduction and various backgrounds of disasters and disaster management, strategies and various literature regarding disaster management . The chapter also contains significance and scope of the study, review of literature, Statement of the problem, Objective of the study and Research methodology, etc.

The Second chapter deals with the conceptual framework and management of disasters across the globe and within the country and various strategies used by libraries in dealing with disasters across the country. It also studies about the need and use of disaster management and various disaster related literature are highlighted in the chapter.

The Third chapter is information about the colleges and college libraries of the 15 colleges within the premises of Aizawl district and a brief details about the colleges and the libraries. It contains an overview image of various 15 colleges in Aizawl.

The Fourth chapter is data analysis and interpretation of the study. The analysis was done on the basis of the criteria like the location and structure of library building, likelihood and knowledge of various disasters which could affect the area, awareness of disaster management in libraries, measures and level of concern about various natural and man-made disasters, imparting training and awareness in libraries and community level and additional inputs and methods of spreading awareness suggested for disaster management strategy, etc.

The fifth chapter contains findings, conclusions and suggestions from the observation of the study and recommendation from teachers, librarians and professionals under the study.

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CHAPTER 2

DISASTER MANAGEMENT: CONCEPTS

2.1 INTRODUCTION

Disaster impacts might include the forfeiture and loss of life, disease, injury and other adverse effects on the physical, mental and social well-being, together with damage to property, destruction of properties, damage of facilities, community and economic disruption and environmental deprivation. A disaster is a dreadful and distressing or devastating effect of a disastrous event that categorically affects or disrupts (or hover to disrupt) the serious roles and functions of a community, the social order or system, for a period long enough to harm or caused a failure. It is beyond the competence of the local community to overcome it. The stricken community needs extraordinary efforts to manage with it, often with outside help or international assistance/aid. It is a situation resulting from an environmental phenomenon or equipped conflict that produces stress, injury, mental and physical damage and economic disruption of inordinate scale. A disaster is not just the incidence or occurrence of an event such as an earthquake, landslide, flood, conflict, health epidemic or an industrial accident but it is that in which a disaster occurs if that event/process negatively impacts human populations.

Disasters combine two elements: hazard, and the susceptibility of affected people. "A disaster occurs when a hazard exposes the vulnerability of individuals and communities in such a way that their lives are directly threatened or sufficient harm has been done to their community's economic and social structure to undermine their ability to survive." A disaster gradually erupts and is a result from an amalgamation of hazards and vulnerability that surpasses the capacity of a society to reduce the potential undesirable consequences of risk. A hazard is an extreme event, natural or man-made, with a destructive potential to social, economic and human assets. These may include forthcoming coercions and may be "natural" (geological, hydro-meteorological and biological) or "man-made" (Conflict, environmental degradation, and technological hazards).

2.2 DISASTER MANAGEMENT DEFINITION

The World Health Organisation (WHO) defines Disaster as "any occurrence that causes damage, ecological disruption, loss of human life, deterioration of health and health services, on a scale sufficient to warrant an extraordinary response from outside the affected community or area."

A disaster can be well-defined as any catastrophic event curtailing from events such as earthquakes, catastrophic accidents, fires, or explosions, floods, etc. It is a phenomenon that disasters can cause damage to life, goods and destroy the economic, social and cultural life of people.

Disaster is the exposure of a cluster of people to risk, leading to a serious disruption of the functioning of a society and causing human, physical being, economic and environmental losses which surpass the capability of the affected community or society to manage.

Types of disasters

Disasters are broadly divided into two types:

- Natural
- Man-made disasters.

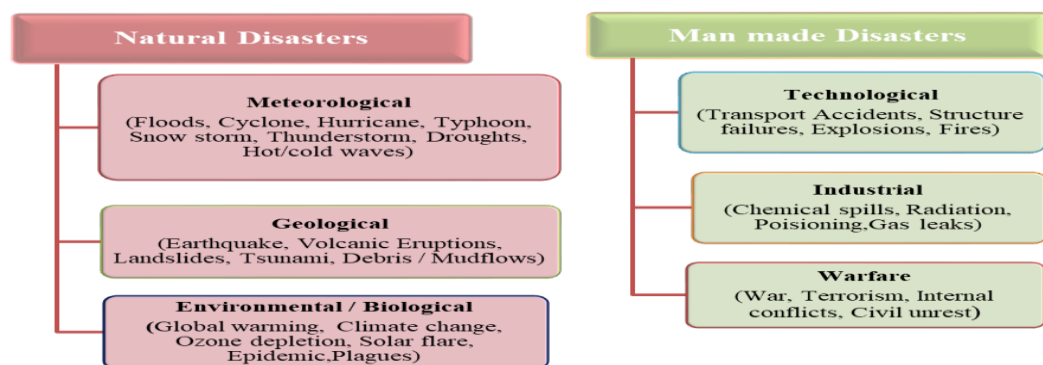


Figure- 2.1: Type of disasters
(Source: Google Image)***

2.3 NATURAL DISASTERS

Natural disasters occur as the outcome of the action of natural forces and tend to be accepted as unfortunate, but certain or inevitable at most of the time. They include Famines, Droughts, Tornadoes, Hurricanes, Floods, Tsunamis, Earthquakes, landslides, etc. The disaster and its effect can be seen on a large scale and the affected population/ community on a global scale are in huge figures every year.

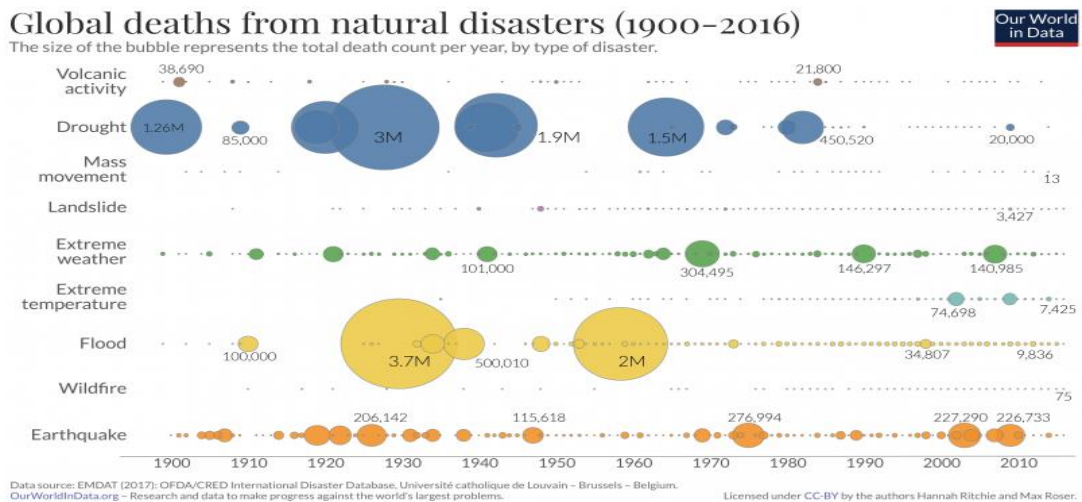


Figure- 2.2: Global deaths of disasters (1900-2016) report by EMDAT (2017)
(Source: Google Image)***

1. **Famines** may be defined as a tenacious failure in food supplies over a continued and prolonged period. It is a phenomenon in which a large percentage of the population of a region or country is so underfed and that death by starvation becomes progressively common.



Figure- 2.3: Bengal famine in India
(Source: Google Image)***

2. **Drought** is a lack and insufficiency of rain-water for a prolonged period of months or years when the area notes a deficiency in its water supply. Mostly, this occurs when a region receives constantly below-average rainfall. It can have a substantial impact on the ecosystem and agriculture of the affected area. Although a leisurely onset emergency and to an extent foreseeable emergency, drought has caused severe agony in the affected areas in recent years, including effects on poverty, starvation, and redundancy or unemployment.



Figure- 2.4: El-Nino affected by Drought
(Source: Google Image)***

3. **Flood** is an excess of water that submerges land, producing computable property damage or compelling evacuation of people and vital properties. Floods are caused due to heavy rainfall and the inadequate capacity of rivers to transmit the high overflow release. Floods develop gradually as rivers swell during an extended period of rain. A flood occurs when water excesses or inundates normally dry land. Almost around 75% of the total rainfall occurs over a short monsoon season (June – September) in some countries. On account of climate change, floods have also occurred in recent years in areas that are normally not flood prone. In 2006, drought prone parts of Rajasthan experienced floods.



Figure- 2.5: Bihar affected by flood in 2019
(Source: <https://indianexpress.com/article/india/bihar-flood-toll-rises-to-67-48-lakh-affected-5834986/>retrieved on 6th March, 2020)

4. **Cyclones** are robust winds that are shaped over the oceans. The term "cyclone" refers to all classes of storms with low atmospheric compression at the midpoint and are shaped when an organized system of circling winds, clockwise in the Southern Hemisphere, anti-clockwise in the Northern Hemisphere that develops over tropical waters. Around 8% of the land is susceptible to cyclones of which coastal areas experience two or three tropical cyclones of erratic concentration or intensity respectively every year. Cyclonic events on the east coast are more severe than on the west coast. The Indian continent is considered to be the worst cyclone-affected part of the world, as a consequence of low-depth ocean bed topography and coastal outline. The main threats from a cyclone are in the form of gales and solid windstorms; torrential rain and high tidal waves/storm surge.



Figure- 2.6: Cyclone BulBul brewing in Bay of Bengal
(Source: <https://oneindia.com/> retrieved on 14th November, 2019)

5. **Hurricane** is a gigantic storm that is powerful, spiral and a storm that begins over a warm sea, near the equator and conveyed by aggressive winds, flash floods, avalanches and huge waves. It is low compression, large scale weather system which originates its energy from the dormant heat of condensation of water vapor over warm tropical seas.

The difference between a cyclone and hurricane is that hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific while cyclones are formed over the South Pacific and Indian Ocean and typhoons are formed over the Northwest Pacific Ocean.



Figure- 2.7: Hurricane disaster

(Source: Google Image)***

6. An **earthquake** is a sudden motion or trembling of the ground crust caused by the collision of tectonic plates resulting in the sudden displacement of rock masses. Earthquakes are the movement of one rock mass past another in response to tectonic forces beneath the earth's surface. Of the total earthquake-prone areas, 12% is susceptible to very severe earthquakes, 18% to severe earthquakes and 25% to damageable earthquakes. The biggest quakes occur in the Andaman and Nicobar Islands, Kutch, Himachal and the North-East. The Himalayan regions are particularly prone to earthquakes. The seven North-East states of India – Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya including the territory of Andaman & Nicobar Islands; and other parts of 6 other states in the North/North-West state in India (Jammu and Kashmir, Uttaranchal, and Bihar) and West (Gujarat), are in Seismic Zone V.



Figure- 2.8: Earthquake disaster

(Source: Google Image)***

7. A **landslide** is the movement of rock, earth, or fragments down a tilted section and slope of land. Landslides are triggered due to by rain, earthquakes, volcanoes, or other factors that make the slope unbalanced. Geologists and expert scientists who study the physical formations of the Earth, define landslides as one type of mass degeneration. Landslides occur in the hilly regions such as the Himalayas, North-East India, the Nilgiris, and Eastern and the Western Ghats. Landslides in India are another recurrent phenomenon. Landslide-prone areas largely correspond to earthquake-prone areas, i.e. North-West and North-East, where the incidence of landslides is the highest.



Figure- 2.9: Landslide disaster

(Source: Google Image)***

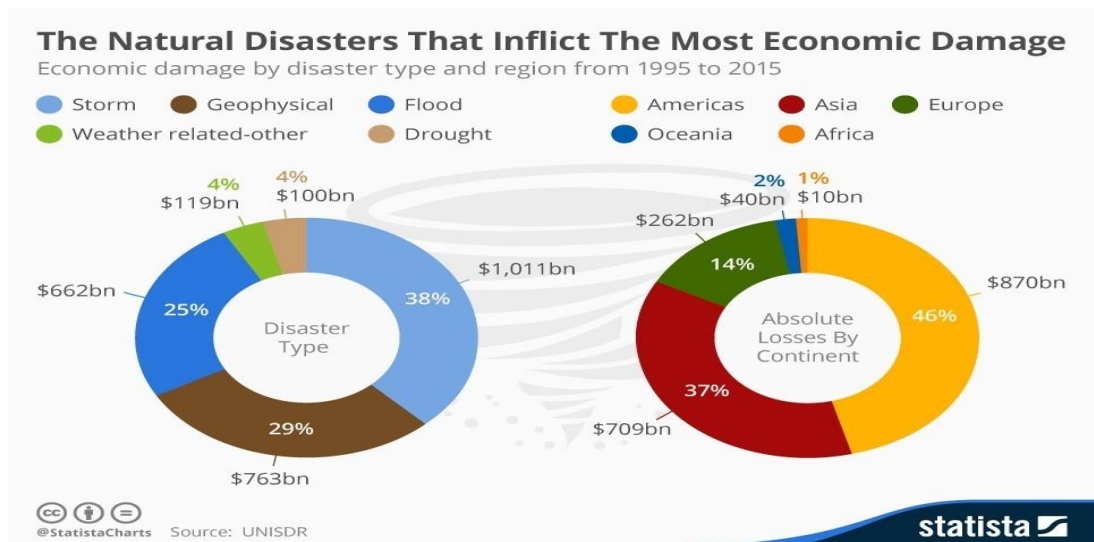


Figure- 2.10: Natural disasters that inflict the most economic damage report by UNDRR
(Source: Google Image)***

2.4 MAN-MADE DISASTERS

Man-made disasters are the type of disasters which may comprise all types of disaster created by man due to negligence, indecorous planning and monitoring, theft, robbery, etc. These might include

- Dam failures
- Explosions,
- Forest/ Wildfires,
- Nuclear reactor accidents
- Release of toxic chemicals and radioactive materials(industrial accidents),
- Wars
- Theft and Robbery

2.5 DISASTER RISK/THREATS

The concealed disaster losses, in lives, health status, livelihoods, assets and services, which might occur to a specific community or a society over some specified future period are sometimes referred to as disaster threats. They are classified by experts into two main factors:

A) Traditional disaster threats:

There are some long-standing disaster threats that still exist like earthquakes, cyclones, volcanic eruptions, tsunamis, wildfires, floods, landslides, and drought so do the man-made disasters like fire, explosions and other major accidents which cause substantial human casualties, financial and social losses. These same traditional threats have increased as an increase in population has enforced people to settle in disaster-prone areas which surges the impact of disasters.

B) Modern disaster threats:

These entail certain manmade acts of disasters like terrorism, civil conflict, terrorism and conflict with conventional arms as well as chemical, biological, nuclear, or radiological armaments. Amplified social violence has drastically affected many nations and communities.

2.6 HAZARD

A hazard is an agent that has the potential to cause harm to a vulnerable target. Hazards can be both natural or human-induced. Sometimes natural hazards such as floods and drought can be caused by human activity. Floods can be caused by bad drainage facilities and droughts can be caused by over-irrigation or groundwater pollution. The terms "hazard" and "risk" are often used interchangeably. However, in terms of risk assessment, they are two very discrete and distinct terms. A hazard is any mediator that can be a source to harm or damage to humans, property, or the environment. Risk is defined as the probability that contacts to a hazard will lead to a negative consequence, or more simply, a hazard poses no risk if there is no exposure to that hazard may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage while hazards are conditions that have the potential to harm a community or environment. Hazards can be latent or possible, with only a theoretic likelihood of harm. An occurrence that is instigated by an interface with a hazard is called an accident or incident. The probable severity of the undesirable costs of an incident related with a hazard, combined with the probability of this occurring, constitute the associated risk. The one key concept in recognizing a hazard is the existence of stored energy that, when released, can cause damage. The stored energy can occur in many forms: chemical, mechanical, thermal, radioactive, electrical, etc.

Another class of hazard does not involve the release of stored energy but rather involves the presence of hazardous situations. Instances comprise limited or inadequate outlet spaces, oxygen-depleted atmospheres, fixed positions, monotonous motions, or protuberant objects, etc. Hazards may also be defined and distinguished as natural, anthropogenic, or technological. In utmost cases, a hazard may affect a range of targets and have slight or no effect on others. Credentials of hazards assumes that the potential targets are distinct, and is the first step in accomplishing a risk assessment.

2.6.1 GEOLOGICAL HAZARDS

A geological hazards are the phenomenon that may cause damage to life, injury and health effects, property damage, damage and loss of livelihoods and amenities, social and economic disruption, or environmental damage. Geological hazards include certain disasters such as landmass related disasters like earthquakes, mudslides, volcanoes, etc,

2.6.2 Water and climatic Hazards (Hydrometeorological hazards)

The process or phenomenon of atmospheric and hydrological, oceanographic nature that may cause loss of life, damages of property and infrastructures, injury or other health impacts, loss of livelihoods and services, social and economic disruption or environmental damage is termed as water and climatic hazards. Certain examples of hydrometeorological hazards may include various kinds like tropical cyclones, thunderstorms or hailstorms, tornados, substantial snowfall, avalanches, coastal storm surges, floods including flash floods, droughts and cold spell.

2.6.3 Chemical Hazards

By their nature, the manufacture, storage, and transport of chemicals are accidents waiting to happen. Chemicals can be corrosive, toxic, and they may react, often explosively. The impacts of chemical accidents can be deadly, for both human beings and the environment.

2.6.4 Industrial/ Technological hazards

A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures, or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

These comprises of various industrial pollutions, nuclear radiation and toxic wastes, dam failures, accidents, factory explosions, fires, and chemical spills, etc.

2.6.5 Biological hazards

Biological hazards referred to a biological elements that stance a threat to the health of living organisms, mainly that of humans. This can include medical waste or samples of a micro- organism, viruses and toxins (from a biological source) that can affect human health. It can also include substances harmful to animals. Examples- anthrax, smallpox, plague, brucellosis and toxin, bird flu, etc.

2.7 HAZARD AND MANAGEMENT OF DISASTER

It is clear to almost all that a Disaster Management refers to how we can protect or preserve a maximum number of lives and property during a natural disaster. Any disaster is an amalgamation of two factors: One or more hazards. Hazards can be natural which might include certain disasters like earthquakes, floods, drought, cyclones, wildfires, etc. and human-made such as conflicts, industrial accidents, severe pollution, etc. A disaster is a result of a sudden disastrous event that seriously disrupts the normal function of the society or the community to the extent that it cannot subsist without outside help. A disaster is not merely the incidence of an event such as an earthquake, flood, conflict, health epidemic or an industrial accident but basically refers to a fact that a disaster occurs if the event/process destructively impacts the human population and society.

Disasters are composed of two main factors: hazard and the vulnerability of the affected people. "A disaster occurs when a hazard exposes the vulnerability of individuals and communities in such a way that their lives are directly threatened or sufficient harm has been done to their community's economic and social structure to undermine their ability to survive." Disaster is the oppression of a group of people to a hazard, principal to a serious disorder of the functioning of a community or society and causing human, material, economic environmental losses which surpass the ability of the affected community. According to Kelly (1996), "Disaster management can be defined as the range of activities designed to maintain control over disasters and emergencies and to provide a framework for helping those who are at risk to avoid or recover from the impact of the disaster".

Disaster management means managing resources and various responsibilities to deal with all humanitarian aspects of emergencies. This may include preparedness before a disaster, response and recovery i.e. rebuilding and supporting society. The purpose of this is to lessen the impact of disasters. Disaster management can also be defined as the association and management of resources and responsibilities for dealing with all humanitarian characteristics of emergencies, in specific, preparedness, response and recovery to decrease the impact of disasters.

The various aspects of disaster management:

- Disaster prevention
- Disaster preparedness
- Disaster response
- Disaster mitigation
- Rehabilitation
- Reconstruction/ Recovery

The aims of disaster management are to:

- Reduce or avoid potential losses from hazards;
- Assure quick and appropriate assistance to victims when required;
- Achieve hasty and robust recovery.

It is further examined that the potential for developing an integrated disaster plan that could line up disaster responses across all collection formats – physical and digital.

Coordination is the key point of disaster response operations. Establishing coordination efforts in disasters is challenging because of the presence of many organizations providing humanitarian aid. When the mentioned agencies combine their efforts to provide solutions, the lack of coordination problem appears as presented by Pilbeam. So, there is the need for an overall organizational structure that can grant the necessary performance integrating several independent agencies for guaranteeing the adequate combined actions in the recovery phase and response phase.

2.8 DISASTERS IN THE GLOBAL CONTEXT

For the past 20 years, around 4.4 billion people have faced a certain kinds of disaster and caused around \$2 trillion of damage and around 1.3 million people have lost their life. These losses have surpassed the total value of official development assistance in the equivalent period. Natural disasters excessively affect people living in developing countries and the most susceptible communities within those countries. Over 95 percent of people killed by natural disasters are from developing countries due to certain disasters like extreme climate temperatures and natural disasters.

The incidence of natural disasters in developing countries connect to that the impact of climate changes and the organization of the natural environment sturdily effect the rate of development progress.

