A Minor Research Project on

A Study of Disaster Management Plans Prepared by College Libraries in Ratnagiri District

(Affiliated to University of Mumbai, Mumbai)

By

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INDEX

DECLARATION

We hereby declare that the work done under the project entitled "**A study of Disaster Management Plans prepared by College Libraries in Ratnagiri District (Affiliated to University of Mumbai, Mumbai.)",** is the original work carried out by **Mr. Sudhir Pandurang More**, in the D.B.J. College, Chiplun, Dist. Ratnagiri. Till the date, no part of this work has been published in any journal or book.

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Date: **Mr. Sudhir P. More**

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List of Tables & Graphs

Chapter 1. Introduction

1.1: Introduction:

Nature is the God's best gift to the human. Many sources are generated from nature; even total life science is depended upon nature. Nature provides us food, shelter and various useful resources. Nature performs major miracles for us every day – from giving us great views and helping to prevent floods to regulating the weather and keeping us supplied with clean water, fresh air and plentiful food. This kind of human-nature relationship is existed since the origin of human life. Human snatches various things from nature, whereas, nature never asks human anything in exchange of it. Human life is often suffered by nature. Due the extensive intervention of human in nature's settlement, there are possibilities of eruption of nature's hazards.

1.2: Natural hazards:

Nature's behavior is unpredictable. When unpredictable natural events become extreme in their occurrence, they may constitute a danger to humans and to the other members of an environment. When such unpredictable things happen, which are harmful to the human life, it calls as Natural hazards. Another way of conceptualizing natural hazard is as the coexistence of people in a natural environment that may disrupt or threaten their safety, property, or livelihood at an unpredictable time. There are many such natural events that, when experienced in an extreme degree, may become a risk to the inhabitants of an environment. These include avalanche, coastal erosion, drought, earthquake, flood, fog, frost, hail, landslide, lightning, snow, tornado, tropical cyclone, volcano, and wind. Some forms of environmental degradation may also contribute to the creation of hazards or be an extension of them, such as deforestation and desertification. Due to human intervention in the natural

processes, the destructive power and frequency of natural disasters have increased considerably.

1.3: Disaster:

According to Wikipedia, "A disaster is a serious disruption, occurring over a relatively short time, of the functioning of a community or a society involving widespread human, material, economic or environmental loss and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster, as defined by the United Nations, is a serious disruption of the functioning of a community or society, which involve widespread human, material, economic or environmental impacts that exceed the ability of the affected community or society to cope using its own resources. Disaster management is how we deal with the human, material, economic or environmental impacts of said disaster, it is the process of how we "prepare for, respond to and learn from the effects of major failures". Though often caused by nature, disasters can have human origins.

According to the International Federation of Red Cross & Red Crescent Societies a disaster occurs when a hazard impacts on vulnerable people. The combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster.

1.4: Types of Disaster:

Generally, disasters are caused by both, man as well as nature. These are called as 'Man made disasters' and 'Natural disasters'. Below is a list of the various types of disasters – both natural and man-made or technological in nature – that can impact a community.

1.4.1: Natural Disasters:

According to Webster Dictionary, "Natural Disaster is a sudden and terrible event in nature (such as a hurricane, tornado, or flood) that usually results in serious damage and many deaths."

A Disaster is defined as "a sudden calamity even bringing great damage, loss, or destruction." Natural hazards such as earthquakes, hurricanes, floods, and droughts are much closed to the term 'Disaster', but a disaster should be defined on the basis of its human consequences, not on the phenomenon that caused it. An earthquake, for example, is simply an event in nature. Even a very strong one is not a disaster unless it causes injury or destroys property. Thus an earthquake occurring in an uninhabited area is only of scientific interest and is not considered a disaster. When a natural event does affect a human settlement, the result may still not be a major disaster. For example, tsunami was caused by an earthquake that occurred in the sea near Sumatra (Indonesia) on 26 December, 2004. It turned into a disaster for India, Srilanka and some other countries of Southeast Asia. It caused wide spread loss to human life and property in Andaman and Nicobar Islands and on the coasts of Andhra Pradesh and Tamil Nadu.