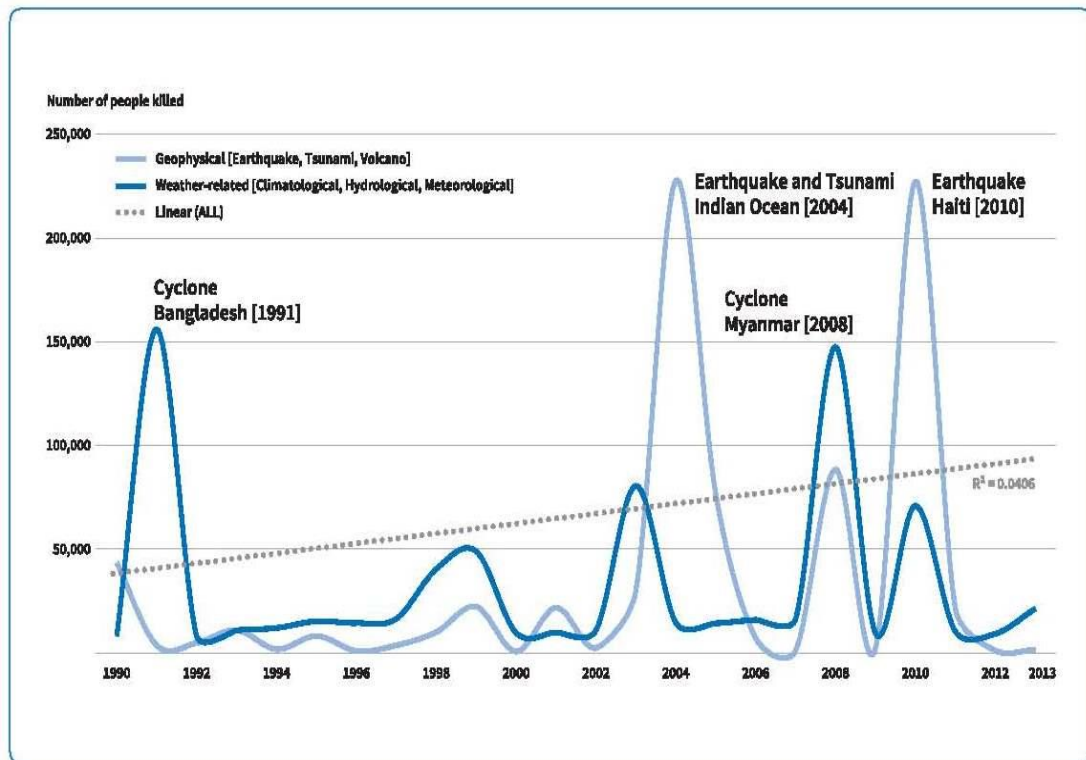


Figure- 2.11: Impact of disaster in the last 10 years, report by UNDRR
(Source: <https://oneindia.com/retrieved> on 14th January, 2020)

In the decade 1990-2013, an average of about 250,000 people lost their lives and around 30 million people were affected by disasters every year. The losses in terms of private, community and public properties has been astronomical. The nature of disasters encountered by different countries are both natural and man-made disasters and therefore there are more than a million who had suffered due to disasters in the global context as well.

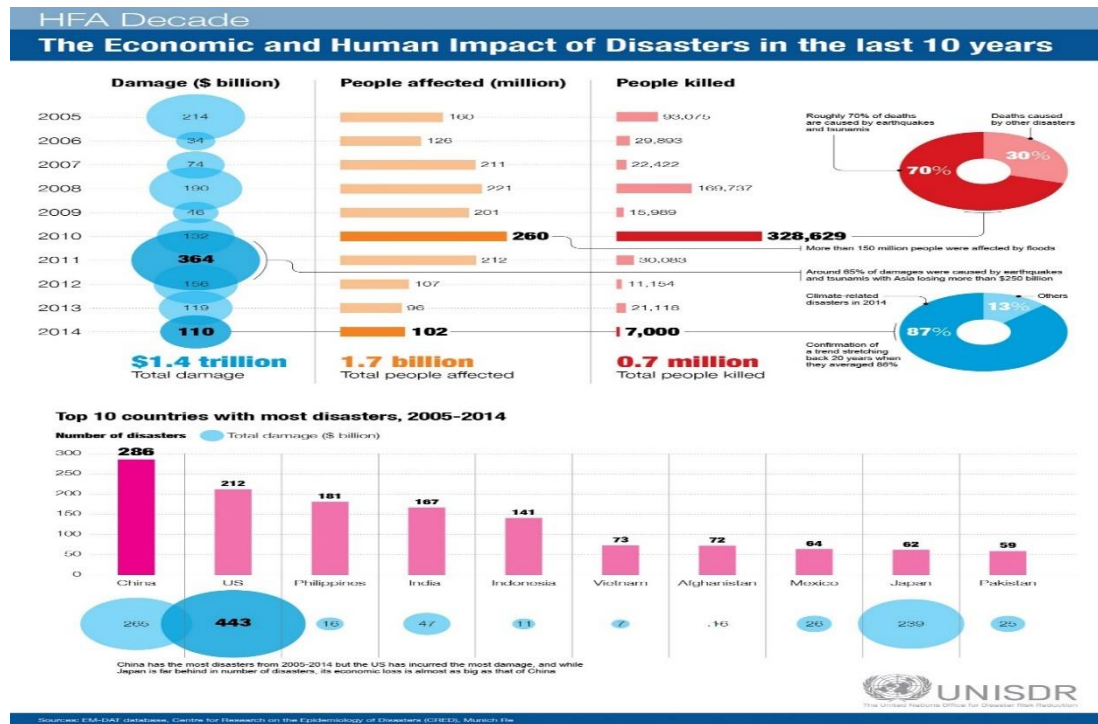


Figure- 2.12: Economic and Human Impact of Disasters, report by UNDRR
(Source: <https://www.unidsr.org/retrieved> on 12th February, 2020)

There has been considerable concern over natural disasters at the global level. Even as scientific and material advancement is made, the loss of lives and property due to disasters has not a decision. The human toll and economic losses have mounted.

It was in this context that the Nations General Assembly (1989) declared the decade 1990-2000 as the International Natural Disaster Reduction with an objective to lessen the loss of lives and property and confine economic damage over concerted global action, specifically in developing countries..

2.9 DISASTERS IN INDIA CONTEXT

India has been habitually vulnerable to natural disasters on account of its inimitable geo-climatic conditions. Certain disasters like floods, droughts, cyclones, earthquakes and landslides have been a persistent phenomenon. According to NDMA, about 60% of the landmass is susceptible to earthquakes of various intensities; over 40 million hectares is prone to floods; about 8% of the total area is prone to cyclones and 68% of the area is susceptible to drought. Nearly 57% of the land is vulnerable to earthquakes (high seismic zones III -V), 68% to drought, 8% to 44.5% to cyclones, and 12% to floods. India has also become much more susceptible to tsunamis since the 2004 Indian Ocean Tsunami.



Figure- 2.13: Disaster map of India (1980-2009)
(Source: <https://www.unidsr.org/retrieved> on 18th November, 2019)

The Indian sub-continent is among the world's most disaster-prone areas. Almost 85% of India's area is exposed to one or multiple hazards. There are 7 union territories, 22 disaster-prone areas of the 28 states and is susceptible to wind storms procreated in the Bay of Bengal and the Arabian Sea, earthquakes caused by vigorous crustal movement in the Himalayan mountains, floods brought by monsoons, and droughts in the country's arid and semi-arid areas. The Government of India has brought about a paradigm shift in approach to disaster management over the past few years.

The innovative approach proceeds from the belief that development cannot be sustainable unless disaster mitigation is built into the development process. The other significant approach is that mitigation has to be multi-disciplinary across all sectors. The new policy also originates from the credence that investments in mitigation are much cost-effective than expenses on relief and rehabilitation. Disaster management lodges an important place in the country's policy framework as it is the poor and under-privileged class who are worst affected on account of calamities/disasters. The phases taken by the Government emanate from the approach outlined above. The request has been interpreted and shaped into a National Disaster Framework or a roadmap covering institutional mechanism; disaster prevention strategy, initial warning system, disaster mitigation, preparedness and response human resource development.

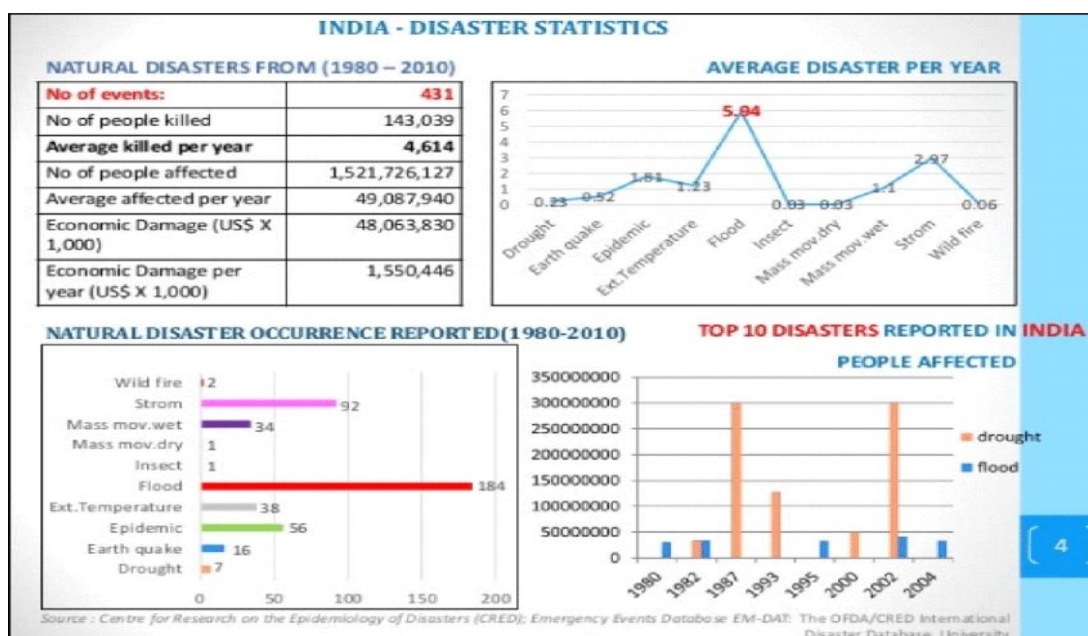


Figure- 2.14: Disaster statistics of India (1980-2010)
 (Source: [https:// www.cred.be/](https://www.cred.be/) retrieved on 18th November, 2019)

The anticipated inputs and areas of intervention, agencies to be in at the National, State and district levels have been acknowledged and listed in the roadmap. This roadmap has been shared with all the State Governments and Union Territory Administrations. Various Ministries from the states and departments of Government of India, and the State Governments/UT Administrations have made and develop their respective roadmaps taking the national roadmap as a comprehensive guideline. Therefore, there is a common strategy sustaining the action being taken by the entire partaking organization's stakeholders.

2.10 APPROACHES TOWARDS DISASTER MANAGEMENT

The approach is being put into effect through various factors and categories. These factor may tend to change and differ from the type of organisation and sector based.

The various factors may include:

- i. Institutional changes
- ii. Enunciation of policy
- iii. Legal and techno-legal framework
- iv. Mainstreaming Mitigation into the Development process
- v. Funding- mechanism
- vi. Specific schemes addressing mitigation
- vii. Preparedness measures
- viii. Community participation and capacity building

The role of emergency management falls to National Disaster Management of India, a government agency subordinate to the Ministry of Home Affairs. There has been alteration in prominence, from response and recovery to strategic risk management and reduction, and from a government-centred approach to decentralized community participation in the recent years.

2.11 FUNDING MECHANISMS

Bilateral-Aid i.e. foreign and local or national funding aid is being used to deal with disasters, especially in the post-disaster phase. Findings from a study by Patrick Ngulube on environmental monitoring and controls in the national archives and libraries in Eastern and Southern Africa revealed that secure funding for preservation activities was very difficult to establish in six national libraries and seven national archives. It was not clear as to how and to what degree preservation was funded in most of the institutions studied. He suggested that the visibility of preservation activities in general, and environmental monitoring in particular, could only be effectively achieved if there is a specific budget dedicated to such activities. At the University of Botswana, it was discovered that the Special Collection Unit gets little or sometimes no funds allocated for management which has been perceived as a major cause of its failure to meet the basic needs of its preservation work.

2.12 COMMUNITY-BASED DISASTER MANAGEMENT

The role of community participation in disaster management is a significant factor. When the community becomes a part of the decision-making system, it safeguards ownership and accountability. On the other hand, the medical staff and doctors do need to know the local language for treating disaster victims. The local people have to be trained to manage disasters. An important and effective mechanisms for a country to prepare for a disaster is by conducting education and public awareness programs at the local community level and by educating, preparing and supporting the local communities in their everyday efforts to condense risks and prepare their local response mechanisms to discourse disaster emergencies.

The community-based approach in disaster management is the process of educating and empowering the population through sharing knowledge and information about the several types of disasters and the possible risks as widely as possible so that people act appropriately when a disaster happens. The member of a community are the immediate victims of the adversative effects of a disaster. They have the superlative knowledge about the local surroundings in terms of the most disaster-prone areas, the demography of the community and the social and traditional organization. Community leaders can form Community Based Action Plans precisely to their needs. This action plan includes the hazard map, mock exercises and other important methods, skills and the knowledge needed in preparation for a disaster.

Disasters are dreadful, distressing and ruinous effect of a calamitous event which seriously affects or disrupts (or threaten to disrupt) the perilous functions of a community, society or system, for a long period and significantly harm it or cause its failure. It is a circumstances resulting from an environmental phenomenon or armed conflict that produces stress, personal injury, physical damage, and economic disruption of great magnitude. It is yonder the capability of the local community to overcome it. Therefore, the stricken community needs astonishing efforts to cope with it, often with outside help or international aid. Disaster management comprises the total of all the activities, programs, awareness and measures to be carried before, during and after a disaster to avoid or reduce the impact or recover and retrieving from its losses.

Disaster management also means supervision of resources and various responsibilities to deal with all humanitarian aspects of emergencies. This may include preparedness before a disaster, response and recovery i.e. rebuilding and supporting society. The purpose of this is to lessen the impact of disasters.

2.13 DISASTERS INSIDE LIBRARIES

Paul Eden and Graham Matthews define disaster management as the preparedness and ability of an organization to carry out operations in the mitigation response or rescue, rehabilitation and recovery after a disaster while ensuring the sustainability of any social-economic and environmental development.

The 2005 Heritage Health Index reported to a fact that there were 78% of libraries who does not have a disaster plan and staff trained to carry out. Therefore, preparedness in terms of disaster is an important issue in library management. The phases of disaster planning are a rounded procedure of planning, prevention, response, recovery, preparedness and training. Since it is problematic to predict when a disaster will strike, all libraries and archives need a disaster preparedness and recovery plan, but most archivists and librarians do not know how or unaware of about developing one.

The cultural heritage collections in the 21st century are progressively hybrid and not only do they contain physical materials, but they also comprehend growing collections of digital materials. However, typically their disaster plans focus on handling just the physical collections. The digital collections are managed separately, commonly the disaster planning role is dispensed to IT systems staff.

Furthermore, it is well reputable that libraries and other heritage institutions have lost valuable properties and resources due to disasters owing to not having any proper disaster management planning in place. Man-made disasters through obliteration or arson specifically targeting libraries are not a recent phenomenon as in ancient times major disasters or calamities can be linked with deliberate acts of arson.

A well- deliberate or good and planned disaster management practice in libraries should therefore include a disaster management strategy, a disaster preparedness plan, adequate equipment and facilities, risk assessment surveys, appropriate training for staff, the organization of disaster teams, and the means for collaboration and linkage with local and national disaster management agencies.

The library of Antioch in ancient Syria was burnt by Emperor Jovian in 364 AD and the library of the Serapeum temple at Alexandria in ancient Egypt was allegedly burnt and looted under a decree issued by Theophilus of Alexandria. In 1548, Glasney College library in England was destroyed under King Henry VIII 's Dissolution of the Monasteries Act, and in 1814 British forces destroyed the original Library of Congress in the USA.

More recently, during the 1990 – 1991 Iraq War, the Central Library of the University of Bagdad was looted and set on fire, and in 2014 ISIS burnt and destroyed the Mosul University Library, also in Iraq. In 2015 the Institute of Scientific Information on Social Sciences in Moscow was destroyed by an unknown arsonist.

Natural disasters are identified and known to have ruined the 70,000 volume Portuguese Royal Library in Lisbon after an earthquake in 1755. In 1923, the Imperial University Library in Tokyo, Japan was damaged on a large scale by an earthquake and the resulting fire. There was also a report on natural disasters affecting Ghanaian libraries, as several professionals including Harry Akussah and Venatus Fosu discussed and wrote how an earthquake critically exaggerated and affect the Accra ' s Aglonby Library in 1939. More recently, in the fall of 2005, Hurricane Katrina destroyed different kinds and types of libraries in Louisiana and Mississippi. In 2013, around 30,000 gallons of water were deserted into the Jimmie B Keel Regional Library in Tampa, Florida, as a outcome of substantial rainfall.

The Indian Ocean earthquake in 2014 also severely affected many libraries, archives and museums in India, Indonesia, Malaysia, Thailand and Sri Lanka. In terms of costs, according to Johnson the 1997 flood at Colorado State University caused \$100 million in damage and Ross Harvey reported how the damage and subsequent costs of the 1966 floods in Florence, Italy were a major impetus for the development of disaster planning, especially salvage techniques for water damaged paper materials. According to the International Federation of Library Associations ' (IFLA) Disaster Preparedness and Planning Manual, fires are one of the most frequent causes of damage in libraries and archives, with the majority of fires provoked by some malfunction in the institutions electrical wiring and equipment or by human carelessness.

In 2014, the technical room of the Computer Resource Centre at the Federal University of Technology Akure in Nigeria — essential for the coordination of all the information and communications technology activities in the university — was ravaged by a fire in which all its computers and networking equipment were destroyed. In the following year, the Centre suffered another major disaster when the main transmitter mast for the entire university was destroyed in a storm, thereby disrupting most university activities for several months including various library services. The fire was also reported in October 2016 to be the cause of a disaster at the University of Jos, also in Nigeria and Ghana, with devastating effect on the university. According to news reports, the fire service was overwhelmed by the magnitude of the fire that also engulfed the library complex at the university.



Figure- 2.15: Technical room of the Computer Resource Centre at the University Library, FUTA after the fire in 2014
(Source: Google Image)***

Mould and mildew have also been recognized as major causes of deterioration, damage and destruction of library resources in humid and tropical environments as they can proliferate due to the instability of the weather and significant fluctuations in temperature and relative humidity. The deterioration of paper by biological agents, particularly moulds, should be accorded high priority in tropical countries such as India, because the prevailing high ambient temperature of between 25°C and 35°C and an ambient relative humidity of 80%, facilitate the rapid proliferation of micro-organisms.



Figure – 2.16: Moulds and mildew damaging books

(Source: Google Image)***

At the National Library and Archive of Namibia it was found that mould attack due to the damp conditions had damaged rare photographic albums and then after the unaffected photos had been digitized in response, these versions were subsequently lost as the computer on which they were saved crashed. Finally, some mould varieties can pose a health hazard to people, and although serious cases are rare, active mould can also cause respiratory problems, infections, and skin and eye irritation.

A well- planned and executed Integrated Pest Management (IPM) programme will help avert problems arising, and in times of limited budgets, by making much more effective use of incomplete human and financial resources. Infestations can be dealt with by the rigorous use of various techniques, including installing external protection to buildings, installing insect traps, reduced but effective use of insecticides and other chemicals, the control of moisture through, for example, dehumidification, as well as increased cleanliness measures, limited heat treatments of infested materials, and continual monitoring for evidence of infestations. Fumigation of library materials may be warranted in some instances, but is rarely necessary.

Reporting on the lack of co-ordinated pest management practice at the University of Botswana, Segatsho found that while there was no strategic pest management system in place, pesticides had been used for quite some time. However, there was no monitoring nor analysis of their effectiveness, nor was there any information on the pesticides used. Furthermore, it is generally recognized that the reduced use of pesticides will lessen the risk of chemical damage to objects.

Fire is one of the biggest risks to a library collection. The most devastating library fire in the United Kingdom was the 1994 Norwich Central Library fire which was caused by an electrical fault and which destroyed an entire collection of books, manuscripts and archival materials.



Figure- 2.17: Norwich Central Library experiencing a fire disaster (1994)
(Source: Google Image)***

Training for staffs in an organisation is significant for effective disaster management and practices. According to John Feather, cultural goods need optimal fire protection and this must be planned in consultation with experts in the field. It is essential to install an adequate fire alarm system throughout any building that houses a valuable collection and to split the building into sectors by using fire division walls. Besides, optimal protection can be achieved by the installation of automatic fire extinguishing systems. V. K. Jain also states that automatic detection and automatic fire fighting measures are necessary to retard, if not extinguish, the fire pending the arrival of the fire services.

2.14 Disaster management practices in Libraries

Tutoring and educating or training of library personnel is another significant factor for a successful response in accordance to a disaster and in reducing any sort of impacts. Obtaining and acquiring necessary skills will assist personnel to comprehend and escalate many of the matters relating to disasters. Apart from cumulating the level of awareness, training will saturate them with the applicable skills and competencies that will augment their commitment to disaster management and improvement in a number of ways.

According to Lyall, there should be the occasional refresher programmes to update staff on new developments and new technologies in disaster management, and she opined how such refresher programmes would enable library staff to adopt a written disaster plan to a specific situation as well as to become familiar with working together. Holding regular compulsory staff awareness training sessions would also assist in maintaining a continuity level of awareness, commitment and enthusiasm. Reiterating the importance of training of personnel for fire disaster, the Director of Lagos Fire Service stated that the implementation of a ' yearly training event exposed many workers to measures and to take in handling emergencies and ensuring that safety equipment were in good condition ', and that ' effective knowledge of fire safety information would help reduce fatalities, injuries and destruction of property '.

On a wider scale, exercises around responses to ' mock disasters ' help test the preparedness of the emergency services and others. As well as a host of newsletters, bulletins, notes and briefings, conferences, seminars, workshops and training events are common across the library and associated services sector. The advent of social media has enhanced the rapid dissemination and communication of information among people within organisations and the wider community.

Another significant factor to accomplish the goal of disaster management in university libraries is that necessary tools and equipment must be provided for monitoring, detecting and executing any plan. It is key to things such as the procurement of facilities and equipment, organizing outreach programs, payment for outsourced emergency services, as well as all aspects of recovery operations.

A library disaster is an unforeseen but an event that puts collections at risk. No institution can be left out from the event or invulnerable to the possibility. Disaster planning is a matter of basic safety and security for libraries and archives, the staffs and the collections. It is considered to be an essential part of any preservation program to be implemented by any kind of library or archives. A formal written plan empowers an organization to respond competently and swiftly to an emergency, and minimizes damage to the building and other resources.

2.15 BUSINESS CONTINUITY PLAN (BCP) IN DISASTER MANAGEMENT



Figure- 2.18: Business Continuity Management Planning
(Source: Google Image)***

In accumulation to a disaster preparedness plan, it is correspondingly significant to have a Business Continuity Plan (BCP) to safeguard the minimum effect of a disaster on the service delivery provided by the library to customers and stakeholders. A BCP is based on the identification of the potential impacts of any internal and external threats and consequential losses, which could lead to disruption or loss of key business processes. The BCP is thus part of the strategy that encompasses risk management and disaster planning, and a good BCP is designed to avoid or mitigate risks to reduce the impact of the crisis and to reduce the time to return to a state of business as usual . Virginia Jones describes a BCP as “the documentation of a predetermined set of instructions or procedures that describe how an organization's business functions will be sustained during and after a significant disruption. It functions as a roadmap that can be followed when a disruptive event occurs.”

2.16 OVERALL AIMS AND PERSPECTIVES OF DISASTER MANAGEMENT AND PLANNING

The overall aim is thus to create a plan and prepare an environment that ensures the continuity and recovery of critical processes at a predetermined minimum level, ideally to the original level before any impact. In addition to any consequences caused by a disaster, preparedness is also about planning how to prevent any perceived threat, both through preventive actions such as backup, spare parts and spare buildings as well as setting policy and expanding awareness about such plans and procedures.

This research investigated disaster preparedness in Mizoram, particularly to the College libraries in Aizawl, to gauge what areas might be common in disaster management of physical and digital collections, and also what might be different.

2.17 CONCLUSION

Fatalities and losses due to disasters have exposed a mounting tendency in terms of lives and property throughout the world due to urbanization, increasing population and increasing degradation of the environment. The global exertions to manage disasters are often not corresponding with the frequency and magnitude of disasters.

However, some innovative intellectual and management of disasters have developed and emerges at a global level which implores for a proactive and preventive approach and assimilates disaster management with continuing development activities that is sustainable development for over the last 20 years or so.

The need for strategic planning and preparedness towards disaster management can be seen from the various disasters encountered every year on a global scale. There is a need and special concern needed to be taken on these grounds by various government and higher officials, organisations from all the continents, depending on the latency or possibility of various natural and ma-made disasters. Therefore, the libraries must also ensure to take measures and be more aware of various disaster and hazards, thus safeguarding the correct plans and procedures for any disasters which might or actually happen in the near future.

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CHAPTER 3

COLLEGES IN AIZAWL: AN OVERVIEW

3.1 INTRODUCTION

The Higher Education scenario in Mizoram comprises of Universities and Colleges. There are two Universities and 31 colleges in Mizoram which cater to the educational and research needs of potential students and researchers. To enhance the educational and research capability of the Universities and Colleges teachers, students and research scholars, there are libraries attached to these institutions. In the changing information scenario, the colleges have started accessing and procuring e-resources by the faculty to promote their teaching, learning and research. It is in this context, it is important to know the colleges located in Aizawl City.

The following chapter focuses on the college libraries located within the premises of Aizawl for the management, planning, and research. There are several higher institutions in Mizoram and a majority of the higher institutions are located within the premises of Aizawl city.

Aizawl is the capital of Mizoram, India. It was officially established on 25 February 1890. There are a total population of 293,416 (according to 2011 census) but has reached to an extent of around 4,56,352 according to populationu.com. It is the largest city in the state. It is also the midpoint of management and administration containing all the relevant government offices, state assembly house and civil secretariat. The residents of Aizawl strongly replicates the different communities of the other ethnic Mizo society. Therefore, the chapter highlights the various college and the libraries in Aizawl. There are number of Colleges within the premises of Aizawl and all the institution claimed of having libraries. However, the study was narrowed down to Institutional Colleges that are focused on the general course of study, such as Arts, Science and Commerce. Colleges that were having or providing specific studies and training in certain fields were excluded from the study.

3.2 COLLEGES IN MIZORAM

Presently Mizoram is having one Central University i.e. Mizoram University and one private University, ICFAI (Institute of Chartered Financial Analysts of India) University. According to Mizoram University Annual Report 2019, there are 35 affiliated/ constituent colleges, recognized institutions under Mizoram University in Mizoram, as stated on the table along with the number of faculty in each college.

Table-3.1: Colleges in Mizoram.

SN	Name of College	Location
16.	Pachhunga University College	Aizawl
17.	Govt. Aizawl College	Aizawl
18.	Govt. Hrangbana College	Aizawl
19.	Govt. Zirtiri Residential Science College	Aizawl
20.	Govt. Mizoram Law College	Aizawl
21.	Govt. Aizawl North College	Aizawl
22.	Govt. Aizawl West College	Aizawl
23.	Govt. T. Romana College	Aizawl
24.	Govt. J. Thankima College	Aizawl
25.	Govt. Johnson College	Aizawl
26.	Aizawl City College	Aizawl
27.	Divine Mercy College	Aizawl
28.	St. Xavier's College	Aizawl
29.	Helen Lowry College of Arts & Commerce	Aizawl
30.	Govt. Saitual College	Saitual
31.	Lunglei Govt. College	Lunglei
32.	Govt. Champhai College	Champhai
33.	Govt. Serchhip College	Serchhip
34.	Institute of Advanced Studies in Education (IASE) /CTE	Aizawl
35.	Govt. Saiha College	Siaha
36.	Govt. Kolasib College	Kolasib
37.	Govt. Hnahthial College	Hnahthial
38.	Govt. Lawngtlai College	Lawngtlai
39.	Govt. Mamit College	Mamit
40.	Govt. J. Buana College	Lunglei
41.	Govt. Khawzawl College	Khawzawl
42.	Govt. Zawlnuam College	Mamit
43.	Govt. Kamalanagar College	Chawngte
44.	Regional Institute of Paramedical & Nursing Science	Aizawl
45.	NIELIT (Formerly DOEACC) Centre	Aizawl
46.	Higher and Technical Institute, Mizoram	Lunglei
47.	Mizoram College of Nursing (MCON)	Aizawl
48.	DIET (B. Ed)	Aizawl
49.	DIET (B. Ed)	Lunglei
50.	MIMER, Falkawn	Aizawl

(Source: MZU Annual Report 2017-2018)

3.3 COLLEGES IN AIZAWL

The colleges under study have been narrowed down to 15 selected college libraries which provide undergraduate education in Arts, Science and commerce situated within the premises of Aizawl city. Colleges providing specific and special types of training and studies were excluded from the study.

Table-3.2: Selected colleges in Aizawl City

SN	Name of College
1.	Pachhunga University College, College Veng, Aizawl
2.	Govt. Aizawl College, Sikulpuikawn, Aizawl
3.	Govt. Hrangbana College, Chanmari, Aizawl
4.	Govt. Zirtiri Residential Science College, Ramthar Veng, Aizawl
5.	Govt. Mizoram Law College, Luangmual, Aizawl
6.	Govt. Saitual College, Saitual, Aizawl
7.	Govt. Aizawl North College, Ramhlun, Aizawl
8.	Govt. Aizawl West College, DawrpuiVengthar, Aizawl
9.	Govt. T. Romana College, Republic Veng, Aizawl
10.	Govt. J. Thankima College, Bawngkawn, Aizawl
11.	Govt. Johnson College, Shivaji Tillah, Khatla, Aizawl
12.	Aizawl City College, C/o J. L. High School, Khatla, Aizawl
13.	Divine Mercy College, Bawngkawn- Lunglei Road, Aizawl
14.	St. Xavier's College, Lengpui, Aizawl
15.	Helen Lowry College, Vaivakawn, Aizawl

(Source: <https://mzu.edu.in/index.php/about-mzu/affiliated-colleges/details-colleges>)

3.4 PACHHUNGA UNIVERSITY COLLEGE (PUC)

3.4.1 About The College

Pachhunga University College is the largest and oldest college in Mizoram by enrolment and campus size. It is also the only constituent college of Mizoram University. The college was accredited A+ (Cgpa-3.51) in 2016 and also selected as College with Potential for Excellence. The college caters Undergraduate degree course in Arts, Science and Commerce. The college has 6 add-on courses and UGC-Community College- Diploma in Mushroom Cultivation. The college was established on 15th August 1958 as "Aijal College" to become the first institution of higher education in Mizoram.

With the establishment of Mizoram University, the entire management was handed over to the new university in July 2001. The college caters to undergraduate courses in 21 subject areas of Arts, Science and Commerce streams. The academic program includes effective classroom teaching, internal semester test for semester system students (introduced in 2011-12 academic session) two terminal exams, periodic class tests, seminars, assignments, remedial courses, field studies, etc. The college also promotes student's exposure through study tours and excursions inside and outside the State. The college is also the leader among all college in terms of research activities and publications and is also selected under the "Star college scheme" by the Department of Biotechnology in 2012. Under the Arts stream, there are several departments which are Economics, Education, English, Geography, History, Mizo, Philosophy, Political Science, Psychology, Public Administration, and Sociology. Several departments are under the Science stream which includes Biotechnology, Botany, Chemistry, Environmental Science(EVS), Geology, Mathematics, Physics, Statistics and Zoology. The courses still include Bachelor of Commerce which is under the Commerce stream. The college is currently a member of N-LIST.



Figure- 3.1: Pachhunga University College Campus

Table- 3.3: Number of faculty in Pachhunga University College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Pachhunga University College	100	89	189

(Source: MZU Annual Report 2018-2109)

3.4.2 About The Library

Pachhunga University College started as a Private Night College in 1958 which is also the year of establishment of the library with Mr. Lalmakthanga as the Librarian. The first separate library building was set up in 1960 with a mere two cupboards of books which soon grew to be one of the best college libraries in the whole North-East Region. It was known for its collection which consists of rare books and a good reference section. Unfortunately in 1981, the library which was built up for more than twenty years with a collection of 25000 books was burnt down to ashes due to the insurgency of the locals. The College Library then took its rebirth in 1984-85, since then the collection of books has been growing steadily along with its staff and building. Due to natural calamity and also with the need for an extension, the library building was dismantled in 2010 and is rebuilt with a well-planned architecture which is now occupied and is functioning in full swing since 12th July 2013.

The new library is now equipped with new furniture worth Rs. 46,08,140/- (Rupees Forty-Six Lakhs Eight Thousand One Hundred and Forty Only). It has become the center of attraction for the students as well as teachers and it hopes to move forward in building a modern library that is well equipped, user friendly and resourceful such that researchers of a different university can get the maximum benefit from it. The new library building was designed and planned based on the 11th Plan Fund allocation of Rs. 280 Lakhs. The works were awarded to NBCC Ltd. Govt. of India Enterprise under the Ministry of Urban Development. The Administrative Approval and Expenditure Sanction of Rs. 2,69,77,900/- based on Delhi Plinth Rate (DPAR 2007) which was accorded on 18th June 2009.



Figure- 3.2: Pachhunga University College Library

3.5 GOVERNMENT AIZAWL COLLEGE (GAC)

3.4.1 About The College

The college was established as “Aizawl College” in 1975 by a team of philanthropic citizens meeting at the Office chamber of the then Legislative Assembly Speaker, Dr. H.Thansanga, on 13th. January 1975. The college was later renamed to “Government Aizawl College” following its take-over by the State Government and was inaugurated by the first Chief Minister of Mizoram, Pu.CH. Chhunga. The college was upgraded to Deficit Grant-in-aid status with effect from 1st November 1984 and became Government institution on 1st January 1989.

The College was included under section 2(f) of the UGC Act 1956[3] and section 12(B) of the UGC Act 1956 with effect from 17.3.1987. While affiliated to the NEHU, the college was one of the prominent members of the NEHU family. The college has two streams which are Art and Commerce with eight different disciplines in Art stream offering both general and honors and is now affiliated to Mizoram University and is currently a member of N-LIST.



Figure- 3.3: Government Aizawl College building

Table- 3.4: Number of faculty in Government Aizawl College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government Aizawl College	55	16	71

(Source: MZU Annual Report 2018-2109)

3.5.2 About The Library

The College Library currently has 13,276 books in its collection. The library has a reading room with a seating capacity of 20 – 30 people and has 4 computers which are using SOUL 2.0. Dewey Decimal Classification 23rd edition is currently used for the classification of library materials. The library also offers reprography services and currently has 3 staff members which are the Librarian and two library attendants.



Figure- 3.4: Government Aizawl College Library

3.6 GOVERNMENT HRANGBANA COLLEGE (HBC)

3.6.1 About The College

Government Hrangbana College was named after the late Hrangbana, a philanthropist and a businessman who donated a sum of Rs. 1 Lakh for the establishment and enactment of the college. On 6th November 1980, the college was given government recognition as a private college and was later upgraded to Deficit Grant-in-Aid status on 1st September 1985.

On 1st April 2003, it finally became a Government college and was affiliated to NEHU until 2002 and was one of the prominent members of the NEHU family and is currently a member of N-LIST. The college offers streams in Bachelor of Arts and Bachelor of Commerce both General and Honours and was accredited “B++” in 2006 and later re-accredited to “A” in 2011 by the National Assessment and Accreditation Council (NAAC), Bangalore.



Figure- 3.5: Government Hrangbana College Building

Table- 3.5: Number of faculty in Government Hrangbana College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government Hrangbana College	71	19	90

(Source: MZU Annual Report 2018-2019)

3.6.2 About The Library

The library has a separate space in the college building and has a collection of 28,419 books. The seating capacity of the library is 70. The library has various collections of audio and video cassettes, CDs, Indian Journals and Foreign Journals which can be accessed through N-LIST. In 2005 the college library became fully automated by using SOUL 2.0 and in 2017 RFID technology was implemented in the library.



Figure- 3.6: Government Hrangbana College Library

3.7 GOVERNMENT AIZAWL WEST COLLEGE (GAWC)

3.7.1 About The College

The Aizawl West College was founded on 2nd May 1990 with 7 teachers and 150 students with the primary objective of imparting college education in the evening hours for deserving students especially to the students who could not afford education in Day College. When the Government upgraded Aizawl College to the status of Government Aided College in 1989, it became a Day College and hence the need for another evening college.

Though there were colleges in the eastern, southern and northern parts of Aizawl city, there was not a single college in the western portion of Aizawl city. Seeing the need and consideration for the students pursuing their higher education, a new college was opened in the western part with land donated by the residents of the locality of Dawrpui Vengthar, Aizawl. The college was first affiliated to the North-Eastern Hill University (NEHU) for pre-university (Arts) on 9th March 1992 and Degree (Arts) on 9th June 1994. When Mizoram University was established on 2nd July 2002, the affiliation was relocated to the new university. The college currently has 700 students and 42 teachers with eight departments including the department of English, Mizo, Public Administration, Psychology, History, Education, Political Science and Economics and is presently a member of N-LIST.



Figure- 3.7: Government Aizawl West College Main Building

Table-3.6: Number of faculty in Government Aizawl West College.

Name Of The College	Number of Faculty		Total
	Teaching	Non- Teaching	
Government Aizawl West College	36	13	49

(Source: MZU Annual Report 2018-2019)

3.7.2 About the Library

The college library was established in the year 1991 and was the State Government College Library. The college library is on the ground floor of the College building. Away from the city noise, the library provides an ideal atmosphere for reading. The library is open from 9:00 AM to 5:00 PM on all working days.

The College library maintains the Readers Section with a seating capacity of about 35 readers at a time and a Periodical Section which holds the journals, magazines and newspapers. The College library also maintains back volume journals, magazines, newspapers, question Papers in bound forms. The library is currently using SOUL 2.0 as the library automation system. A Documentation Section has been maintained in which important documents of the College like University Exam Results, College achievements, records of the students union and other bodies are kept. Other documents like the Right to Information Act (RTI), Statistical Handbook, important government gazette notifications, census records, etc. are also kept.

There is one qualified Assistant Librarian and one attendant in the College library and the library uses the 19th Edition of Dewey Decimal Classification Scheme for classifying books. Books are kept according to a subject, each on a separate shelf in an open access system.

A Library Committee was formed to augment and develop the functioning of library. The Committee takes the responsibility of overseeing the requirement of the library as well as providing support to the librarian in implementing the rules. The library committee also performs other functions such as providing suitable library furniture and equipment, laying down sound library rules, making provision for adequate services. It also made provision for suitable funds for procurement of documents, purchase of equipment, maintenance of the building, etc. The library committee holds regular monthly meetings.



Figure- 3.8: Government Aizawl West College Library

3.8 GOVERNMENT AIZAWL NORTH COLLEGE (GANC)

3.8.1 About The College

Government Aizawl North College, established in 1988, is under the management of the Higher & Technical Education Department, Government of Mizoram and is permanently affiliated to Mizoram University and got Government Recognition up to Pre University level in 1988 and Degree level in 1990. It is a co-educational higher institution of learning designed for the training of youth in preparation for life and service. The College is located at one of the choicest spots of Aizawl city, enjoying a temperate climate all year round.

The College received University (NEHU) Provisional Affiliation up to Pre University (Arts) level on 4th October 1989 and Degree level on 17th February 1993. The College received permanent affiliation on 1st July 2006. The College received UGC Recognition under 2(f) and 12(b) on 27th September 2007 and was accredited B+ by NAAC in 2009 and is currently a member of N-LIST.



Figure- 3.9: Government Aizawl North College Main Building

Table-3.7: Number of faculty in Government Aizawl North College.

Name Of The College	Number of Faculty		Total
	Teaching	Non- Teaching	
Government Aizawl North College	27	10	37

(Source: MZU Annual Report 2018-2109)

3.8.2 About The Library

Government Aizawl North College Library was established in 1988. The college library is the main resource of information and knowledge for the students and teachers of the college. The college currently has a collection of 11,500 books and has a reading room capacity of about 30 – 40 people. The library is currently using SOUL 2.0 for automation and is using barcode technology for annual stock verification and circulation work.



Figure- 3.10: Government Aizawl North College Library

3.9 GOVERNMENT T.ROMANA COLLEGE (GTRC)

3.9.1 About The College

In 1992, many students who passed the Pre-University Examination in Mizoram could not pursue further studies because the existing colleges in Aizawl at that time were unable to accommodate them all. Hence, on June 3, 1992, a new private college was established and named 'T. Romana College' after the name of its donor Mr. T. Romana.

Govt. T. Romana College was established in 1992 as a private institution, upgraded to grant-in-aid (deficit) status in 2003 and provincialized in 2008. The College is an approved study center of the Indira Gandhi National Open University (IGNOU) under the Convergence Scheme for Open and Distance Learning and Conventional Systems, under which the students can pursue their Bachelor's Degree in subjects like Social Work, Human Rights and others.

Career Oriented Course Programme introduced by the University Grants Commission (UGC) has enabled the College to offer Certificate Courses in Computer Application and Mobile Phone Repairing. The college was granted affiliation by North Eastern Hill University (NEHU) in 1995. The college is now affiliated to Mizoram University which came into being in 2001. It came under the grant-in-aid scheme from 2002. In 2007 the College was accredited C++ by the National Assessment and Accreditation Council (NAAC) and in the same year, it was granted permanent affiliation by the Mizoram University and recognized by UGC under 2(f) & 12(B) provisions of UGC Act and is currently a member of N-LIST.



Figure- 3.11: Government T. Romana College

Table-3.8: Number of faculty in Government T. Romana College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government T. Romana College	38	17	45

(Source: MZU Annual Report 2018-2109)

3.9.2 About The Library

The College Library is located in the college building itself and is easily accessible. It remains open from 9:00 Am to 5:00 Pm on all working days round the year except on holidays. The Library has a large collection including books, periodicals, Journal references and other relevant materials.

It also offers an ideal reading room for both the students and the faculty members. Only the staff and students of the college have access to the Library facilities. Exceptions are made for outsiders with special permission from the Principal. DDC scheme is used for classifying the documents of the library.



Figure- 3.12: Government T.Romana College Library

3.10 GOVERNMENT ZIRTIRI RESIDENTIAL SCIENCE COLLEGE (GZRSC)

3.10.1 About The College

Govt. Zirtiri Residential Science College, Aizawl possesses the unique position of being the first and only science college in the State of Mizoram, NE India. It was established by an act of the State Assembly in 2000 with the primary vision of providing science education.

The College is affiliated to Mizoram University and offers 10 UG courses, besides 1 certificate course as a value-added course. It is registered under 2(f) & 12-B of UGC Act under the nomenclature 'Govt. Zirtiri Women's College' in 1989, which was later renamed to its present form in 2000. Certain subjects like- Home Science,

Biochemistry and Electronics are courses available in the college which are not offered anywhere else in the State. It is also the first college in Mizoram to start the BCA program. The college is currently located in the heart of Aizawl, the capital city on temporary buildings with inadequate space for Classrooms, Computer laboratories, Auditorium, Science laboratories and Library.

The college offers education in the subjects of English, Physics, Chemistry, Mathematics, Botany, Zoology, Biochemistry, Electronics, Home Science, Computer Science and Geology. The College was accredited with Grade B by NAAC in 2009 and is currently a member of N-LIST.



Figure- 3.13: Government Zirtiri Residential Science College

Table- 3.9 Number of faculty in Government Zirtiri Residential Science College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non-Teaching	
Government Zirtiri Residential Science College	59	22	81

(Source: MZU Annual Report 2018-2109)

3.10.2 About The Library

The college library has a large volume of collections of science-related reading materials and is classified according to the Dewey Decimal Classification scheme. The library was partially automated in the year 2000.

The library has a reading room with a seating capacity of 30 people. Barcode technology is implemented and used for stock verification and circulation. The library subscribes to several e-journals, e-documents and other sources of information that are useful for the users of the library. The library is a member of the LIS information network and connected by the Internet for sharing information and resources among other college libraries.



Figure- 3.14: Government Zirtiri Residential Science College Library

3.11 GOVERNMENT J. THANKIMA COLLEGE (GJTC)

3.11.1 About The College

Government J. Thankima College was established in 1992 by the residents of Bawngkawn, Aizawl and the people within the vicinity of the locality to meet the growing demand for quality education and learning. The College was subsequently upgraded to a provincialized status by the Government of Mizoram in the year 2007. Consequent upon the up-gradation to a provincialized status, the College was named “Government J. Thankima College”. The College is privileged with permission to offer a six semester Under Graduate Arts course and is affiliated to Mizoram University in 2007. It was accredited by NAAC, Bangalore in 2007 with a 'C++' grade and the 2nd Cycle Assessment and Accreditation it was awarded C grade with a CGPA of 1.78. It is registered under section 2(f) and 12(B) of the UGC Act on February 18, 2008. The College has Central Campus at Brigade Area of Bawngkawn, South Campus at Bawngkawn and North Campus at Durtlang Mel 5. The College administration was shifted to the Central Campus on 26th January 2017 which housed the Administrative Building, classrooms and other buildings and offices.