According to U.N. statistics, natural disasters kill 1,00,000 persons on an average and cause property damage of Rs. 20,000 crores world wide per year. Among the top ten natural disaster-prone countries, India stands second after China. Therefore, there is a need for creating awareness amo-ng all sections of the people about its causes, consequences as well as preventive measures so that they can handle as an individual, and as a member of society.

1.4.1: Natural Types of Disasters:

- Agricultural diseases & pests
- Damaging Winds
- Drought and water shortage
- Earthquakes
- Emergency diseases
- Extreme heat
- Floods and flash floods
- Hail
- Hurricanes and tropical storms
- Landslides & debris flow
- Thunderstorms and lighting
- Tornadoes
- Tsunamis
- Wildfire
- Winter and ice storms
- Sinkholes

1.4.2: Man-Made and Technological types of Disasters:

A disaster can be more precisely defined as an occurrence of widespread severe damage, injury, or loss of life or property with which a community cannot cope and during which the society undergoes severe disruption.

Disasters also can be caused by humans. Hazardous materials emergencies include chemical spills and groundwater contamination. Workplace fires are more

common and can cause significant property damage and loss of life. Communities are also vulnerable to threats posed by extremist groups who use violence against both people and property.

Following are some important Man-made disasters.

- Hazardous materials
- Power service disruption & blackout
- Nuclear power plant and nuclear blast
- Radiological emergencies
- Chemical threat and biological weapons
- Cyber attacks
- Explosion
- Civil unrest

1.4.3: Consequences of Disasters:

Some disasters can result from multiple hazards, or, more often, to a complex combination of both Natural and Man-made causes which involve a break-down of authority, looting and attacks on strategic installations, including conflict situations and war. These can include:

- Food Insecurity
- Epidemics
- Armed Conflicts
- Displaced Populations

1.4.4: Disaster Management:

According to International Federation of Red Cross and Red Crescent Societies, ***Disaster Management*** can be defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters.

The International Federation of Red Cross & Red Crescent Societies defines disaster management as the organization and management of resources and responsibilities for dealing with all the humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters

1.4.5: Disasters in Libraries:

Libraries, museums and archives in many geographical areas have been affected by disasters. Earthquakes, floods and heavy rains, hurricanes and tsunamis, fires and power outages, moulds and pests have created emergencies, damaged library resources and disrupted library services. In addition to these natural disasters, libraries have also been destroyed during wars, political conflicts, terror attacks, vandalism, arson and loot. The damage caused by disasters to lives and physical infrastructure is very evident; the destruction to the information infrastructure is not so obvious.

Libraries, archives and museums are important components of the information infrastructure. They play a key role in the creation, organization, storage, preservation, and dissemination of information in different formats and in making it available and accessible to society. Damage to libraries is damage to the country's information infrastructure and can slow down the development process. Disasters in libraries cause loss of much valuable information necessary in decision making at all

levels, scientific research and educational support. Further, a book/document is more than its information content. Manuscripts, books, rare materials and artifacts represent the cultural and intellectual legacy of a country which is preserved and disseminated through libraries and archives. These resources are cultural artifacts and libraries and archives are the repositories of the cultural heritage of a society. When disasters affect a region, they cause damage to cultural monuments and artifacts and also cultural and intellectual records in 'memory institutions'.

1.4.6: Damages to Libraries in India:

Libraries in India have a long history. Literature shows that library culture in India was very strong during the Vedic, the Buddhist, the Medieval, and the Muslim eras. India also has a long history of experiencing many disasters of different kinds. These disasters must have also affected libraries. However there is very little documentation on the damage caused to libraries. Ancient Indian civilization had the world's finest universities and centers of excellence.

Libraries in India existed in these universities and centers of excellence. Written literature, in manuscript form was kept in Gurukuls or Ashramas, Jain and Buddhist monasteries, and Madarsas'. Nalanda University, the University of Vallabhi, Odantapuri University, is some of the examples of universities which had huge libraries storing oriental literature. Over time, they were either destroyed or merged with other institutions. The University of Vallabhai built by the Maitraka Kings during the years 475-775 A.D., had a library with a variety of Eastern literature. This university and its library lasted until the 12th century, when they were said to be completely destroyed by Arab invaders.

The University of Nalanda Library was called Dharmaganja, and it was housed in three buildings named Ratnabodhi (ocean of pearls), Ratnasagar (sea of pearls) and

Ratnaranjak (pearls of recreation). This welknown institution did not die a natural death through deterioration. It felt victim to the invading hordes of Mohammad Bakhtiyar Khilji in the 13th century. The buildings, books and manuscripts, as well as the scholars, all were mercilessly annihilated and fire was set to the establishment of Nalanda.

The University at Somapuri, had its own library which possessed a wealth of Oriental literature. But the university was destroyed by fire in the middle of the 11th century A.D. The last of the famous seats of learning in Eastern India was Navadwipa in Bengal. It reached its height of glory from 1083 to 1106 A.D. as a centre of intellectual excellence as well as for its rich library facilities. However, this library was also destroyed along with the centre by Mohammad Bakhtiyar Khilji. Akbar, the greatest of Mughal emperors maintained a very rich library.

After the downfall of the Mughals, the literary wealth of the Indian libraries was looted. In 1857, after the Sepoy mutiny, thousands of books were destroyed and thousands of important, valuable, and rare books were siphoned to England. It is believed that the Sarasvati Mahal Library at Tanjavur was under threat from Muslim rulers. They wanted to burn down the Sarasvati Mahal Library which was treated like a temple of Tanjavur. A Maharashtrian Brahmin named Dabir Pant, who was a minister, saved the library by telling the vandals that in addition to Hindu books, the library also had copies of the Quran.

The Sikh Reference Library was established at the Golden Temple in Amritsar on 08 February, 1947 and it housed rare hand-written manuscripts and scriptures on Sikhism. The library was set ablaze on 07 June, 1984 in the early hours of the morning. The destruction of the Sikh Reference Library is a loss that can never be replaced.

In 1992 the library at Srinagar's main mosque was set ablaze. A large number of priceless manuscripts were destroyed.

Thapar University library and Panjabi University Library were affected due to unprecedented floods on the night of 11 July 1993. The library on the campus had 63,000 items out of which 44,535 were destroyed completely. The library also lost computers, photocopying machines and CD's.

At Panjabi University Library, there was hardly any loss to the collection and equipment except that a voltage stabilizer was damaged. Only those books were damaged which were borrowed by the users who lived in areas that were flood affected.

At the Lal Bahadur Shastri National Academy of Administration, established in 1959 to train officers for the Indian Administrative Service and the Indian Police Service, a fire broke out in 1984 and destroyed, among other buildings and papers, its precious library rated amongst the best in the country.

1.4.7: Natural Disaster of 15th July 2005 in Maharashtra: A UNDP Report

The flood situation in Maharashtra caused due to heavy rains over Marathwada and active over most places in Konkan-Goa, Madhya Maharashtra flooded upper stream catchment areas of river Kal and Savitri. Heavy rains have caused disruption in rail and road traffic in Konkan region affecting Ratnagiri, Raigad, and Thane and Mumbai districts. During this period, Raigad and Ratnagiri districts received more than 200 mm affecting 3505 families in Mahad, Mangaon and Chiplun taluka while Mumbai and Thane rainfall was received more than 500 mm. Mumbai metropolis continued to remain cut -off by road and air links also experiencing gusty winds with

a speed of 45 kms to 60 kms per hour as per forecasts in city and suburbs areas. Goa under the spate of heavy rains was experiencing flooding of low lying areas in Khareband, Ravanfod, Benaulim areas near Margo in South Goa district and in North Goa district low lying areas of Bicholim town centre and Mala Panaji had been affected due to heavy rains and high tide conditions in the rivers.