Figure- 3.15: Government J. Thankima College Library

Table- 3.10: Number of faculty in Government J. Thankima College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government J. Thankima College	24	13	37

(Source: MZU Annual Report 2018-2109)

3.11.2 About The Library

The College Library was established since its inception of the college in the year 1992. The functions of the College Library lay in: Providing materials to the College community adequate for their various needs purposes. Making materials easily accessible physically through open shelves, orientation, etc. By encouraging wide reading through easy accessibility of materials, reader's guidance and display. By enlisting the co-operation of the faculty in making the library a study center. Another major and significant service and factor rendered by the college library is to the alumni.

The college library currently has 7200 print documents and receives e-journals from INFLIBNET. The college has a reading room with a capacity of 20 people and is currently under the guidance of one Librarian. The college is open on all working days from 9:00 AM to 5:00 PM.



Figure- 3.16: Government J. Thankima College Library Building

3.12 GOVERNMENT JOHNSON COLLEGE (GJC)

3.12.1 About The College

Government Johnson College was established on 27th July 1993 by the communal leaders of Khatla, Aizawl and was so-called Khatla Arts and Commerce College. The college was named after Mr. PP. John, an education-minded and protruding resident of Khatla who contributed a sum of Rs.12 Lakhs. The college was later renamed to Johnson College and the commerce stream was dropped. There are six departments currently active which are the Department of Mizo, Department of English, Department of History, Department of Education, Department of Political Science, and Department of Economics.

It received provincial affiliation to NEHU on 17th Decemeber, 1996 was amalgamated with Bungkawn College on October 24th, 2007. The college was provincialized by the Government of Mizoram on October 11th, 2007. The college was granted university affiliation up to degree level on December 17th, 1996 and received permanent affiliation on July 1st, 2006. The college has been granted UGC recognition under 2(f) & 12(B) on 17th November 2006 and is currently not a member of N-LIST.



Figure- 3.17: Government Johnson College Building

Table- 3.11: Number of faculty in Government Johnson College

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government Johnson College	28	13	41

(Source: MZU Annual Report 2018-2109)

3.12.2 About The Library

Government Johnson College Library was established in the year 1993 under the state government. The library has been automated by the use of SOUL 2.0 in 2013 along with the circulation system and the library offers CAS, SDI and Reprography Services. The library does not have a separate building and holds a seating capacity of 30 – 40 people and is open from 9:00 AM to 5:00 PM.



Figure- 3.18: Government Johnson College Library

3.13 GOVERNMENT MIZORAM LAW COLLEGE (GMLC)

3.13.1 About The College

Govt. Mizoram Law College is a lone Legal Institution in the state of Mizoram. It plays a vital role in absorbing the aspiring local youths in the line of legal education. It is serving as an avenue for continuing education for the youths and provider/facilitator of employments as is Professional course and then to achieve justice in the society.

Govt. Mizoram Law College was established in 1983 with a humble beginning, having the name of *Aizawl Law College* with the initiatives of some prominent citizens, academics and politicians. The College at first was affiliated to the North Eastern Hills University (NEHU), Shillong, Meghalaya. Then, with the establishment of Mizoram University in 2001, the College became affiliated to Mizoram University and recognized by University Grant Commission, under section 2(f) and 12(B) of UGC Act, 1956. w.e.f. May 2009.. At the same time, the College is also affiliated with the Bar Council of India. The college was accredited by National Assessment and Accreditation Council (NAAC), Bangalore, Grading 'C' Grade with SGPA 1.97, with effect from the 8th February 2019. Mizoram Law College was upgraded to deficit Grant-in-Aid status w.e.f. 25.08.2006 and provincialized w.e.f. the 19th September 2013. GMLC is located in the western part of the Aizawl City, at the adjacent of Govt. Ch. Chhunga High School, Luangmual, near the YHAI Hostel. The College offers a Three Year Unitary Course of Law i.e. LL.B and a single faculty institution.



Figure- 3.19: Government Mizoram Law College Building

Table- 3.12: Number of faculty in Government Mizora Law College

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government Mizoram Law College	12	15	27

(Source: MZU Annual Report 2018-2109)

3.13.2. About the Library

The library is not in a separated but in attached to the main building on the first floor of the building. Therefore, it is quite an open and planned area and buildings are of concrete structure. It is a single- storey building which makes it simple to access and maintain any kinds of alteration and stock collection. There are 1 professional staff, 1 semi- professional and 1 non- professional staff, which concludes to 3 staffs in the Library. There are certain fire extinguishers in and outside of the library.

The library has been automated by the use of SOUL 2.0 along with the circulation system and the library offers CAS and Reprography Services. The library does not have a separate building and holds a seating capacity of 30 – 40 people and is open from 9:00 AM to 5:00 PM.



Figure- 3.20: Government Mizoram Law College Library

3.14 GOVERNMENT SAITUAL COLLEGE

3.14.1 About The College

Government Saitual College was established in 1984 and it was upgraded into Government grant in- aid Deficit Status with effect from 1 April 1993. the College was provincialized by the Government of Mizoram on 11th October 2007.

Government Saitual College has an auditorium and gymnasium along with NIELIT Computer Study Centre which was opened on February 27, 2019. The college now has 7 departments offering the following degrees in Bachelor of Arts. A NIELIT Computer Study Centre was opened in the college on 27th Feb 2019 which includes the Department of Economics, Department of Education, Department of English, Department of Geography, Department of History, Department of Mizo, Department of Political Science and Department of Sociology.



Figure- 3.21: Government Saitual College

Table- 3.13: Number of faculty in Government Saitual College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Government Saitual College	27	13	40

(Source: MZU Annual Report 2018-2109)

3.14.2. About the Library

The library is not in a separated building and is attached with the main building on the ground floor. The location of the library is an open and planned area and buildings are of concrete structure. It is a single- storey building and located on Seismic zone 5. The library does not have a separate building and holds a seating capacity of 30 – 40 people and is open from 9:00 AM to 5:00 PM. There is 1 professional staff, 1 semi-professional and 1 non- professional staff, which concludes to a total of 3 library staffs. There is one fire extinguishers outside of the library. The library has been automated by the use of SOUL 2.0 along with the circulation system and the library offers CAS and Reprography Services. There are several collections and bindings of All India Report (AIR) from 1951 till date. It is also the only college library in Mizoram which has a Moot Court Practical collections.

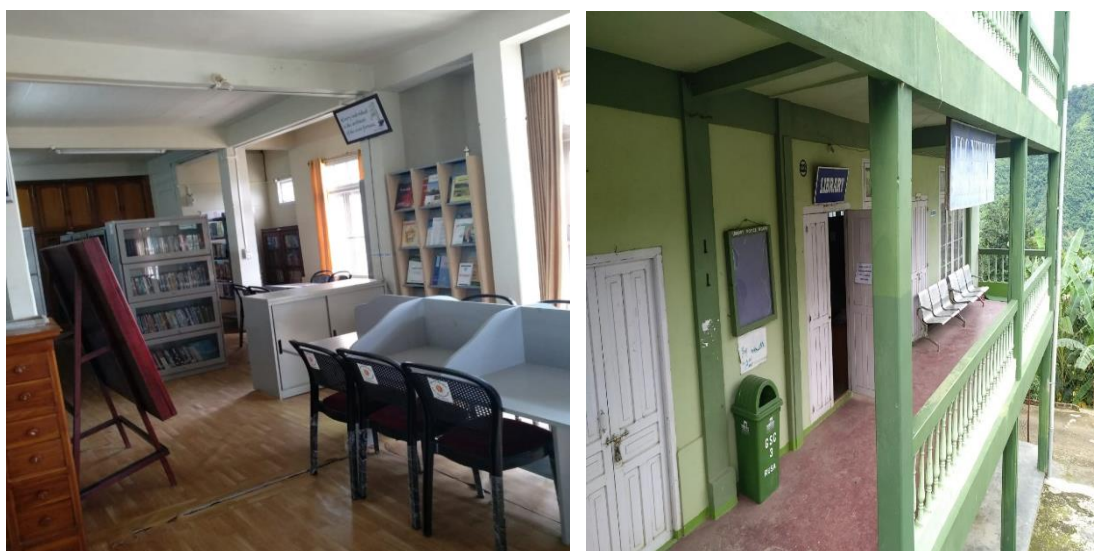


Figure- 3.22: Government Saitual Library

3.15 HELEN LOWRY COLLEGE

3.15.1 About The College

Helen Lowry College of Arts & Commerce, Aizawl, is a College run by the Seventh Day Adventist Church at Aizawl in the state of Mizoram. It is a part of the Adventist Education System, the world's second largest Christian school and College system. It was inaugurated as college on 23 August 2017 by the Chief Minister of Mizoram , Pu Lalthanhawla.

The College is an affiliated institution and accredited to Mizoram University. The college offers education in the following courses - Bachelor of Commerce and Bachelor of Arts

All students take religion classes each year that they are enrolled. These classes cover topics in biblical history and Christianity and denominational doctrines. Instructors in other disciplines also begin each class period with prayer or a short devotional thought, many which encourage student input. Weekly, the entire student body gathers together in the auditorium for an hour-long chapel service. There is year-round spiritually oriented programming that relies on student involvement outside the classes as well.



Figure- 3.23: Helen Lowry College Building (Academic Block)

Table- 3.14: Number of faculty in Helen Lowry College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Helen Lowry College	16	9	25

(Source: MZU Annual Report 2018-2109)

3.15.2 About The Library

The library had been established and maintained for only a few years and thus, the collections and development on various grounds can be witnessed. Though it is still in-process, the Library is a separated and planed , open area and holds a sitting capacity of 20- 25 peoples. The Library had been equipped with SOUL software and enabled the users for easier access to a better extent. The working hours of the library may be different from that of other libraries and presently, the working hours of the library is 9:00 AM – 2:30 PM. It is also a single- storey building and made of concrete structure. The library is not aware of certain Disaster Management plans and procedures for the past few decades and had not been actively involved in mass casualty drills, etc. However, the Librarian and staffs fell the need to have a proper disaster management plans and strategic planning for the Library.



Figure- 3.24: Helen Lowry College Library

3.16 AIZAWL CITY COLLEGE

3.16.1 About The College

Aizawl City College has been established in 2015 with the initiative made by the then Higher & Technical Minister. It is a private and un-aided institution which was affiliated under the care of J.L Higher Secondary School. It has got its affiliation from UGC on 2016 and holds and evening classes and also regarded as an autonomous institute. It provides courses on various Arts subjects such as – English, Political Science, Mizo, Sociology, Education and History. It has effective contribution to provide Indian education with young, enthusiastic teachers and managers. Aizawl city college is a place to pursue knowledge beyond traditional boundaries.



Figure- 3.25: Aizawl City College, (C/O JL High School)

Table- 3.15: Number of faculty in Aizawl City College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
Aizawl City College	19	2	21

(Source: MZU Annual Report 2018-2109)

3.16.2 About The Library

The Library is attached on the main building on the ground floor and holds a sitting capacity of 25-30 peoples. The working hours of the Library is 4:00 PM – 7:30 PM as the classes are mainly held in the evening. It caters not only to the college’s academic requirements but also stocks enough books for reference and books on general awareness. The library subscribes 6 journals of each subjects offered by the college to add further scope for learning. It also subscribes to leading dailies of national and regional newspapers and magazines. The Library is in a congested area and the materials used for the Building are mainly of wood and bricked- lined walls. The Library is also situated within the range of Seismic Zone 5. The Library had also encountered Theft and Robbery twice within the past few years. Classification, cataloging, accession and others which include Library features are still done manually.



Figure- 3.26: Aizawl City College Library

3.17 ST. XAVIER’S COLLEGE

3.17.1 About The College

St. Xavier's College, Lengpui, Mizoram, India, is an undergraduate college opened in 2017. It is named after St. Francis Xavier, a Navarre Jesuit of the 16th century, who ministered in India. It is the first catholic college in Mizoram, India. The college was started at the request of the Bishop of Aizawl, Stephen Rotluanga. The foundation stone was laid in November 2016 and the College was inaugurated on 18 July 2017 by the Chief Minister of Mizoram, Mr. Lalthanhawla. The college is named after Francis Xavier, the 16th century Jesuit saint from Navarre, northern Spain. The college campus is located at Lengpui in a 29-acre plot.



Figure- 3.27: St. Xavier’s College

St Xavier’s College, Lengpui, Aizawl, is a Roman Catholic, Private, Co-Educational institution offering a Three Year Degree Course as well as Higher Secondary Education situated at Lengpui on the Buichali road, in a sprawling and picturesque 10.595 hectares of land about 1.5 km away from the Lengpui airport. In progress response to the request of the Catholic Diocese of Aizawl, the College aims at fulfilling the pressing need of quality education in the state of Mizoram. The institution is affiliated to Mizoram University and the college provides seven humanities courses in the UG level -Mizo, English, history, sociology, political science, psychology.

Table- 3.16: Number of faculty in St. Xavier's College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
St. Xavier's College	22	5	27

(Source: MZU Annual Report 2018-2109)

3.17.2 About The Library

The Library is attached on the main building on the ground floor and holds a sitting capacity of 25-30 peoples. The working hours of the Library is 9:00 AM – 3:00 PM as there are school education attached to it . It caters not only to the college's academic requirements but also stocks enough books for reference and books for high school mand higher secondary standards. The library subscribes 8 journals of different subjects offered by the college to enhance additional space for learning. The Library is in an open and planned area and the materials used for the Building are mainly of concrete structure but the library is also situated within the range of Seismic Zone 5. The Library has not encountered any kind of certain disaster within the past 20 years. Classification, cataloging, accession and others which include Library features are done in both computerization and manually.



Figure- 3.28: St. Xavier's College Library

3.18 DIVINE MERCY COLLEGE

3.18.1 About The College

Divine Mercy College is a college that was established in the year 2016. It was a college that caters to offer a course on Bachelor in Social Work (BSW) and Sociology for undergraduate students. It is also the only college that provides BSW course in Mizoram. The college was enacted to be a prominent college to cater the need and ability of students interested in societies and social works. The college was affiliated to Mizoram University on 2018 and it had gained a lot of attention to a number of students that are partaking and interested in the fields. The main college is located on the 3rd and 4th floor of the building. It is situated at Bawngkawn, on the Northern part of Aizawl.



Figure- 3.29: St. Xavier's College Library

Table- 3.17: Number of faculty in Divine Mercy College.

Name Of The College	Number Of Faculty		Total
	Teaching	Non- Teaching	
St. Xavier's College	15	6	21

(Source: MZU Annual Report 2018-2109)

3.18.2 About The Library

The Library is attached on the main building on the ground floor and holds a sitting capacity of around 50 users a a time. The working hours of the Library is 9:30 AM – 4:00 PM. It caters not only to the college’s speculative requirements but also displayed enough books for reference and books for students as the college is an institution mainly based and focused on social works and communities. The library also subscribes to different journals and publications in the field of Sociology and social Work to enhance additional space for learning. The Library building is in a congested area and the materials used for the Building are mainly of concrete structure and the library is also situated within the range of Seismic Zone 5. The Library has not encountered any kind of certain disaster within the past 20 years. Certain features like Classification, cataloging, accession and others which include Library features are done in computerized format and sometimes manually.



Figure- 3.30: Divine Mercy College Library

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CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 INTRODUCTION

The chapter covers the data analysis and findings based on the objectives laid for the purpose. Critical evaluation of processed data gives the right meaning for the research objectives and establishes relations or connection with different variables of the analysed data and information. The questionnaire used in this retrospective study was carefully analysed to ensure that the data gathered was presented clearly with the aid of tables, percentages and graphs, where possible. Conducting a retrospective chart analysis was shown to capture the data critical to accomplish the research purposes and objectives. The inclusive aim of the study was to determine the strategic planning and preparedness towards Disaster Management in college libraries of Aizawl and how Libraries are administered.

The questionnaire comprised four sections with a total of 46 structured closed questions that were developed to ensure rigour and objectivity of data.

SECTION A

This section contained 6 questions and comprised the following :

- Name
- Designation
- Sex
- Name of Institution
- Year of Establishment
- Type of Organisation

SECTION B

This section contained 9 questions and comprised the following:

- Location of Library
- Sitting capacity and working hours
- Name of Librarian/ In-charge
- Librarian/In-charge Academic and Technical qualifications
- Number of staffs in the Library
- Materials used for construction of Library

SECTION C

This section contained 34 questions and comprised of various questions about Library and Disaster Management:

- Likelihood of disasters and knowledge of various Disasters.
- Awareness and various disasters which Libraries have encountered
- Participation and knowledge of Disaster Management plan and procedures
- Awareness of the Library about Disaster Management
- Various initiatives and measures concerning Disaster Management and Libraries
- Community level awareness and financing of training about Disaster Management
- Imparting training in Library and general awareness of Disaster management
- Library and Disaster Management strategy in Mizoram
- Methods of spreading mass general awareness about Disaster management.

4.2 DATA ANALYSIS

Analysis of data is a skilled work that every researcher has to do carefully and with utmost care. Based on the background of the objectives, a structured questionnaire was prepared and distributed among 15 College Libraries within the premises of Aizawl to obtain relevant data. The questionnaires were distributed on all selected fifteen Libraries and were answered by each Librarian of the college library. In a case where there were no librarians, the questionnaire was answered by the In-charge (Deputy Librarian, Assistant Librarian or Library Assistant) of the Library. The distributed questionnaire response rate was 100%. All the relevant data and information was gathered in the filing unit by the researcher, using the structured instrument and entered into the excel sheet on the computer provided by the statistician for 15 college libraries.

The data captured from all 15 college Libraries within Aizawl was organized, scrutinized, tabulated and converted into percentages and collated in the form of tables, graphs and figures to make the data presentation meaningful. The data was analysed according to the research questions posed earlier in the study.

4.2.1 Types of Colleges and Libraries Staffs

Table 4.1 supported with figure 1A & 1B shows the type of organization in terms of administrative control and number of library staffs working in collage. The analysis resolved that majority of colleges (67%) are administratively under state government followed by private collages (27%), while one collage (Pachhunga University College) is administratively controlled by central government.

The library staffs are one of the very important and essential components of library to provide quality and effective library services. In selected 15 colleges, there are total 49 library staffs with average of 3.26 library staffs/college. The Pachhunga University College have highest number of library staffs (9) in library among the selected colleges followed by Govt. Aizawl College (5), Govt. Hrangbana College and Govt. Aizawl North College (4 each). The seven collages (Govt. Zirtiri Residential Science College, Govt. Aizawl West College, Govt. Mizoram Law College, Govt. J. Thankima College, Govt. Johnson College, Divine Mercy College and Govt. Saitual College) having 3 staffs and two college libraries (Govt. T. Romana College and Helen Lowry College) having only 2 staffs. The two private colleges (Aizawl City College and St. Xavier's College) have only 1 library staff presently. In total selected 15 colleges there are 49 library staffs at the present time.

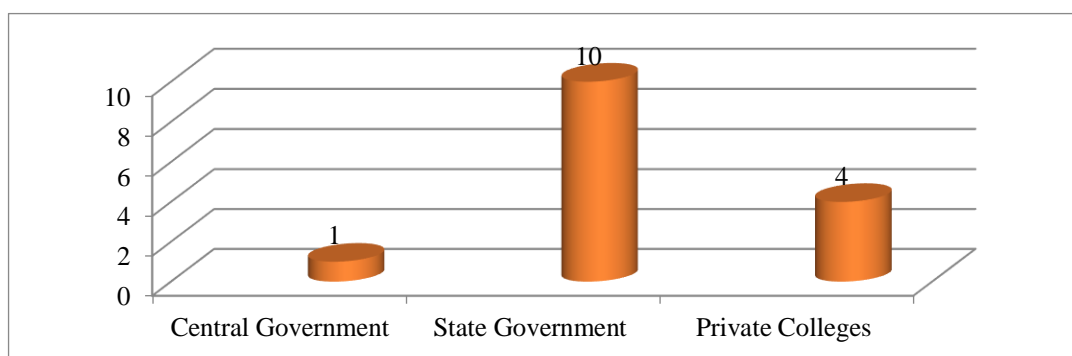


Figure- 4.1: Types of Organizations

(Source: Field Survey)

Table-4.1: Types of Colleges and Libraries Staffs

Name of Institution	Type of Colleges
Pachhunga University College	Central
Govt. Hrangbana College	State
Govt. Zirtiri Residential Science College	State
Govt. T. Romana College	State
Govt. Aizawl College	State
Govt. Aizawl West College	State
Govt. Aizawl North College	State
Govt. Mizoram Law College	State
Govt. J. Thankima College	State
Govt. Johnson College	State
Aizawl City College	Private
Divine Mercy College	Private
Helen Lowry College	Private
St. Xavier's College	Private
Govt. Saitual College	State
Total	

(Source: Field Survey)

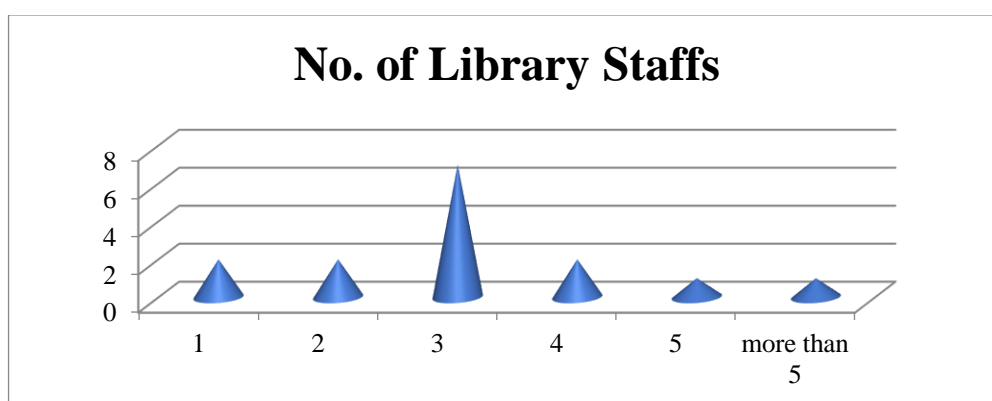


Figure- 4.2: Number of Library Staffs in Colleges

(Source: Field Survey)

4.2.2 Categories of Library Staffs in Library:

In library there are different types of library staffs working and they are classified in three groups i.e. professionals, semi-professionals and non-professionals as per their qualifications and nature of duty performed. Each category of staffs has their own significant role in performing their duty.