Damage details:

Towns affected severely by floods are Roha, Mahad , Mangaon in Raigad district, and Khed and Chilun in Ratnagiri district. Traffic on National Highway was disrupted on the Chiplun-Roha section, the Mumbai -Goa NH was submerged at many stretches disrupting traffic movement. The low-lying areas of Rajapur, Khed and Dapoli tehsils and Mahad in Mangoan Taluka and Chiplun taluka were submerged. Due to water logging of rail tracks trains have been stopped along between Pune -Mumbai .Reports of landslide in villages Juigaon in Mahad taluka, Lohar Sawant Kudhegaon of Poladpur taluka and Mundhegaon in Ratnagiri district was reported. 150 people have been trapped in a landslide in Juigaon of Mahad taluka . while 23 death have been reported from Raigad, 6 in Ratnagiri and 4 in Thane. Villages Charvali and Sonya area (Raigad district) were flooded while 40 houses in Kodoli village in Kalhapur districts were inundated.

Mumbai City experienced water logging of low lying areas, roads and streets affecting Santacruz and Colaba areas . As rains continued paralyzed road, rail and domestics air traffic leading to suspension of long distance and suburban trains between Mumbai -Pune -Raigad -Ratnagiri route. Also out bound long -distance trains were cancelled and in coming trains were diverted. The domestics air flights to and out of Mumbai city airport were canceled as the runway was water logged and flights were diverted to Goa, Nagpur, Baroda, Ahmedabad, Bangalore and Chennai

city air ports . International flights have been diverted to Chennai, Delhi and Calcutta air ports. Power supply has been disconnected due to collapse of electric poles and communication networks were hampered in suburban areas.

In Pune Rivers Karad and Pawana over flowed along the flood plains areas forcing the dam gates in Chiplun to be opened and leading to flooding of Pimpri Chichwad Township.

1.4.8: Huge damage to the great heritage of knowledge : Lokmanya Tilak Smarak Vachalayaya, Chiplun (A 125 years old Public Library)

The library was started in 1864 by Mr. Balaji Sakharam Kashikar as Native General Library. After the death of Shri Lokmanya Tilak, the library was named after him. It is one of the oldest public libraries in Chiplun having its own independent building given by the Chiplun Nagar Parishad.

Lokmanya Tilak Smarak Vachan Mandir, Chiplun (Lokmanya Vachan Mandir) though the library is 6 ft. above the road level, due to very heavy rains, water entered the library for the first time in its history. It started flooding on the night of 26 July and 5½ft. water remained in the library for more than 11 hours, submerging almost the whole collection of 58,000 books and computers. The library had a complete loss of Rs. 25 lacks (approx.), but the library lovers in the Chiplun city raised the funds over 18 lacks to cover the loss occurred in this heavy rainfall.

1.5: Disaster Management Plan:

A disaster preparedness plan is a written document that describes the procedures devised to prevent and prepare for disasters, and those purposed to respond to and recover from disasters when they occur. The disaster preparedness

plan does not need to be a lengthy, detailed document, but it does need to be a written document that has been read and is understood by the staff and the Authority. When disaster strikes, everyone will know about the plan and will be ready to follow it.

1.5.1: Need of Disaster Management Plan:

Planning is an important function in any library. And a disaster preparedness plan is just another planning document that will assist the library staff a smooth running facility.

Following are some important reasons for keeping ready a Disaster Management Plan in the library.

1. The person in charge, who may be knowledgeable about a verbal or informal plan, may not be around when disaster strikes.
2. The process of writing fosters a more intensive review of circumstances and needs, and is more conducive to receiving input from more people.
3. Having a written disaster preparedness plan will relieve much of the confusion that arises during a crisis situation. The plan prioritizes what should be salvaged and what should be dealt with immediately in an emergency.
4. A written plan can indicate which tasks can be delegated to volunteers and which will require professional input.
5. A written disaster preparedness plan is cost-effective. Comparison-shopping is done ahead of time and this allows the library to achieve the best prices for goods and services rather than attempting to make these choices under the stressful environments surrounding a crisis. A written plan may qualify your library for reduced insurance premiums.

1.6: Objectives of the Project:

The main objective of the study is to determine the various level of Disaster Management Plans prepared by College Libraries in Ratagiri Districts (Affiliated to University of Mumbai, Mumbai.)

Specifically, the study seeks to:

1. Determine the level of staff training and awareness on disaster preparedness of the libraries.
2. Examine major threats to the safety of library resources that could lead to a disaster.
3. Highlight the importance of Disaster management plan on disaster preparedness.
4. Determine measures that are necessary for the prevention of fire and flood disasters.
5. Find out the availability of insurance policy of academic libraries.
6. To suggest remedies to overcome the natural or artificial disasters.

1.7: Geographical Area of Research (Ratnagiri District) :

Ratnagiri is a coastal district of Maharashtra state, situated in the western coast of India. It has north-south length of about 180 km. and average east-west extension of about 64 km. Sahyadri hills surround it in the east beyond which there are Satara, Sangli and Kolhapur districts, Raigad district in the north, the Arabian Sea in the west and Sindhudurg district in the south. Ratnagiri district has an area of 8208 sq.km. and the population is 16,96,482 (Census, 2001).

In 1731 Ratnagiri came under the control of Satara kings; in 1818 it was

surrendered to the British. A fort was built during the Bijapur dynasty and strengthened in 1670 by the Maratha king Shivaji, which is located on a headland near the harbor. It is one of the ports of the konkan coast. It has a palace where the last king of Burma, Thiba and later Veer Savarkar were confined.

This region was under the rule of the Mauryas, the Nalas, the Silaharas, the Chalukyas, the Kadambas, the Portuguese, the Marathas and subsequently the British. In 1948 the independent princely state of Sawantwadi was merged with the Indian union and in 1956 with Bombay Province. In 1960 with the creation of Maharashtra, Ratnagiri became a district. In 1981 Ratnagiri district was bifurcated and the new district of Sindhudurg was created.

Ratnagiri is noted for the delicious golden Haapus (Alphonso) mangos. The heavy rainfall results into highly eroded landscape in the coastal region. Fertile alluvial valleys produce rice and coconut as the main crops; fruits and cashew nut cultivation is being promoted.

Ratnagiri can be physically divided into 3 zones.

Coastal Zone : This zone extends to about 10-15 km from seacoast and generally has low altitude and about 2500 mm rainfall. Most of the activities in this area are connected with sea. This area contains numerous beaches,creeks, sea forts, harbors, hot water springs, caves, temples and other religious places, places of scenic beauty as well as birthplace of some great personalities. The possible tourist activities include inland and sea water ways, sailing, boating, water sports like water scooter, canoeing, fishing, camping, marinas, coastal resorts and marine parks; but the major problem is the lack of easy accessibility and road network.

Hill area Zone : This area includes the western slopes of Sahyadri and extends up to about 10-15 km. It generally has medium to high altitude with high rainfall of about

3500 mm. A large area in this zone is covered by forest although it is deteriorating very fast. A substantial drop in temperature is experienced at places exposed to the rising western breeze. This area contains hill forts, ghat roads, forests, wild life, etc. It gives panoramic views at many places. The possible tourist activities include trekking, hiking, forest camps, holiday resorts, bird sanctuaries, wild life safari, etc.

Middle Zone : This area lies between the coastal and hill areas and generally has a medium altitude. It is more accessible due to the Bombay-Goa-Highway as well as the Konkan railway. However, it contains very few places of tourist interest, mostly religious places and hot water springs.

In 1981, old Ratnagiri distirct was divided into two districts, i.e. Ratnagiri and Sindhudurga. Ratnagiri comprises of 9 talukas, viz. Chiplun, Dapoli, Guhaghar, Khed, Lanje, Mandangad, Rajapur, Sangameshwar and Ratnagiri.

Climate: The climate is humid. The maximum temperature rises to 34-35º degree Celsius and minimum is 19º degree Celsius. Rainfall average is 330 cm. From coast to Sahyadri the proportion of rainfall increases. June to October is rainy season. During the month of July, the district receives maximum rain.

Education: Though Konkan region is economically poor, the field of education is never neglected. Ratnagiri has produced some very illustrious personalities. The first Bharat Ratna laurite Maharshi Karve is from Dapoli. A photo museum in his honour is maintained at Harne, Dapoli. Father of our constitution Dr. B. R. Ambedkar was also from Dapoli. Lokmanya Tilak was from Ratnagiri itself and his house has been converted into a museum. Ratnagiri has also produced some great educationists and reformers like Wrangler Paranjpe and Veer Savarkar.