Table 4.2: Categories of Library Staffs

Name of Institution	Number of Staffs in Library			
	Professional	Semi-professional	Non-professional	Total no. of staffs
Pachhunga University College	2	1	6	9
Govt. Hrangbana College	2	2		4
Govt. Zirtiri Residential Science College	1		2	3
Govt. T. Romana College	1		1	2
Govt. Aizawl College	1		4	5
Govt. Aizawl West College	1	1	1	3
Govt. Aizawl North College	1	1	2	4
Govt. Mizoram Law College	1	1	1	3
Govt. J. Thankima College	1		2	3
Govt. Johnson College	2		1	3
Aizawl City College	1			1
Divine Mercy College	1		2	3
Helen Lowry College	1		1	2
St. Xavier's College	1			1
Govt. Saitual College	1	1	1	3
Total	18	7	24	49

(Source: Field Survey)

Table- 4.2 shows the categories wise classification of library staffs in selected college libraries and analysis resolved that all the college libraries have at least one professional staffs however, 3 collages libraries (Pachhunga University College, Govt. Hrangbana College and Govt. Johnson College) have two professional staffs each. There are only one collage library (Govt. Hrangbana College) having 02 semi-professional staffs while 5 collages libraries (Pachhunga University College, Govt. Aizawl West College,, Govt. Aizawl North College, Govt. Mizoram Law College and Govt. Saitual College) having one semi-professional staffs. The rest 9 collage libraries don't have any semi-professional staffs at present. There are 6 non-professional staffs in Pachhunga University College followed by Govt. Aizawl College (4 staffs) while 4 collage libraries (Govt. Zirtiri Residential Science College, Govt. Aizawl North College, Govt. J. Thankima College and Divine Mercy College) having 2 staffs each and 6 colleges having 1 non-professional staffs each and 03 college libraries (Govt. Hrangbana College, Aizawl City College and St. Xavier's College)

4.2.3 Gender of Respondents

Table 4.3 highlights the gender and qualifications of the respondents belonging to the staff members of every college Library in Aizawl and found that there were 60% Male and 40% female Librarian/ In-charge librarians in the college libraries within Aizawl.

Table-4.3: Gender of Respondents

Gender of respondents	
Male	9
Female	6
Total	15
% of Male	60%
% of Female	40%
Total %	100%

(Source: Field Survey)

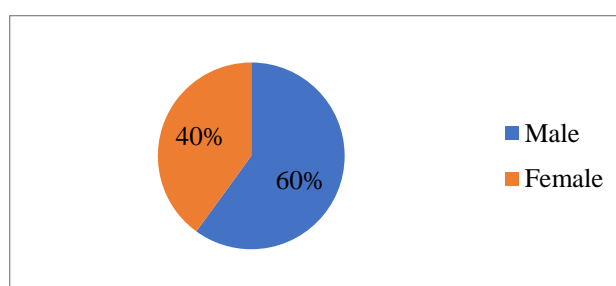


Figure- 4.3: Gender Analysis of Respondents

(Source: Field Survey)

4.2.4 Classification of Respondents on the Basis of Professional Position

Analysis of the professional position of the library staff members have been discussed in Table 4.4. The respondents were divided in 4 categories viz. Librarian, Deputy Librarian, Assistant Librarian and Library Assistant as per their qualification and posting in colleges. The observation of table shows that 11 (73.33%) respondents were Librarian as designation followed by Assistant Librarian (13.33%). There was only one college (i.e. Govt. Johnson College) has Dy Librarian designated in-charge while one college (i.e Govt. Johnson College) respondent are library assistant. Among the 15 college libraries in Aizawl, there were 3 colleges (Govt. Zirtiri Residential Science College, Govt. Aizawl West College and Govt. Johnson College), who does not have a permanent librarian at presently time.

Table 4.4: Academic Position

Professional Position	Number of the Respondent	%
Librarian	11	73.33%
Deputy Librarian	1	6.67%
Assistant Librarian	2	13.33%
Library Assistant	1	6.67%

(Source: Field Survey)

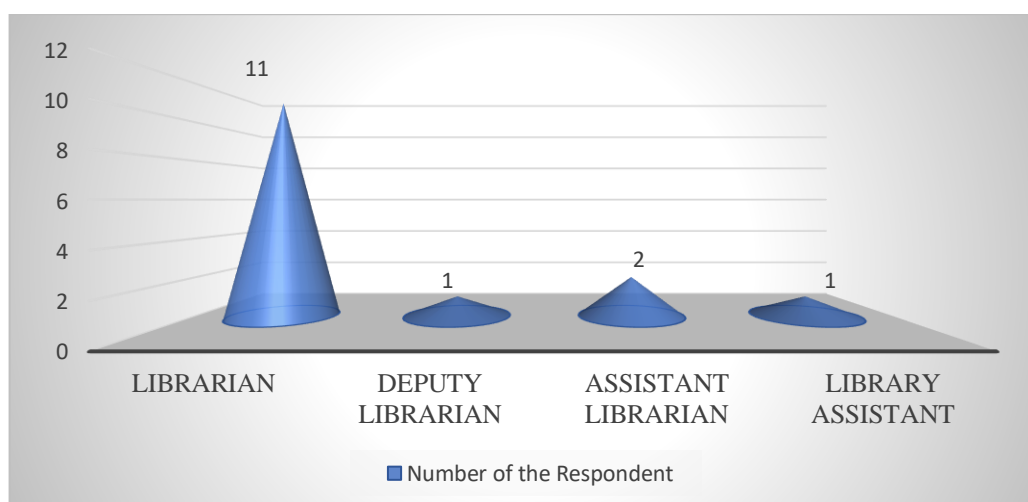


Figure- 4.4: Academic Position of Respondents

(Source: Field Survey)

4.2.5 Academic Position vis-a-vis Academic Qualification

Table 4.5A and 4.5B shows the respondents professional position and academic qualifications of selected college libraries. The respondents classes of the academic and professional qualification were divided into 4 categories viz. Ph.D., M. Phil, MLIS, and others (like only MA or BA degree). The analysis resolved that among the librarians category, only one have Ph.D., 3 M.Phil. and 4 have only MLIS degree while 2 have others qualifications (like Master's Degree or Bachelor's Degree). There was only one Dy Librarian in Govt. Johnson College with MLIS degree while the two assistant librarians from Pachhunga University College and Govt. Aizawl West College are having Ph.D. degree. In one college, one library assistant is in-charge of library and he also don't have any LIS degree. In overall, 20% Librarians/In-charge are having Ph.D. and 20% M.Phil. degree while 46.63% having Master's degree only and 13.34% respondents come under others category of qualifications and does not have any Library science background. Further, 86.63% of the respondents have completed Ph.D/ M.Phil./MLISC or B. Lib. While there were 2 respondents (13.33%) who does not have any MLIS background.

Table- 4.5 A: Academic Position vis-a-vis Academic Qualification

Qualification of the respondents	
Ph. D	3
M. Phil	3
MLIS/BLIS	7
Others	2
Total	15

(Source: Field Survey)

Table- 4.5B: Academic Position of Respondents

Academic Position	Academic Qualification				Total	Total %
	Ph.D.	M.Phil.	MLIS/BLIS	Others		
Librarian	1 (6.67%)	3 (20%)	6 (39.96%)	1 (6.67%)	11	73.33%
Deputy Librarian		-	1 (6.67%)		1	6.67%
Assistant Librarian	2 (13.33%)	-		-	2	13.33%
Library Assistant		-	-	1 (6.67%)	1	6.67%

(Source: Field Survey)

4.2.6 Working Hours and Sitting Capacity of College Library

Table-4.6 showing the working hours of college libraries and seating capacity of the library and after analysis it resolved that majority collages library (60%) having 8 hrs working/day followed by 7hrs working /day in 20% colleges and 6 hrs in 13.33 colleges while one college (Aizawl City College) working hrs was only 4hrs/day and that is because college was opening during the evening 4:30 P.M to 8:30 P.M.

Table- 4.6: Working Hours and Siting Capacity of College Library

Name of Institution	Working Hrs	Sitting Capacities
Pachhunga University College	7	200
Govt. Hrangbana College	8	75
Govt. Zirtiri Residential Science College	8	40
Govt. T. Romana College	7	53
Govt. Aizawl College	8	30
Govt. Aizawl West College	8	30
Govt. Aizawl North College	8	60
Govt. Mizoram Law College	8	70
Govt. J. Thankima College	8	20
Govt. Johnson College	8	50
Aizawl City College	4	25
Divine Mercy College	7	20
Helen Lowry College	6	20
St. Xavier's College	6	40
Govt. Saitual College	8	28

(Source: Field Survey)

Regarding seating capacity, Pachhunga University College have the highest sitting capacity (200) followed by Govt. Hrangbana College (75), Govt. Mizoram Law College (70), Govt. Aizawl North College (60), Govt. T. Romana College (53) and

Govt. Johnson College (50). Some colleges (like Govt. J. Thankima College, Divine Mercy College and Helen Lowry College) have only 20 seating capacity in library and rest colleges' libraries having 25 to 40 sitting capacity.

4.2.7 Library Building Status

Table 4.7 shows information regarding colleges' libraries buildings and found that 33.33% of the college libraries has a separate library building while the remaining 66.67% colleges does not have a separate library building and library is situated in one part of the collage building. The majority (80%) of college libraries buildings are single story, and 2 library buildings are two-storey and no colleges have any multi-storey building for libraries. Further, all the libraries buildings was made by concrete structure. Only 40% respondents reported that their library buildings were constructed in open and planned area while 60% respondents reported that their libraries were in congested area.

Table- 4.7: Information about the Library Building

Library Building	Respond		Total
	Y	N	
Separate Building	5 (33.33%)	10 (66.67%)	15 (100%)
Open and Planned	6(40%)	9(60%)	15(100%)
Congested	9(60%)	6(40%)	15(100%)
Concrete	15(100%)	0	15(100%)
Brick-Lined walls	-		-
Multi-storey	-		-
Two-storey	3(20%)	12(80%)	15(100%)
Single- Storey	12 (80%)	3((20%)	15(100%)

(Source: Field Survey)

4.2.8 Likelihood of disasters to affect the area

Disaster may happen in many ways whether natural or man-made form of factor. Some areas are prone to some specific type of disasters according precautions adopted in public interest. Table 4.8 shows the views of librarians on likelihood disasters that may damage the selected libraries. The cause of disasters mentioned and librarians views was asked in five point scale (i.e. Definitely, Probably, Possibility, Probably Not and Definitely Not).

Table- 4.8: Likelihood disasters to affect the area

Name of Disaster	Likelihood of disasters to affect the area				
	Definitely	Probably	Possibility	Probably Not	Definitely Not
Floods	-	-	-	9 (60%)	6 (40%)
Droughts	-	-	-	8 (53.33%)	7 (46.67%)
Tsunami	-	-	-	6 (40%)	9 (60%)
Cyclones	1 (6.67%)	2 (13.33%)	10 (66.67%)	1 (6.67%)	-
Wildfire	2 (13.33%)	3 (20%)	3 (20%)	4 (26.67%)	3 (20%)
Radioactive incident	-	-	2 (13.33%)	8 (53.33%)	5 (33.33%)
Terrorism/ War	-	-	2 (13.33%)	9 (60%)	4 (26.67%)
Earthquake	9 (60%)	-	6 (40%)	-	-

(Source: Field Survey)

The observations found that in terms of floods, 60% do not face a problem and answered "Probably Not" and 40% of the were certain that the area will not be affected by floods. The same goes for it in the case of Droughts and Tsunami where the chances of facing such a disaster are not high enough. In terms of droughts, 53.33% answered "Probably Not" and 46.67% answered, "Definitely Not". Under Cyclone, there is a certain college to affect and most likely to be aware of. 6.67% answered "Definitely", 13.33% answered "Probably" and the majority of colleges, 66.67% answered "Possibly" while 6.67% answered, "Probably Not".

Therefore, it is likely safe to say that the majority of college libraries are on definite probability to be affected by certain disasters like earthquake, cyclones and wildfire while certain disasters like floods, droughts, tsunami, radioactive incident and terrorism/war are on a lower chance to be affected on the area.

4.2.9 Librarians' Concern on Disaster Management Knowledge

As discussed already that disaster may cause by many ways like floods, droughts, tsunami, cyclone, wildfire etc. An attempt was made to know the respondents' concerned with different disaster management knowledge on the basis of 5 points scale (Not very much concerned; Not concerned; Neutral, Somewhat concerned and Very much concerned) and response was tabulated in table 4.9.

The analysis reveals that out of the 15 respondents, 20% were not very much concerned about Floods, 26.67% are not concerned, 26.67% are Neutral to the situation while 20% are Somewhat Concerned, and 6.67% are Very Much Concerned about Floods. In the case of Droughts, 20% are not very much concerned about Droughts, 26.67% are not concerned, 26.67% are Neutral to the situation while 20% are Somewhat Concerned, and 6.67% are very much concerned about Droughts. In the case of Tsunami, 6.67% are not very much concerned about Tsunami, 46.67% are not concerned, 26.67% are neutral to the situation while 13.33% are somewhat concerned, and 6.67% are very much concerned about Tsunami. Further, in the case of Cyclone, 40% are neutral to the case while 46.67% are somewhat concerned and 13.33% are very much concerned.

From the analysis, it was also found that 20% of the Libraries are not concerned about Wildfire and 20% are neutral to the case while 53.33% are somewhat concerned and 6.67% are very much concerned. In the case of Radioactive Incident, 20% are not very much concerned about the incident, 33.33% are not concerned, 26.67% are neutral to the situation while 20% are somewhat concerned. In the case of Terrorism or War, 20% are not very much concerned about Terrorism, 26.67% are not concerned, and 33.33% are neutral to the situation while 20% are somewhat concerned. Lastly, in terms of Earthquake, 6.67% are neutral to the case while 33.33% are somewhat concerned and 60% are very much concerned about the case.

Table 4.9: Librarians' Concern on Disaster Management Knowledge

Name of Disasters	Likelihood of disasters to affect the area				
	NVMC	NC	N	SC	VMC
Floods	3 (20%)	4 (26.67%)	4 (26.67%)	3 (20%)	1 (6.67%)
Droughts	3 (20%)	4 (26.67%)	4 (26.67%)	3 (20%)	1 (6.67%)
Tsunami	1 (6.67%)	7 (46.67%)	4 (26.67%)	2 (13.33%)	1 (6.67%)
Cyclones	-	-	6 (40%)	7 (46.67%)	2 (13.33%)
Wildfire	-	3 (20%)	3 (20%)	8 (53.33%)	1 (6.67%)
Radioactive incident	3 (20%)	5 (33.33%)	4 (26.67%)	3 (20%)	-
Terrorism/ War	3 (20%)	4 (26.67%)	5 (33.33%)	3 (20%)	-
Earthquake	-	-	1 (6.67%)	5 (33.33%)	9 (60%)

(NVMC- Not very much concerned; NC- Not concerned; N- Neutral; SWC- Somewhat concerned; VMC-Very much concerned)

(Source: Field Survey)

4.2.10 Library Plan and Management for Disaster Management

To know the library awareness, plan and management to handle the disaster management situations if arises unfortunately in selected libraries, some questions was asked and respondents response was tabulated in table 4.10.

Table 4.10: Library Plan and Management for Disaster Management

Library plans and management	Response	
	No	Yes
Library aware of DM plans and procedures	8 (53.33%)	7 (46.67%)
Library encountered any type of disasters in the past 20 years	13 (86.67%)	2 (13.33%)
Participating in any disaster/ mass casualty drills	10 (66.67%)	5 (33.33%)
Actively involved in any mass casualty drills	12 (80%)	3 (20%)

(Source: Field Survey)

On the observation of Table 4.8, it has been found 53.33% of college libraries in Aizawl are not aware of various Disaster Management plans and procedures while 46.67% were aware of Disaster Management plans and procedures. There are 86.67% of libraries who have not encountered any type of disaster within the past 20 years while 2 college libraries (33%) have witnessed and experienced a certain type of manmade disaster (Aizawl City College and Govt. Aizawl North College) .

Both the libraries have encountered a similar type of disaster which pertains to be Theft and Robbery. 66.67% of the respondents do not participate in any educational activity dealing with disaster or mass casualty preparedness or management while 33.33% had participated. Further, 80% had never been actively involved in mass casualty drills while 20% had actively participated.

4.2.11 Qualification Level of Librarian/ In-charge in Disaster Management

Analysis of formal qualifications in disaster management level from different college librarian/in-charge of the library has been discussed in Table 4.11

Table 4.11: Qualification Level of Librarian/ In-charge in Disaster Management

SN	Qualification at DM level	Response	Total no. (in %)
1	Up to School	2	13.33%
2	Graduate/PG level	-	-
3	Short- term course	3	20%
4	Attended lectures	3	20%
5	Seen Demonstration	5	33.34%
6	Don't have any qualification in DM	2	13.33%
Total		13	93.33%

(Source: Field Survey)

From analysis it observed that the formal qualifications of Librarian /in- charge librarians vary at different grounds. There were 13.33% respondents who had a formal qualification and training regarding DM up to the school level and 20% respondents had a qualification and training through short- term courses while 20% respondents

had attended lectures to know DM and 33.34% respondents had seen a demonstration of disaster management in mass/ casualty drills. There are 2 (13.33%) of college librarian who does not have a particular form of qualification or training on disaster management. There were a total of 13 response from the question and there were 2 respondents who did not bounce a response on the specific question.

4.2.12 Source to Learn about Disaster Management

Human learn things from many formal and informal sources and experience. It is interesting to know about the respondents source of knowledge about disaster management and some questions has been asked from respondents about the source of knowledge of DM and their response was tabulated in table- 4.12 and shown in figure- 4

Table- 4.12: Source of Information about Disaster Management by respondents

Source of information about DM by respondents	Total number	%
At School Level	3	20%
From friends/ relatives	-	-
From experts	6	40%
From Internet/ media (print and electronic)	4	27%
No response	2	13%
Total	15	100.00%

(Source: Field Survey)

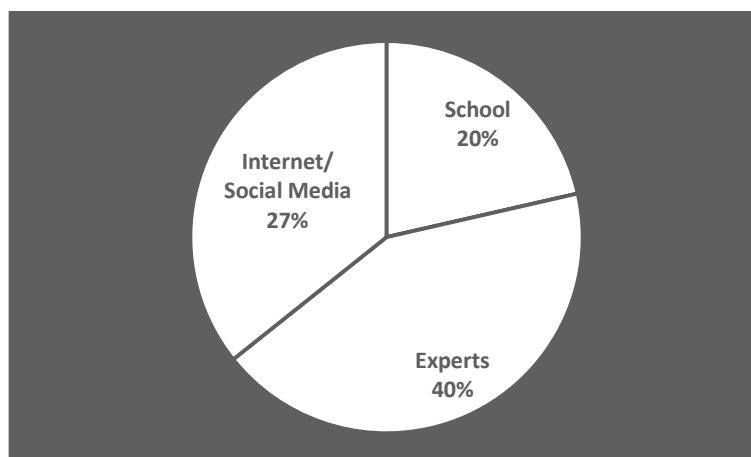


Figure: 4.5: Source to Learn about Disaster Management

From the analysis is cleared that the majority of respondents (40%) had their disaster management knowledge from experts while 20% respondents' source was the school level training and 27% respondent's source to learn the DM was the Internet/ social media. There were 13% respondents who did respond this particular question. Surprisingly, there were no respondents who learned about DM from friends or relatives.

4.2.13 Types of Disaster which could Happen in Study Area

There are many types of disasters but all the disasters normally not happen in all the places and it depends on the geographical areas. Some disasters which are very much common at one place may not happen to another place. The respondent's response about the possible disasters which could happened in this area was listed in table 4.14 supported with figure-5.

Table- 4.13: Types of Disaster which may Happen in Study Area

Disasters which could happen in the area	No. of respondents	In percentage (%)
Earthquake	15	100%
Floods	-	0
Tsunami	-	0
Cyclone	-	0.00%
Land Slides	11	73.33%
Cloud- burst	3	20%
Forest fires	7	46.67%
Accidents	15	100%
Riots	-	33.33%
Terrorist attack/ War	-	0.00%
Stampede	-	0.00%
Hijack	10	0.00%
Windstorms		66.67%

(Source: Field Survey)

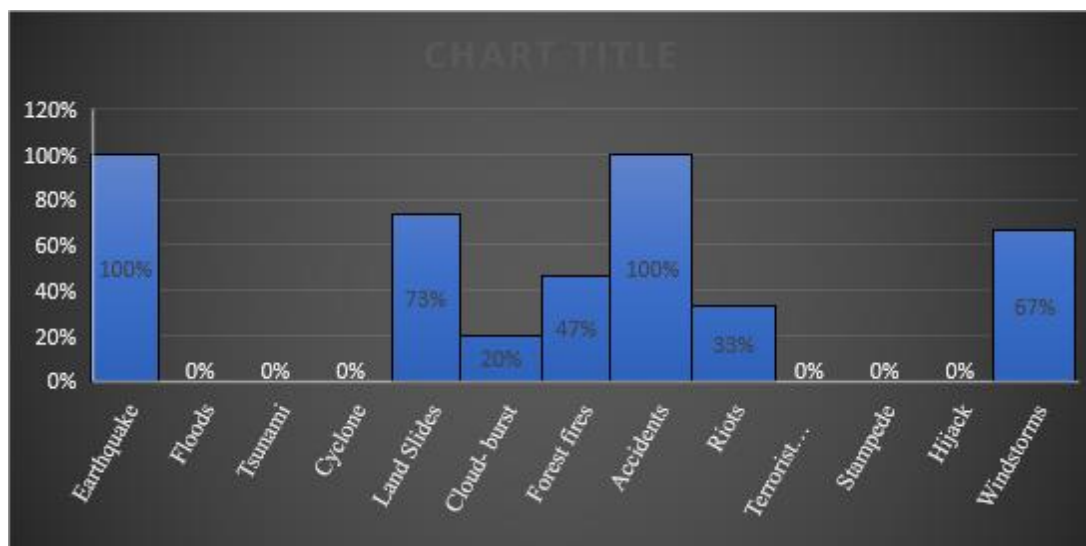


Figure- 4.6: Types of Disaster may happen in Aizawl

(Source: Field Survey)

The analysis resolved that all the respondents (100%) feel that earthquakes and accidents were most possible disaster in this selected areas and libraries should be alert always. Another possible disaster in this area are landslides (73.33%) and cyclone (66.67%) while cloud- burst could happen in the area and comprises of 20% while forest- fires with 46.67% could likely happen in the area while some of respondents (33.33%) feel that riots also may happen in this area. The other disasters such as war, stampede and hijack, floods and tsunami may not seem to happen or very rare chance.

4.2.14 Seismic Zone and Disaster Management Plan for Library

The whole country was divided in 5 zones by Government of India according to possibility of disaster in increasing order of danger and accordingly government allow constructing the buildings with taking all the precaution measures. An attempt was done to know the seismic zone of selected libraries and disaster management plan for library buildings and response was tabulated in table 4.14 A and 4.14B and supported with Figure- 4.7.

Table- 4.14A: Seismic Zone of Selected Library

Seismic zone	Response	%
Zone 2	-	-
Zone 3	-	-
Zone 4	-	-
Zone 5	15	100%

(Source: Field Survey)

Table- 4.14B: Library Disaster Management Plan

Library Disaster Management (DM) Plan	Yes	No
Library having a DM Plan	5 (33.33%)	10 (66.67%)
Need to have a DM Plan	9 (60%)	6 (40%)
Awareness of library to be constructed as per National Building Code (NBC)	3 (20%)	12 (80%)
Library constructed as per National Building Code (NBC)	1 (6.67%)	14 (93.33%)
Contemplate has been taken any measures to strengthen the library building	13 (86.67%)	2 (13.33%)

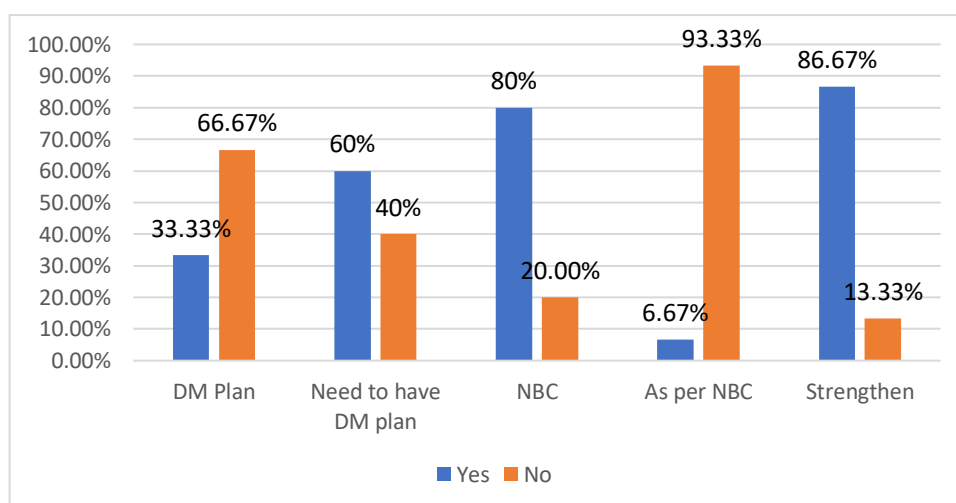


Figure- 4.7: College Library Disaster Management Plan

(Source: Field Survey)

Analysis found that all the selected libraries are in seismic zone 5, which is a highest risky zone of disaster. So it is necessary to all libraries have some disaster management plan for their respective libraries but analysis resolved that only 33.33% of the libraries (Pachhunga University college, Govt. Johnson college, Aizawl North college, Divine Mercy College and Govt. Mizoram law college) have a disaster management plan in the library and 66.67% do not have any such plan while 60% respondents feel that their library need to have a disaster management plan but again 40% respondents do not find it necessary to have such plan.

The majority of respondents (80%) don't know that library building has to be constructed as per the National Building Code (NBC) and only 20% respondents (from Helen Lowry College, Govt. Hrangbana College library and Pachhunga University College) were aware about it but among all 15 colleges libraries, only Pachhunga University College library was constructed as per the National Building Code and rest 93.33% of the libraries buildings were not constructed as per the National Building Code which are a very serious issue of safety. Out of the college libraries that were not constructed as per the National Building Code, 85.72% respondents feel the need and contemplate on taking measures to strengthen the existing buildings.

A question was asked to the respondents that if they feel that strengthen the existing buildings, to whom they want to contact for the initiation of strengthening the library building as per NBC and their response was recorded in Figure- 4.8 and it is observed that 53.33% of the respondents wanted and opts for structural engineer for this initiative followed by Architect (46.67%), Building contractor (20%) and 13.33% to both Mechanical engineer and Electrical Engineer. No one wants to consult on Mason for this purpose.

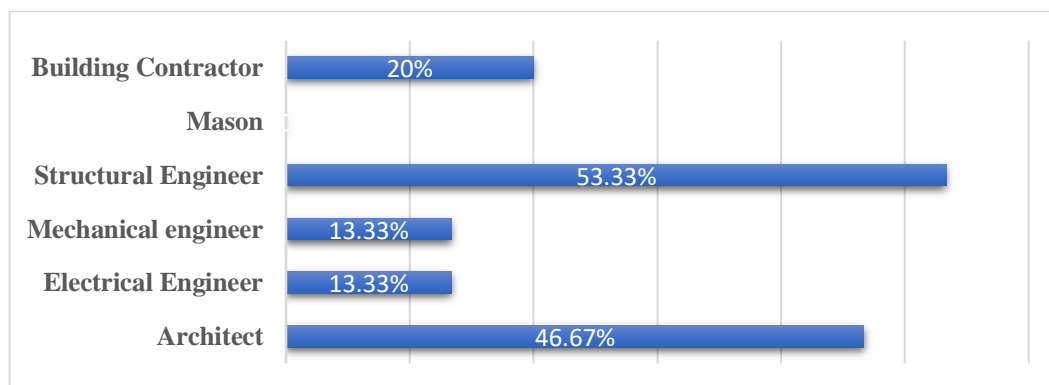


Figure- 4.8: Contact for strengthening the Library

(Source: Field Survey)

4.2.15 Measures Taken to Prepare for an Earthquake Disaster

As it was known that whole Mizoram state is earthquake prone zone and under seismic zone 5, so it is obvious that every organizations keeping some precautions measures to face this disaster. Table 4.15 shows respondents preparation measures for earthquake disaster and analysis found that 26.67% respondents would prefer to take measures by preparing library disaster management kits while 26.67% respondents

preferred to brief the library staffs and members what to do during earthquake tremors and aftershocks and 6.67% would prefer to switch off the electricity. The majority of the respondents (53.33%) want to take all the above features and steps mentioned in questionnaire.

Table- 4.15: Measures to be taken to prepare for an Earthquake Disaster

Measures for an Earthquake Disaster	%
Anchor movable items	-
Prepare Library DM kits	26.67%
Have a common contact outside Mizoram	-
Brief the Library staffs and members what to do during earthquake tremors and aftershocks	26.67%
Switch off Electricity	6.67%
All of Above	53.33%

(Source: Field Survey)

4.2.16 Preferred Agency to Contact during Man mad Disaster

As discussed that there are basically two types of disaster- natural and manmade. The natural disaster normally comes without any prior information even then because of advancement in technology, some natural disasters also may predict now a day by scientists. While manmade disaster happened because of negative or distractive nature of men activities. A question was asked from respondents to know their views that if some men made disasters happen so to whom they will prefer to contract and their response was presented in Figure- 4.9.

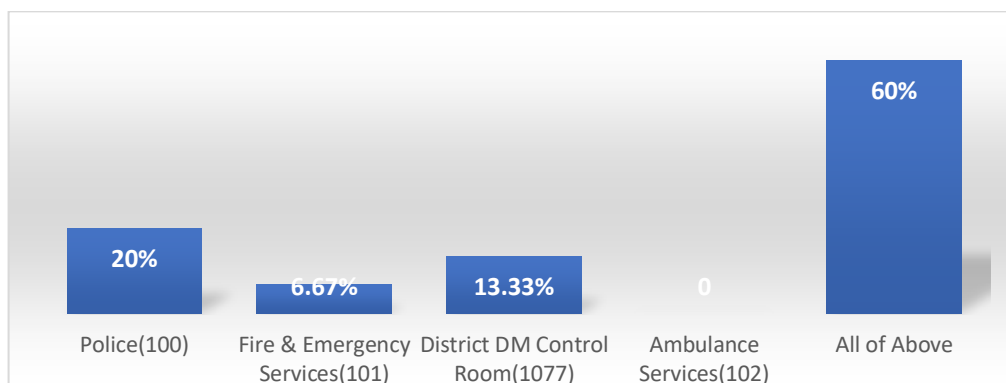


Figure- 4.9: Preferred Contact on Man-made Disaster by Respondents

(Source: Field Survey)

The analysis shows that 20% respondents would prefer to contact Police and 13.33% respondents would contact district disaster management control room while 6.67% respondents will contact to fire and emergency services but majority of respondents (60%) like to prefer to contact all of the above agencies (Police, Fire & emergency, district disaster management and ambulance service) during men made disaster crises.

4.2.17 Participation in Mock Exercise by respondents

Time to time difference government agencies as well as some societies working on disaster management conducting mock exercise in different areas to make aware, alert and trained to the society peoples as well as to check their own preparations. Many time they also involved the civilians as well as some offices/staffs of government offices to make them aware and trained. An attempt was made to know either any respondents have participated in such type of mock exercise and their general perception about such exercise and their response was recoded in table 4.16.

Table 4.16: Participation in Mock Exercise by respondents

Participation and perceptions	No	Yes
Participated in mock exercise conducted by Residence welfare Association (RWA)	15 (100%)	-
Participated in mock exercise conducted by District Authorities	12 (80%)	3 (20%)
Opinion on community is the first responder in disaster-	1 (6.67%)	14 (93.33%)
Need to impart formal training in district authorities to community to make them more aware	-	15 (100%)

(Source: Field Survey)

The analysis found that no respondents have participated in any mock exercises or drills conducted by resident welfare association (RWA) but 20% respondents had participated in some mock exercises and training conducted by district authorities and gain some knowledge and experience. In another word, majority of respondents (80%) did not have any practical knowledge and experience to handle any disaster because they did not participated in any such trainings or mock exercises till now while majority of them (93.33%) knew that community is the first responder in any such disaster. Further, all the respondents agreed and accept that there is need to impart formal training in disaster management to the community to make them more aware as to what to do before/ during/ after a disaster.

4.2.18 Types of Contents for Disaster Management Training

To face the challenges of disaster in future, all the respondents feel that there should be formal training program where all the libraries staffs get training. To know the respondents views about the contents of training program, questions was asked and respondents responses shown in figure 8.

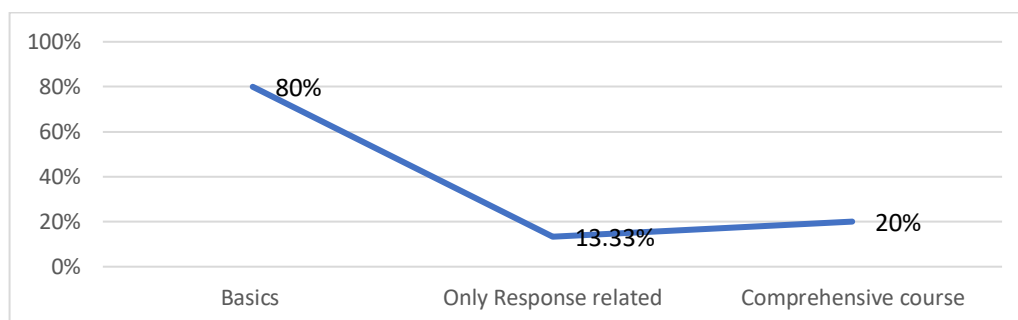


Figure- 4.10: Types of Contents for Disaster Management Training
(Respondents giving more than one option = 2), N=17
(Source: Field Survey)

Analysis of the formal training on disaster management and what contents should be involved shown that majority of respondents (80%) preferred that it should be basic contents only while 13.33% responded feel that contents should be only response related and 20% of the respondents preferred formal training in Disaster Management on comprehensive course.

4.2.19 Who should Impart the Disaster Management Training?

An analytical study was carried out to get a response about who should impart the disaster management training at the community level to make awareness and training. Figure- 4.11 shows the respondents response and analysis resolved that majority of respondents (56%) implied that it should be from district authorities and 31% respondents feel that training impart from favoured experts within the community while 7% respondents feel that fire and emergency services impart this training. Further, 6% respondents have the feeling that police authorities communicate the disaster management training.

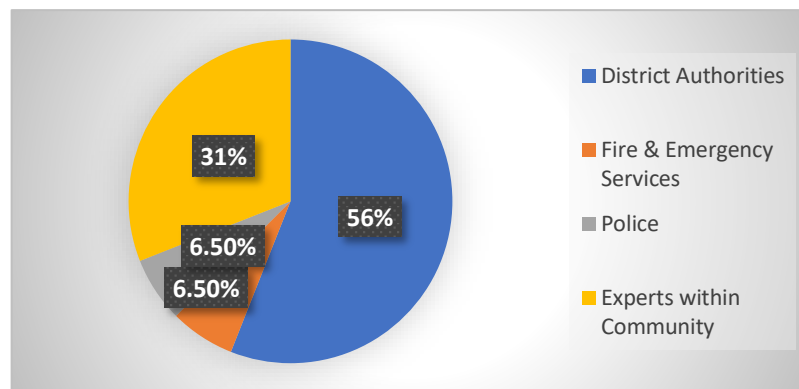


Figure- 4.11: Response on who should impart training

(Source: Field Survey)

4.2.20 Who should Finance the Disaster Management Training?

The finance is one of the basic requirements in organizing any training. Thus it was tried to find out the respondents views on this important issue by asking the question that who should finance disaster management training and their response was tabulated in table- 4.18. The Analysis shows that 60 % respondents feel that district authority should finance the disaster management training while 40% respondents feel that finance for disaster management training not only depend on district authority but it should come from all the sectors (like- Contribution from Community, Sponsored from the corporate sector, NGOs/ Volunteer Organisation along with district authority).

Table 4.17: Financial Support for Disaster Management Training

SN	Name of Sector	Total No. with %
1	Contribution from Community	-
2	District Authorities	9 (60%)
3	Sponsored from the corporate sector	-
4	NGOs/ Volunteer Organisation	-
5	All of Above	6 (40%)

(Source: Field Survey)

4.2.20 Best Suitable Time to Organize the Disaster Management Training

Timing is very important for such type of training where whole community interest involved and for all training is important. Considering the all the sectors of community like service peoples/ students/businessman/housewives etc. what will be the best timing from respondent's views as asked as question in questionnaire and respondents opinion was presented in Figure- 4.12. The analysis shows that majority of the respondents (79.99%) preferred a separate timing for different stake-holders for disaster management training while 6.67% respondents feel that it should be week end and same quantity of respondents wanted on holiday. Only 6.67% respondents wanted training on morning hrs. There was no response in favour on evening hours.

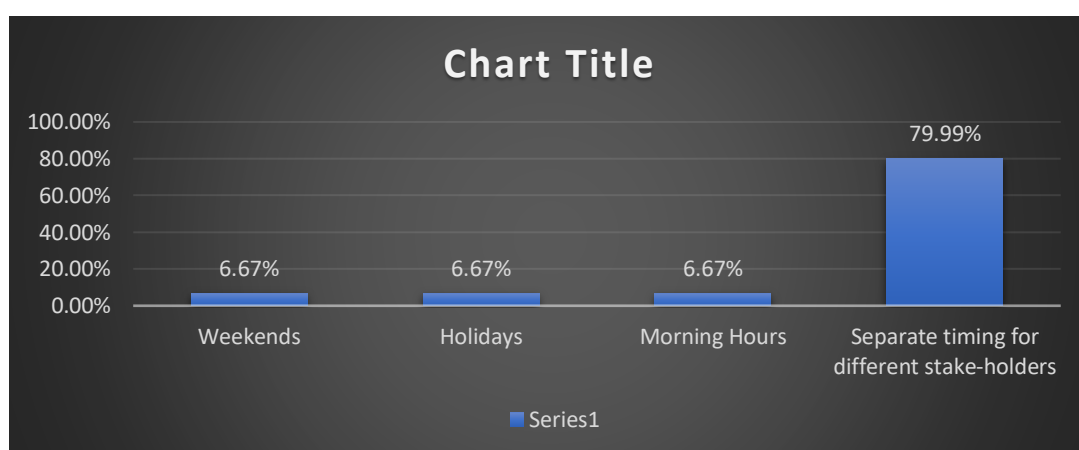


Figure- 4.12: Best time for training

(Source: Field Survey)

4.2.21 Impartment of Training and General Awareness in Libraries

It is a challenge task to impart the disaster management training in library so that effectively the library to make aware and get trained of such training to library stockholders. To know this, a question was asked to respondents and their response was tabulated in table-4.19. The analysis resolved that 26.67% respondents feel that the best way to impart disaster management awareness/training in library is by including it as a part of curriculum while 13.33% of the respondents feel that it should be imparted library as one time activity and 13.33% respondents as academic and practical training through experts. Further 26.67% respondents feel that one single method will not be very effective and better to adopt all methods to make aware and trained to library stockholders.

Table 4.18: Mode of Training/General awareness on DM in Library (N=12)

SN	How training should be imparted in Library?	Total	Percentage (%)
1	As Part of Curriculum	6	40%
2	As One- time Activity	2	13.33%
3	Academic & Practical training through Experts	2	13.33%
4	All of Above	5	33.34%
Total		15	100%

(Source: Field Survey)

4.2.22 Satisfaction with Present General Awareness in Mizoram about Disaster Management and Point to Add for Improvement

Analysis of various opinions of the present system of imparting general awareness in Mizoram about Disaster Management in Libraries of having only project work and what other additional inputs should be added in Disaster Management strategy was asked among various respondents and respondents' response was tabulated in table-4.20. The analysis found that the 93.33% respondents were not satisfied with present system of imparting general awareness in Mizoram about disaster management in libraries of having project work and feel that additional input must be added while one respondents (from Divine Mercy College Library) presume that the general awareness in Mizoram about Disaster Management in libraries of having only project work is good enough.

The 20% respondents preferred to academic inputs of disasters perceived in Mizoram should added while 6.67% respondents feel that academic inputs of all types of disasters in India should be added. Further, 13.33% respondents feel that organization of mock exercises every year should be compulsory and 26.67% respondents were having the opinion that seminars/lectures may be more effective where experts should interact with students/ users as additional inputs while 33.33% respondents feel that rather than add any single methods, better adopt all above points as additional input point in the disaster management strategy.

Table 4.19: Opinions on the present general awareness in Mizoram about Disaster Management and point to add for Improvement

General awareness in Mizoram about Disaster Management in Libraries of having only project work is good enough	Yes	No	
	6.67%	93.33%	
Additional inputs to be added in DM		Total No.	Percentage
Academic inputs of disasters perceived in Mizoram		3	20%
Academic inputs of all types of disasters in India		1	6.67%
Organization of mock exercises every year should be compulsory		2	13.33%
Organization of seminars where experts should interact with students/ users		4	26.67%
All of Above		5	33.33%
Total		15	100%

(Source: Field Survey)

4.2.23 How Training on Disaster Management should be imparted at Workplace (Library)

It is very important to impart the disaster management training in workplace so that every workers of the institutes/organization including libraries within the covered areas and through that effort, the employees will aware and trained with basic knowledge and techniques of disaster management. If this plan successfully implemented, then it will help a lot at time of disaster by saving the life of human as well as properties. To know the respondent views and opinions on this issue to how training on disaster management should be imparted at work place, one question with possible options was asked and their feedback was tabulated in table- 4.21.

The analysis clearly shows that 30% respondents feel that conducting mock exercises every year was good method to impart DM training at workplace while 13% respondent have opinion that every institutions have a DM plan where every workers know his/her task during /after disaster and same population (i.e.13%) having feeling that continuous periodical seminars/ lectures by experts will help to impart the training at workplace even then, majority of respondents (44%) feel that no one single method will really able the import the DM training at workplace fully and its better altogether implement together which really more effective.

Table 4.20: Way to Impart DM Training at Work Place

SN	Types of training	Total No.	Percentage
1	Seminars/ Lectures by Experts periodically	2	13%
2	Every Library have a DM plan where every workers know his/her task during /after disaster	2	13%
3	Conduct mock exercise on various type of perceived disaster under the aegis of experts every year	4	30%
4	All of Above	7	44%
Total		15	100%

(Source: Field Survey)

4.2.24 Best Methods of Spreading Awareness about DM at Community Level

The real victims of any disaster are ultimately the effected community in large scale. Unless the community aware and know about disaster management practices and policy, it is difficult to say that the mission of awareness was completed fully. Now the question is that by what are the best methods to make aware to the community about disaster management? There were various methods discussed by the respondents from different perspectives as the best method of spreading mass general awareness at the community level was shown in figure- 4.12. Based on the analysis of figure- 4.13, it resolved both electronic and print media play a very important role in spreading awareness about DM at community level. Majority of respondents (63%) found to be the best method of spreading general awareness at the community level is electronic media and 21% respondents said that print media as best method. Further, 11% respondents feel that street shows may be the best method followed by Telecast of Documentary method by 5% respondents.

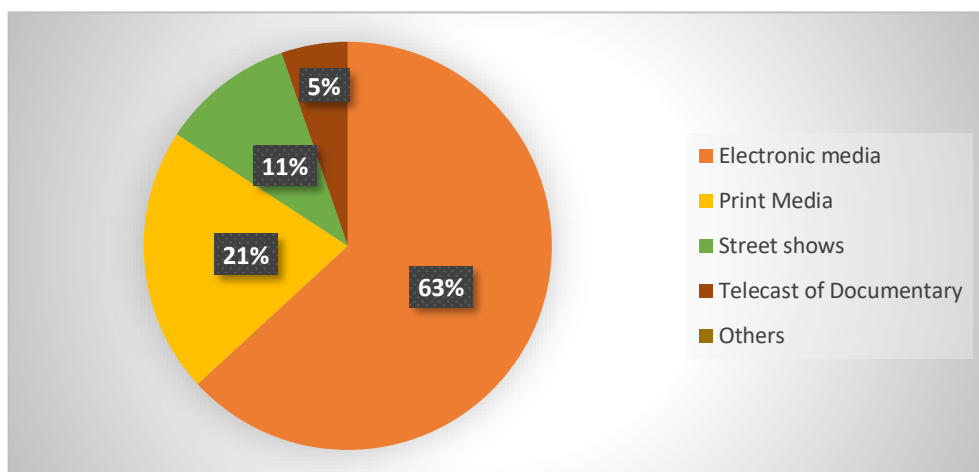


Figure- 4.13: Best Methods of Spreading Awareness about DM at Community Level by Respondents

(Source: Field Survey)

4.3 CONCLUSION

This chapter discussed the data analysis and findings and presented them in table and graphic format. Literature was used to indicate similar findings. The data collection of 15 questionnaires from 15 College Libraries revealed the general information of college, information about the libraries and the approach and measures taken by various college libraries towards Disaster Management. Disasters are not predictable and can cause major disruption in the library services. Mizoram is prone to certain disasters but the ground situation of disaster preparedness is not found to be suitable as found in the present study. Most of the college libraries under the study are found to be very ill prepared to confront such situation coming out of the disasters and bearing in mind that the state is in a red-zone area. However, the study also revealed that some libraries have taken steps for disaster control. It is however very significant and malicious factor to take steps and conduct further studies towards Disaster Management and as to what have been the factors for poor disaster management in the college libraries of Mizoram.

Chapter 5 concludes the study, discusses the conclusions and its limitations, and makes suggestions for practice and further research.

CHAPTER 5

FINDINGS, CONCLUSIONS AND SUGGESTIONS

5.2 FINDINGS

Based on the data analysis and inferences of the study, following findings are alienated for this study:-

1. Majority of the college libraries (60%) in Aizawl are in congested area, while (40%) the college libraries are in an open and planned area. All the college libraries are made and build of concrete structure and there are only three colleges with a two-storey building (20%) while the remaining 80% college libraries are having single-storey only. There were no library building made of brick-lined walls and multi-storey building of the college libraries in Aizawl.
2. The majority of the college libraries are located in areas where the chances of certain disasters to affect the area are given a response of Probably Not and Definitely Not which concludes to a statement that disasters like floods (0.01%), droughts (0.01%), Tsunamis (0.01%) and cyclones (0.01%) are on a low probability to affect the area as well as the library while there are certain disasters like Earthquakes, windstorms, accidents, wildfire, etc on a high probability and chances (60% - 90% chance) to affect the area.
3. The measure of concern of certain disasters by the respondents also shows that the disasters which were not likely to affect the area and low chances of certain disasters were not given much concern while disasters which could affect the areas are given knowledge of concern by the respondents.
4. Majority of the college libraries (53.33%) are not aware of various disaster management plans and procedures while there were other remaining college libraries (46.67%) which were aware of various disaster management plans and procedures. Further, there were 2 libraries (13.33%) who had encountered certain type of manmade disaster (theft and robbery) while 86.67% has not encountered any type of disaster within the past 20 years.
5. There were 33.33% of the respondents who had participated in some kind of disaster/ mass casualty drills while 66.67% had not participated on any kind of drills. There were only 20% of the respondents who had actively participated in disaster/ mass drills while 80% of the respondents does not participate or involved in disaster mass casualty drills.

6. The 13.33% respondents who had a formal qualification and training up to the school level about disaster management while 20% respondents had some qualification and training as short- term courses, 26.67% of the respondents have attended some lectures and 33% respondents had seen the demonstration of disaster management mass/ casualty drills. There are 2 (13.33%) of college librarian who does not have a particular form of qualification or training on disaster management.
7. Respondents gain the knowledge about disaster management from different channel. The majority of respondents (40%) had gain their knowledge from experts while 20% of the respondents who came to have learn about DM at the school level. Surprisingly, there are no respondents who have learned it from friends or relatives while 27% came to learn from the Internet/ Media. There is one respondent who did not learn about disaster management.
8. All the college libraries in Aizawl are in seismic zone 5. This is due to the reason that Mizoram is in a red-zone area and also a disaster-prone area.
9. There were 33.33% of the Libraries which have a disaster management plan in the library while 66.67% do not have any disaster management plan. There are 60% of the libraries which feels that disaster management plan is need while 40% do not find it necessary to have a plan.
10. The majority of college libraries in Aizawl which comprises 80% do know that libraries should be constructed as per the National Building Code while 20% do know that libraries should be constructed as per NBC. However there was only one college library (PUC) constructed as per NBC standard. The majority of college libraries in Aizawl detest to a fact in contemplating on taking measures to strengthen the library was given a positive response (86.67%) while there were 3 respondents (13.33%) who does not fell the need to strengthen and take such measures.
11. If some manmade disasters happen in future, then 20% respondents would prefer to contact police force, 6.67% respondents to fire and emergency services and 13.33% would contact district disaster management control room while there were 60% respondents preferring to contact all of the above mentioned agencies. There were no responses for the contact of ambulance services during manmade disasters.

12. All the respondents accepted the fact that training about disaster management should be imparted in the library as well as the community level. However, the preferred contents for the training by the respondents were discerned from person-to-person. About 80% of the respondents preferred the basic contents for training while 13.33% respondents feel that contents should be only response related while 20% of the respondents preferred formal training in disaster management on comprehensive course.
13. Majority of the respondents are supportive of imparting training in libraries but regarding the timing of training respondents have different opinions. Majority of the respondents (79.99%) preferred a separate timing for different stake-holders while 6.67% respondents feel that such training should be on holidays, weekends and morning hours each. No one are in favour to organize such training in evening time.
14. There were 40% respondents who preferred to have a training or general awareness of disaster management in library as part of curriculum while 13.33% of the respondents preferred to be as a one time activity and 13.33% respondents as academic and practical training through experts. Overall 33.34% respondents preferred such training as mixture of all the above mentioned modes.
15. The 93.33% respondents were not satisfied with present system of imparting general awareness in Mizoram about disaster management in libraries of having project work only and feel that additional input must be added while one respondents (from Divine Mercy College Library) presume that the general awareness in Mizoram about Disaster Management in libraries of having only project work is good enough.
16. Regarding the additional inputs added in disaster management strategy, 20% respondents preferred that academic inputs of disasters perceived in Mizoram may be added in training while 6.67% respondents feel that academic inputs of all types of disasters happened in India may added as input. The 13.33% respondents who preferred to organization of mock exercises every year as compulsory and 26.67% respondents were having the opinion that seminars/lectures may be more effective where experts should interact with students/ users as additional inputs.

17. About 44% respondents feel that not a single method will really be able to import the disaster management training at workplace (library) fully and its better altogether implement together which will be more effective while 30% respondents feel that conducting mock exercises every year was good method and 13% respondent have opinion that every institutions have a DM plan where every workers know his/her task during /after disaster and same population (i.e.13%) having feeling that continuous periodical seminars/ lectures by experts will help to import the training at workplace.
18. Both electronic and print media can play a very important role in spreading awareness about disaster management at community level. Majority of respondents (63%) found that the best method of spreading general awareness at the community level will be electronic media in present ICT era and 21% respondents having the opinion that print media can lay more important role in such awareness while 11% respondents feel that street shows may be the best method.

5.2 CONCLUSION

There are various standpoints as to how and why a library should maintain a well-structured and strategic planning of disaster management not only for the organisation or institution but for the entire educational sector and the nation. Many libraries have experienced a certain types of disasters and these had brought the attention of the many users and the community that the library's resources in facing or witnessing a disaster might affect and weigh to the possibility of losing a huge amount of resources. The various incidents that took place inside or within the environment of libraries can show a great term of either well-prepared and planned organisation or a sense of negligence on both the terms. Certain disasters like earthquakes, landslides and accident cannot be avoided but maintain a well-prepared and planned environment and structure to avoid the lest the number of losses in terms of documents and vital information. However, there are certain disasters which man-made disasters developed or erupt such as theft and robbery, fires, mould and mildew disasters inside the libraries. These certain types of disasters are mainly due to either negligence or lack of pre-planned and strategic preparedness within the organisation.

The library should therefore, ensure and developed a well-planned and strategic planning for the organisation to develop and minimize the possibility of such disaster at all cost. The key of important resources and documents are stored in various places of the library and therefore, maintaining a vast significant resources in almost all the places. The lack of having a well strategic planning about disaster management could lead to a loss of great amount of vital resources or information, at any given period of time. The library building and the environment as well, must be kept in alert at times due to the fact that a disaster could Disaster preparedness is a significant element of the disaster series that can shape pliability into the vigour sector. There are however various improvements that need to be made in the college libraries to improve the energy sector's performance.

All the college libraries in Aizawl are made and build of concrete structure and there are only and majority of them (80%) are in single story building but location wise area are in congested position. As we well aware that whole Mizoram is in seismic zone 5 and belong to red-zone area which is a disaster-prone area. It means that all the collage libraries of Aizawl are also on high risk of some specific type of disaster. There are very less chance of disaster by floods, droughts, Tsunamis and cyclones in this areas because of its' geographical location but certain disasters like Earthquakes, windstorms, accidents, wildfire etc. have a very high probability and chances to affect this area. The collage librarians are also feeling that the disasters which were not likely to affect the area were need not given much concern while disasters which could affect the areas are serious problem for them and proper knowledge and training should be organize by the government. But in reality, majority of the college libraries (53.33%) are not aware of various disaster management plan and procedures. There were 2 libraries, who had encountered certain type of manmade disaster (theft and robbery) while 86.67% has not encountered any type of disaster within the past 20 years in Aizawl district. Only few college libraries (33.33%) had participated in some kind of disaster/ mass casualty drills and majority of them have not participated on any kind of such drills. Regarding the awareness regarding the library building standard, 80% college librarians do know that libraries should be constructed as per the National Building Code and out of 15 selected libraries, only one library building (i.e. PUC) was constructed as per NBC standard.

Thus it is necessary to do the assessment library buildings quality as per the NBC standards. All the Librarians/in charge librarians accepted the fact that training about disaster management should be imparted in the library as well as the community level and majority of the respondents (79.99%) preferred a separate timing for different stake-holders but no one in favour to organize such training in evening time. There were 40% librarians who preferred to have a training or general awareness of disaster management in library as part of curriculum while 33.34% librarians have the opinion that if we do such training in more than one methods, it will more effective and useful. All the collage librarians except one are not satisfied with present system of imparting general awareness in Mizoram about disaster management in libraries of having project work only and feel that additional input must be added because no one single method will really able the import the disaster management training at workplace (library) fully and its better altogether implement together which really more effective.

Both electronic and print media can play a very important role in spreading awareness about disaster management at community level. Majority of respondents (63%) found to be the best method of spreading general awareness at the community level is electronic media in present ICT era and 21% respondents having the opinion that print media can lay more important role in such awareness while 11% respondents feel that street shows may be the best method. Back in 1993 Lyall also suggested that irrespective of the rarity of inevitable disasters, training sessions, including mock disaster practices, should be held on a consistent basis to safeguard that all staff are acquainted and familiar with the disaster plan, as rehearsing a disaster scenario provides a practical method of testing the plan.

Manmade disasters also cause a lot of damage to libraries. The results from the survey have shown that theft and burglary were the types of disaster have been experienced by some librarians. The other types of damages on various resources by certain disasters like fire, computer crashes, storms, landslides and earthquakes, etc are the possible outcome which libraries could encounter at any certain period of time. However, theft and burglary, storms, earthquakes, landslides and accidents are the types of disaster with the highest probability of actual occurrence in the libraries. This would suggest that at the very least the college libraries need to put in place adequate security procedures to discourse the problems of such disasters within the library.

The libraries should also be made aware more to adopt an Integrated Pest Management (IPM) approach to prevent further losses due to certain damages caused by pest and insecticides. Finally, to protect against loss of information as a result of computer system crashes, adequate backup and computer security measures should be made.

The most common risk mitigating measures available were fire extinguishers, air conditioners and the provision of security personnel. This indicates that libraries had little or an insignificant level of disaster preparedness and they had little by way of devices such as smoke detectors, fire alarms, moisture alarms, dehumidifiers and surge protectors that can detect and prevent many types of disaster and consequent losses. Akussah and Fosu proposed that, “Academic libraries should embrace these kinds of disaster prevention alarms to mitigate the effects of any potential disaster and Iske and Lengfellner found that moisture alarms were useful to alert staff about leaks before they could cause damage to materials, including mould.”

The study also revealed that other than the link with their university security personnel, college libraries in Aizawl did not have formal collaborations or any plans and guidelines towards disaster management and are lacking in various fields of funding mechanism and preparedness. Lack of associating with various disaster management strategies and planning, agencies especially the police and state fire service, could pose critical problems for college libraries in near future.

Thus, it is the duty and responsibility of all the college libraries for safeguarding significant and valuable resources, whether a physical documents or digital, be kept safely and less harm while encountering various disasters like natural or man-made disasters. The libraries must develop a strategic planning for disaster management for ensuring the safety of valuable resources and lives of the staff- personnel as well. Finally, it can also be found and believe that this study should be extended across the entire energy sector, i.e. libraries across the entire nation and global perspective, to see whether the results of this case study can be validated and therefore, such results could then form the basis of the college library and future energy sector strategies for the development of resilience in the face of both man-made and natural disasters.

5.3 SUGGESTIONS

On the basis of data analysis and findings, following suggestion were recommended for future improvement:

1. The library building should be built by contract as per NBC norms and also it should be build maximum up to two floors only because the whole state is under zone-5
2. All the existing college library building should be re-examined and if possible, re-constructed as per the NBC norms.
3. All the college library staffs should be made and well aware of various disaster management plan and strategy through proper awareness and training.
4. Some disaster management courses should be introduced in schools and college level to make aware and trained to all the people to face future challenges if any.
5. Mock exercises should be conducted regularly with definite time interval.
6. Every Library must have or ensure to partake a proper disaster management plan where every worker knows his/her task before, during and after a disaster.
7. For community awareness, different media platform (i.e. social media, electronic media, print media etc.) may be used and these various sources must be introduced at a greater speed so as to comprehend the level of knowledge for all the college library staffs as well as the users of the library.

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APPENDIX

B. Information about the Library

1. Does the library have separate building? Yes () No ()
2. Sitting capacity of Library:
3. Working hours of Library:
4. Name of the Librarian/In-charge: Dr/Mr/Mrs.
5. Librarian's Qualification: Academic:
Professional/ Technical Qualifications:
6. No. of Staffs in the Library:

SN	Category of Staff	Total No.
a)	Professional	
b)	Semi-Professional	
c)	Professional with Management Experts	
d)	Non-Professional	

7. Library Building located in
 - a) Congested Area ()
 - b) Open and Planned Area ()
8. Library building made of
 - a) Concrete structure ()
 - b) Brick lined walls ()
9. Library building is:
 - a) Multi-storey building ()
 - b) Two-storey building ()
 - c) Single-storey building ()

C. Library and Disaster Management

1. What is the likelihood of the following disasters to affect the area?

Disaster Types	Definitely	Probably	Possibly	Probably Not	Definitely Not
Floods					
Droughts					
Tsunami					
Cyclones					
Wildfire					
Radioactive incident					
Terrorism / War					
Earthquake					

2. How concerned are you with disaster management knowledge you have about the following disasters?

Disaster Types	Not very much concerned	Not concerned	Neutral	Somewhat concerned	Very much concerned
Floods					
Droughts					
Tsunami					
Cyclones					
Wildfire					
Radioactive incident					
Terrorism / War					
Earthquake					

3. Is the library aware of various disaster management plans and procedures?

Yes () No ()

4. Does the library have encountered any type of disaster in the past 20 years?

Yes () No ()

(If Yes, please state what type of disasters had the library encountered)

.....

5. Over the past two years, have you been participating in any educational activity dealing with disaster/ mass casualty preparedness or management?

Yes () No ()

6. Have you ever been actively involved in mass casualty drills?
Yes () No ()

7. Formal Qualifications/training in Disaster Management (Level)

- a) Up-to School ()
- b) Graduate/ PG Level ()
- c) Short term Course ()
- d) Attended Lecture ()
- e) Seen Demonstration ()

8. From where did you learn about disaster management?

- a) At school level ()
- b) From friends/ relatives ()
- c) From experts ()
- d) From Internet/ Media (print/electronic) ()

9. Tick the disasters which can happen in your area.

- a) Earthquake ()
- b) Floods ()
- c) Tsunami ()
- d) Cyclone ()
- e) Land-slides ()
- f) Cloud-burst ()
- g) Forest Fires ()
- h) Accident ()
- i) Riots ()
- j) Terrorist attack / War ()
- k) Stampede ()
- l) Hijack ()
- m) And Others (specify)

.....

10. Your library is located in which Seismic Zone?

- a) Zone 2 ()
- b) Zone 3 ()
- c) Zone 4 ()
- d) Zone 5 ()

11. Does your library have any disaster management plan?

Yes () No ()

12. If No, do you think that there is a need to have a library disaster management plan?

Yes () No ()

13. Do you know that the library has to be constructed as per the National Building Code?

Yes () No ()

14. Has the library been constructed as per the National Building Code?

Yes () No ()

15. If No, do you contemplate taking any measures to strengthen it?

Yes () No ()

16. To whom you want to contact for this initiative?

- a) Architect ()
- b) Electrical Engineer ()
- c) Mechanical Engineer ()
- d) Structural Engineer ()
- e) Mason ()
- f) Building Contractor ()

17. What other measures would you take to prepare for an earthquake disaster:

- a) Anchor movable items ()
- b) Prepare library disaster management kits ()
- c) Have a common contact outside Mizoram ()
- d) Brief the library staff and members what to do during earthquake tremors and after main shocks ()
- e) Switch off electricity ()
- f) All of above ()

18. To whom you will contact when you see a man-made disaster?

- a) Police (Dial 100)
- b) Fire & Emergency Services (Dial 101)
- c) District DM Control Room (Dial 1077)
- d) Ambulance Services (Dial 102)
- e) All of above

19. Have you ever taken part in any mock exercise conducted by Resident Welfare Association (RWA)?

Yes () No ()

20. Have you taken part in any mock exercise conducted by the district authorities?

Yes () No ()

If yes, what role did you play in the mock exercise?

- a) Active worker ()
- b) Observer ()
- c) Spectator ()

21. Give out (in brief) lessons learnt from the mock exercises:

22. Do you know that community is the first responder in any disaster?
 Yes () No ()
23. Do you think there is a need to impart formal training in Disaster Management to the Community, to make them more aware as what to do before/ during/ after a disaster?
 Yes () No ()
24. The formal training on disaster management should consist of what contents?
 a) Basics ()
 b) Only response related ()
 c) Comprehensive course ()
25. Who should impart this training? (Tick appropriate stake-holder/s)
 a) District authorities ()
 b) Fire & Emergency Services ()
 c) Police ()
 d) NGOs ()
 e) Experts within the community ()
26. Who should finance training related to disaster management? (Tick one)
 a) Contribution from community ()
 b) District authorities ()
 c) Sponsored from corporate sector ()
 d) NGOs/ Volunteer organization ()
 e) All of them ()
27. Knowing that the library user consists of people in service/ business/ student/ house-wives, etc. What is the best time to impart such training?
 a) On weekends ()
 b) During Holidays ()
 c) In evening hours ()
 d) In morning hours ()
 e) Separate timing for different stake-holders ()
28. How should the training/ general awareness be imparted in libraries?
 a) As part of curriculum ()
 b) As one time activity ()
 c) Academic and practical training through experts ()
 d) All of above ()

29. Do you think that present system of imparting general awareness in Mizoram about disaster management in libraries of having only project work is good enough?

Yes () No ()

If No, what additional inputs be added in the disaster management strategy?

- a) Academic inputs of disasters perceived in Mizoram ()
- b) Academic inputs of all types of disasters in India ()
- c) Organisation of mock exercises every year should be compulsory ()
- d) Organisation of seminars where experts should interact with students/users ()
- e) All of above ()

30. How should the training on disaster management be imparted at work place (Libraries)?

- a) Hold seminars/lectures by experts, periodically ()
- b) Every work place should have DM plan, where every worker knows his/her task during/ after a disaster ()
- c) Conduct mock exercises every year, on various types of perceived disasters under the aegis of experts ()
- d) All of above ()

31. What are the best methods of spreading mass general awareness at community level:

- a) Advertisement in electronic media ()
- b) Advertisement in print media ()
- c) Street shows ()
- d) Telecast of documentary ()
- e) Any other (specify)

.....

32. What role do you envisage for Libraries before/ during/ after a disaster?
Elaborate briefly:

.....
.....

33. What role do you envisage for the Urban Local Bodies (like Municipal Corporation) for strengthening Community based Disaster Management?
Elaborate briefly:

.....
.....

Thank you

(Signature)

PARTICULARS OF THE CANDIDATE

NAME OF CANDIDATE	:STEPHEN LALFAKZUALA
DEGREE	:MASTER OF PHILOSOPHY
DEPARTMENT	:LIBRARY INFORMATION SCIENCE
TITLE OF DISSERTATION	: STRATEGIC PLANNING AND PREPAREDNESS TOWARDS DISASTER MANAGEMENT IN COLLEGE LIBRARIES OF AIZAWL: AN ANALYTICAL STUDY
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DATE OF SUBMISSION	:
EXTENSION	:

Abstract
on
STRATEGIC PLANNING AND PREPAREDNESS TOWARDS
DISASTER MANAGEMENT IN COLLEGE LIBRARIES OF
AIZAWL: AN ANALYTICAL STUDY

*A dissertation submitted in partial fulfilment of the requirement for the
Degree of Master of Philosophy in Library and Information Science*

Submitted by
STEPHEN LAFAKZUALA
M. Phil registration No. MZU/M.Phil./523 of 07.05.2019

Supervisor
Dr. Manoj Kumar Verma
Associate Professor

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
MIZORAM UNIVERSITY, TANHRIL : AIZAWL

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1.1 INTRODUCTION

It is generally understood and clear to almost all that a Disaster Management refers to how we can protect or preserve maximum number of lives and property during a natural disaster. Disaster management plans are multi-layered and are aimed to direct such issues as floods, hurricanes, fires, mass failures of utilities and even bombings or the rapid spread of disease. “By failing to prepare, we are preparing to fail”- Benjamin Franklin.

Prevention is always better than cure which proves to be true in terms of disasters. While many disasters cannot be prevented, being prepared for certain disasters helps to moderate both the risk and the damage and also builds up resilience to face it. Prevention involves risk assessment, taking qualifying measures and disaster planning which may include response or rescue and recovery operations. The focus of disaster prevention is generally a disaster plan in which policies, procedures and practices to manage with a disaster are brought out. The need for disaster planning is sometimes questioned. “Proponents of this view take the attitude that disaster will occur whether we like it or not”. Therefore, it is better to let nature take its course, and use all available means of assistance to build a better tomorrow. The vast majority of international experience directs to a fact that where disaster plans did not exist, or where planning was inadequate, then the effects of disaster on countries gets worse and sometime leads to a catastrophic event.

1.2 DISASTER MANAGEMENT AND STRATEGIC PLANNING

In the years since the mid 1990's, while proponents of disaster management have continued to encourage its acceptance and implementation as an integral part of library and archival management, they also have had to incorporate within this the implications and impact of new developments within libraries and archives and the society in which they operate. As there may be various disasters and chaotic events that can or might occur, a disaster plan is necessary for the society, organisations and especially libraries and archives which acts as a prominent storehouse and centre of information, data and the cultural heritages. A variety of terminology is used to refer to disaster plans namely Disaster Control Plan, Disaster Response Plan, Disaster Management Plan, Emergency Operations Plan, Disaster Preparedness Plan, Library Disaster Plan, Collection Disaster Plan, Disaster Recovery Plan or simply Disaster Plan.

These plans are fairly similar in contents although there are differences in the details given. Even in the case of library disaster, it is better that staff accepts and understands the advantages of emergency preparedness rather than learn through hard experiences. Disasters not only damage the library collections, the library building, and harm the library staff and the readers but also disrupt the services. If libraries are prepared, it will help the library to minimize the impact of a disaster and restore collections and resume services at the earliest.

1.3 SIGNIFICANCE OF THE STUDY

The main aim of the study is to provide information that will or might assist in the design, development and formulation of disaster management and planning policies in the changing global situation, and in particular to highlight those factors that should be emphasized in order to further encourage academic staffs to be aware of various disasters that might occur and have a better disaster management, planning and preparedness for the organisations and mostly, the libraries. It is anticipated that this investigation will provide new perspectives on this issue. Such information is vital to this study for improving the libraries and heritages. To most effectively achieve this aim, the various obstacles to increasing the output for library staffs as well as the users need to be identified in their own terms.

This study has been designed to address these issues, and will solicit information directly from library staffs, members and professionals regarding their perceptions of reasons for non-participation or unawareness of disaster management and planning in libraries, and to invite suggestions about the ways to overcome and provide a better. The results of this study will provide benefits to the studied colleges and university. Further, present study will be helpful and will be able to help and show the current trend of disaster management as well as display the various forms of strategic planning and preparedness. The disaster management and planning will help the library staffs, educational institutions and every users to assess themselves for further improvement and aware of various disasters and protect at the very best when it eventually strikes.

1.4 SCOPE OF THE STUDY

The present study is confined to the college libraries in Aizawl. The study will cover colleges situated within the boundary of Aizawl only. There are 15 colleges situated within the boundary of Aizawl. However, the other different colleges which pertain to be a medical colleges and other special colleges are not included in the study.

The list of 15 colleges covered under the study is as follows:

Table- 1.1: Colleges covered under the study

SN	Name of College
1.	Pachhunga University College, College Veng, Aizawl
2.	Govt. Aizawl College, Sikulpuikawn, Aizawl
3.	Govt. Hrangbana College, Chanmari, Aizawl
4.	Govt. Zirtiri Residential Science College, RamtharVeng, Aizawl
5.	Govt. Mizoram Law College, Zomi Villa, Tuikual 'C', Aizawl
6.	Govt. Saitual College, Saitual, Aizawl
7.	Govt. Aizawl North College, Ramhlun, Aizawl
8.	Govt. Aizawl West College, DawrpuiVengthar, Aizawl
9.	Govt. T. Romana College, Republic Veng, Aizawl
10.	Govt. J. Thankima College, Bawngkawn, Aizawl
11.	Govt. Johnson College, Shivaji Tillah, Khatla, Aizawl
12.	Aizawl City College, C/o J. L. High School, Khatla, Aizawl
13.	Divine Mercy College, Bawngkawn- Lunglei Road, Aizawl
14.	St. Xavier's College, Lengpui, Aizawl
15.	Helen Lowry College, Vaivakawn, Aizawl, Mizoram

(Source: <https://mzu.edu.in/index.php/about-mzu/affiliated-colleges/details-colleges>)

1.5 RESEARCH GAP

From the above literature, it has been observed that a number of research has been conducted towards disaster management and planning in libraries across the state and country. Many plans and strategies are still in the process while research and studies go intact. However, in terms of Mizoram, it has been found that no research had been conducted in the field of disaster management and planning of libraries in Aizawl.

So, the present study is an attempt to fill up the gap. Therefore, the study is an attempt to investigate the strategic planning and preparedness towards disaster management in college libraries of Aizawl.

1.11. RESEARCH DESIGN

1.11.1 Statement of the Problem

The disaster destroys almost everything in the place, wherever occur. It is very much difficult to assess the actual impact (negative) of disaster. It creates variety of problems and gives challenge to rebuild the disaster site after disaster. Strategic planning and preparedness towards disaster management is a type of steps to cope up with the disaster, when it arrives. A proper planning against disaster reduces the negative impact of disaster on the place. Libraries and Information Centres are the place where we store and preserve knowledge and information which are the main driving source to civilize the society at large. The loss of such knowledge and information centres during disaster may cause the loss of human knowledge what we had generated and stored for the future generations. In another way, disaster whether it is artificial or natural, may destroy the library resources which cannot be recoverable in certain conditions. The effect of disaster varies as per geographical location, and Mizoram is located at a very serious disaster prone location in Indian sub-continent where more chances for earthquakes, landslides, heavy rain, biological agents, etc. So, it is the duty of library staff as well as concerned administration to make a safer strategic plan to prevent from the variety of disasters. Mizoram is considered as the disaster prone area, so it is the need of the hour to study the strategic planning and preparedness towards disaster management by the college libraries of Aizawl as well to know the awareness level of library staff towards disaster management. There are no such studies found which deals with the strategic planning and preparedness towards disaster management in college libraries of Aizawl. This research gap prompted to take up this challenge and it is thus an interesting measure to analyse the strategic planning and preparedness towards disaster management in college libraries of Aizawl.

1.11.2 Objectives of the study

The objectives for the present study are:

- a) To know the level of awareness of library staff towards disaster and it's management.
- b) To find out the strategies or action plans for disaster management in libraries.
- c) To know the constraints towards making strategies related to disaster management.
- d) To suggest the most prevalent strategies to overcome disaster.

1.11.3 Research Methodology

The present study was designed to investigate how strategic planning and preparedness towards disaster management are carried out in the college libraries of Aizawl. The study covers 15 college libraries within Aizawl. The survey method (through questionnaire) of research was found appropriate to undertake the present study. The structured questionnaire containing a total of 46 questions designed for every college libraries in Aizawl was distributed to the Librarian/ In-charge of the librarians covered under study. The data obtained through filled-in questionnaire was tabulated and analyzed using suitable statistical tool.

5.2 FINDINGS

Based on the data analysis and inferences of the study, following findings are alienated for this study:-

1. Majority of the college libraries (60%) in Aizawl are in congested area, while (40%) the college libraries are in an open and planned area. All the college libraries are made and build of concrete structure and there are only three colleges with a two-storey building (20%) while the remaining 80% college libraries are having single-storey only. There were no library building made of brick-lined walls and multi-storey building of the college libraries in Aizawl.
2. The majority of the college libraries are located in areas where the chances of certain disasters to affect the area are given a response of Probably Not and Definitely Not which concludes to a statement that disasters like floods (0.01%), droughts (0.01%), Tsunamis (0.01%) and cyclones (0.01%) are on a low probability to affect the area as well as the library while there are certain disasters like Earthquakes, windstorms, accidents, wildfire, etc on a high probability and chances (60% - 90% chance) to affect the area.
3. The measure of concern of certain disasters by the respondents also shows that the disasters which were not likely to affect the area and low chances of certain disasters were not given much concern while disasters which could affect the areas are given knowledge of concern by the respondents.
4. Majority of the college libraries (53.33%) are not aware of various disaster management plans and procedures while there were other remaining college

libraries (46.67%) which were aware of various disaster management plans and procedures. Further, there were 2 libraries (13.33%) who had encountered certain type of manmade disaster (theft and robbery) while 86.67% has not encountered any type of disaster within the past 20 years.

5. There were 33.33% of the respondents who had participated in some kind of disaster/ mass casualty drills while 66.67% had not participated on any kind of drills. There were only 20% of the respondents who had actively participated in disaster/ mass drills while 80% of the respondents does not participate or involved in disaster mass casualty drills.
6. The 13.33% respondents who had a formal qualification and training up to the school level about disaster management while 20% respondents had some qualification and training as short- term courses, 26.67% of the respondents have attended some lectures and 33% respondents had seen the demonstration of disaster management mass/ casualty drills. There are 2 (13.33%) of college librarian who does not have a particular form of qualification or training on disaster management.
7. Respondents gain the knowledge about disaster management from different channel. The majority of respondents (40%) had gain their knowledge from experts while 20% of the respondents who came to have learn about DM at the school level. Surprisingly, there are no respondents who have learned it from friends or relatives while 27% came to learn from the Internet/ Media. There is one respondent who did not learn about disaster management.
8. All the college libraries in Aizawl are in seismic zone 5. This is due to the reason that Mizoram is in a red-zone area and also a disaster-prone area.
9. There were 33.33% of the Libraries which have a disaster management plan in the library while 66.67% do not have any disaster management plan. There are 60% of the libraries which feels that disaster management plan is need while 40% do not find it necessary to have a plan.
10. The majority of college libraries in Aizawl which comprises 80% do know that libraries should be constructed as per the National Building Code while 20% do know that libraries should be constructed as per NBC. However there was only one college library (PUC) constructed as per NBC standard. The majority of college libraries in Aizawl detest to a fact in contemplating on taking measures to strengthen the library was given a positive response (86.67%)

while there were 3 respondents (13.33%) who does not fell the need to strengthen and take such measures.

11. If some manmade disasters happen in future, then 20% respondents would prefer to contact police force, 6.67% respondents to fire and emergency services and 13.33% would contact district disaster management control room while there were 60% respondents preferring to contact all of the above mentioned agencies. There were no responses for the contact of ambulance services during manmade disasters.
12. All the respondents accepted the fact that training about disaster management should be imparted in the library as well as the community level. However, the preferred contents for the training by the respondents were discerned from person-to-person. About 80% of the respondents preferred the basic contents for training while 13.33% respondents feel that contents should be only response related while 20% of the respondents preferred formal training in disaster management on comprehensive course.
13. Majority of the respondents are supportive of imparting training in libraries but regarding the timing of training respondents have different opinions. Majority of the respondents (79.99%) preferred a separate timing for different stake-holders while 6.67% respondents feel that such training should be on holidays, weekends and morning hours each. No one are in favour to organize such training in evening time.
14. There were 40% respondents who preferred to have a training or general awareness of disaster management in library as part of curriculum while 13.33% of the respondents preferred to be as a one time activity and 13.33% respondents as academic and practical training through experts. Overall 33.34% respondents preferred such training as mixture of all the above mentioned modes.
15. The 93.33% respondents were not satisfied with present system of imparting general awareness in Mizoram about disaster management in libraries of having project work only and feel that additional input must be added while one respondents (from Divine Mercy College Library) presume that the general awareness in Mizoram about Disaster Management in libraries of having only project work is good enough.

16. Regarding the additional inputs added in disaster management strategy, 20% respondents preferred that academic inputs of disasters perceived in Mizoram may be added in training while 6.67% respondents feel that academic inputs of all types of disasters happened in India may added as input. The 13.33% respondents who preferred to organization of mock exercises every year as compulsory and 26.67% respondents were having the opinion that seminars/lectures may be more effective where experts should interact with students/ users as additional inputs.
17. About 44% respondents feel that not a single method will really be able to import the disaster management training at workplace (library) fully and its better altogether implement together which will be more effective while 30% respondents feel that conducting mock exercises every year was good method and 13% respondent have opinion that every institutions have a DM plan where every workers know his/her task during /after disaster and same population (i.e.13%) having feeling that continuous periodical seminars/ lectures by experts will help to import the training at workplace.
18. Both electronic and print media can play a very important role in spreading awareness about disaster management at community level. Majority of respondents (63%) found that the best method of spreading general awareness at the community level will be electronic media in present ICT era and 21% respondents having the opinion that print media can lay more important role in such awareness while 11% respondents feel that street shows may be the best method.

5.2 CONCLUSION

There are various standpoints as to how and why a library should maintain a well-structured and strategic planning of disaster management not only for the organisation or institution but for the entire educational sector and the nation. Many libraries have experienced a certain types of disasters and these had brought the attention of the many users and the community that the library's resources in facing or witnessing a disaster might affect and weigh to the possibility of losing a huge amount of resources. The various incidents that took place inside or within the environment of libraries can show a great term of either well-prepared and planned organisation or a sense of negligence

on both the terms. Certain disasters like earthquakes, landslides and accident cannot be avoided but maintain a well-prepared and planned environment and structure to avoid the least the number of losses in terms of documents and vital information. However, there are certain disasters which man-made disasters developed or erupt such as theft and robbery, fires, mould and mildew disasters inside the libraries. These certain types of disasters are mainly due to either negligence or lack of pre-planned and strategic preparedness within the organisation. The library should therefore, ensure and developed a well-planned and strategic planning for the organisation to develop and minimize the possibility of such disaster at all cost. The key of important resources and documents are stored in various places of the library and therefore, maintaining a vast significant resources in almost all the places. The lack of having a well strategic planning about disaster management could lead to a loss of great amount of vital resources or information, at any given period of time. The library building and the environment as well, must be kept in alert at times due to the fact that a disaster could Disaster preparedness is a significant element of the disaster series that can shape pliability into the vigour sector. There are however various improvements that need to be made in the college libraries to improve the energy sector's performance.

All the college libraries in Aizawl are made and build of concrete structure and there are only and majority of them (80%) are in single story building but location wise area are in congested position. As we well aware that whole Mizoram is in seismic zone 5 and belong to red-zone area which is a disaster-prone area. It means that all the collage libraries of Aizawl are also on high risk of some specific type of disaster. There are very less chance of disaster by floods, droughts, Tsunamis and cyclones in this areas because of its' geographical location but certain disasters like Earthquakes, windstorms, accidents, wildfire etc. have a very high probability and chances to affect this area. The collage librarians are also feeling that the disasters which were not likely to affect the area were need not given much concern while disasters which could affect the areas are serious problem for them and proper knowledge and training should be organize by the government. But in reality, majority of the college libraries (53.33%) are not aware of various disaster management plan and procedures. There were 2 libraries, who had encountered certain type of manmade disaster (theft and robbery) while 86.67% has not encountered any type of disaster within the past 20 years in Aizawl district.

Only few collage libraries (33.33%) had participated in some kind of disaster/ mass casualty drills and majority of them have not participated on any kind of such drills. Regarding the awareness regarding the library building standard, 80% college librarians do know that libraries should be constructed as per the National Building Code and out of 15 selected libraries, only one library building (i.e. PUC) was constructed as per NBC standard. Thus it is necessary to do the assessment library buildings quality as per the NBC standards. All the Librarians/in charge librarians accepted the fact that training about disaster management should be imparted in the library as well as the community level and majority of the respondents (79.99%) preferred a separate timing for different stake-holders but no one in favour to organize such training in evening time. There were 40% librarians who preferred to have a training or general awareness of disaster management in library as part of curriculum while 33.34% librarians have the opinion that if we do such training in more than one methods, it will more effective and useful. All the collage librarians except one are not satisfied with present system of imparting general awareness in Mizoram about disaster management in libraries of having project work only and feel that additional input must be added because no one single method will really able the import the disaster management training at workplace (library) fully and its better altogether implement together which really more effective.

Both electronic and print media can play a very important role in spreading awareness about disaster management at community level. Majority of respondents (63%) found to be the best method of spreading general awareness at the community level is electronic media in present ICT era and 21% respondents having the opinion that print media can lay more important role in such awareness while 11% respondents feel that street shows may be the best method. Back in 1993 Lyall also suggested that irrespective of the rarity of inevitable disasters, training sessions, including mock disaster practices, should be held on a consistent basis to safeguard that all staff are acquainted and familiar with the disaster plan, as rehearsing a disaster scenario provides a practical method of testing the plan. The manmade disasters also cause a lot of damage to libraries. The results from the survey have shown that theft and burglary were the types of disaster have been experienced by the some librarians.

The other types of damages on various resources by certain disasters like fire, computer crashes, storms, landslides and earthquakes, etc are the possible outcome which libraries could encounter at any certain period of time. However, theft and burglary, storms, earthquakes, landslides and accidents are the types of disaster with the highest probability of actual occurrence in the libraries. This would suggest that at the very least the university libraries need to put in place adequate security procedures to discourage the problems of theft, burglary and defacement within the library. The libraries should also be made aware more to adopt an Integrated Pest Management (IPM) approach to prevent further losses due to certain damages caused by pest and insecticides. Finally, to protect against loss of information as a result of computer system crashes, adequate backup and computer security measures should be made.

The most common risk mitigating measures available were fire extinguishers, air conditioners and the provision of security personnel. This indicates that libraries had little or an insignificant level of disaster preparedness and they had little by way of devices such as smoke detectors, fire alarms, moisture alarms, dehumidifiers and surge protectors that can detect and prevent many types of disaster and consequent losses. Akussah and Fosu proposed that, “Academic libraries should embrace these kinds of disaster prevention alarms to mitigate the effects of any potential disaster and Iske and Lengfellner found that moisture alarms were useful to alert staff about leaks before they could cause damage to materials, including mould.”

The study also revealed that other than the link with their university security personnel, college libraries in Aizawl did not have formal collaborations or any plans and guidelines towards disaster management and are lacking in various fields of funding mechanism and preparedness. Lack of associating with various disaster management strategies and planning, agencies especially the police and state fire service, could pose critical problems for college libraries in near future.

Thus, it is the duty and responsibility of all the college libraries for safeguarding significant and valuable resources, whether a physical documents or digital, be kept safely and less harm while encountering various disasters like natural or man-made disasters. The libraries must develop a strategic planning for disaster management for ensuring the safety of valuable resources and lives of the staff- personnel as well.

Finally, it can also be found and believe that this study should be extended across the entire energy sector, i.e. libraries across the entire nation and global perspective, to see whether the results of this case study can be validated and therefore, such results could then form the basis of the college library and future energy sector strategies for the development of resilience in the face of both man-made and natural disasters.

5.3 SUGGESTIONS

On the basis of data analysis and findings, following suggestion were recommended for future improvement:

1. The library building should be built by contract as per NBC norms and as it should be build maximum up to two floors only because the whole state is under zone-5
2. All the existing college library building should be re-examined and if possible, re-constructed as per the NBC norms.
3. All the college library staffs should be well aware by various disaster management plan and strategy through proper awareness and training.
4. Some disaster management courses should be introduced in school and college level to make aware and trained to all the people to face future challenges if any.
5. Mock exercises should be conducted regularly with definite time interval.
6. Every Library must have or ensure to partake a proper disaster management plan where every worker knows his/her task during /after disaster.
7. For community awareness, different media platform (i.e. social media, electronic media, print media etc.) may be used and these various sources must be introduced at a greater speed so as to comprehend the level of knowledge for all the college library staffs as well as the users of the library.

1.12. TENTATIVE CHAPTERIZATION

The First chapter is introduction and various backgrounds of disasters and disaster management, strategies and various literature regarding disaster management . The chapter also contains significance and scope of the study, review of literature, Statement of the problem, Objective of the study and Research methodology, etc.

The Second chapter deals with the conceptual framework and management of disasters across the globe and within the country and various strategies used by libraries in dealing with disasters across the country. It also studies about the need and use of disaster management and various disaster related literature are highlighted in the chapter.

The Third chapter is information about the colleges and college libraries of the 15 colleges within the premises of Aizawl district and a brief details about the colleges and the libraries. It contains an overview image of various 15 colleges in Aizawl.

The Fourth chapter is data analysis and interpretation of the study. The analysis was done on the basis of the criteria like the location and structure of library building, likelihood and knowledge of various disasters which could affect the area, awareness of disaster management in libraries, measures and level of concern about various natural and man-made disasters, imparting training and awareness in libraries and community level and additional inputs and methods of spreading awareness suggested for disaster management strategy, etc.

The fifth chapter contains findings, conclusions and suggestions from the observation of the study and recommendation from teachers, librarians and professionals under the study.