Literacy Rate:

According to Census 2001, the literacy rate of Ratnagiri is as follows-

Male: 86.28% and Female: 65.98%. In the year 2000, state Government had 4 primary schools and Zilla Parishad had 2627 schools of primary level. Municipal Council had 20, Private (Non-Aided) 31 primary schools in the district.

1.7.1 Some distinctive features of Ratnagiri District:

1. Over 85% of the land surface in Ratnagiri district is hilly. All rivers in the district originate in the Sahyadri ranges and flow from east to west and merge in Arabian Sea. The important rivers of the district are Vashisthi, Jagabudi, Shastri and Naringi.
2. It has 167 km long sea coast which contains many beaches, pats, and forts. 180 km long Sahyadri hill range, contains hills, hill forts, wild life and many places of scenic beauty. Number of creeks-ideal and safe for water sports, boating, fishing, swimming, camping etc. Few rivers-which are navigable up to about 40 km distance from sea is also a good attraction for water front activities. A natural wonder like hot water springs at few places.
3. Hills, sea shores, creeks, rivers, hot water springs, forests, waterfalls, & religious places attract tourists & pilgrims from great distance.
4. Birthplaces of many famous personalities like Lokmanya Tilak, freedom fighters, politicians, poets, authors etc.
5. Alphonsa Mangoes (Hapus), Cashew nut, Kokum, Coconut etc. are famous for their quality and taste.
6. Vivid cultural activities like folk dances and drama; local arts and crafts. Konkan is famous for its koli dances, the Dashavatari drama etc.
7. Characteristic Konkan cuisine, especially non-vegetarian dishes of fish, prawns and seafood are mouth-watering.

1.8: Scope and Limitations of the Research Study:

The scope of the present study is to ascertain the disaster management plan prepared by the senior colleges of Ratnagiri District of Maharashtra. Therefore, 17 senior colleges from 9 talukas of Ratnagir district, which are affiliated to University of Mumbai were chosen for the study. The preparedness for disasters by the libraries of these Arts, Commerce and Science colleges has been studied in this research work. Following senior colleges from Ratnagiri district were selected for the study purpose.

1. Arts, Science and Commerce College, Lanja
2. Athalye, Sapre, Pitre College, Devrukh
3. D.B.J. College, Chiplun
4. Dapoli Urban Science College, Dapoli
5. Gogate-Jogalekar College, Ratnagiri
6. I.C.S. College, Khed
7. Khare, Dhere, Bhosale College, Guhagar
8. Leknete Gopinathrao Mundhe College, Mandangad
9. Manohar Hari Khapane College, Pachal
10. Navnirman Sanstha's Arts, Science. Commerce College, Sangameshwar
11. Patpanhale Education Sanstha's Senior College, Shringartali
12. S.P. Hegshetye College, Ratnagiri
13. Shikshan Prasarak Mandal's College of Arts & Commerce, Sakharpa
14. Smt. Sahilaja Shinde College, Pedambe
15. T.B. Kadam College, Khed
16. Dr. Tatyasaheb Natu College, Margtamhane
17. Varadkar-Belose College, Dapoli

Chapter 2: Literature Review

1. Chakrabarti , Abhijit and Pramanik, Abhiji (2017) have mentioned in "Disaster Management Methods and Techniques for Library and Information Centres: a framework" that, to save libraries from forthcoming hazards, the authorities should apply suitable methods and techniques of disaster management. To avert and alleviate the outcome of any type of disasters, the researchers present a framework for Methods and Techniques of Disaster Management for Library and Information Centers keeping in the mind of the need of Library and Information Centers.

2. Echezona, R. I, Ugwu, C.I and Ozioko R. E. (2012), in their research entitled, "Disaster management in university libraries: Perceptions, problems and strategies" explore disaster management in terms of its perception, problems and strategies in University libraries in South Eastern Nigeria.

The study has revealed that while some librarians are aware of disaster management, some others have low level of knowledge of it. The level of their knowledge on disaster management, notwithstanding, the respondents were of the opinion that University Libraries in South Eastern Nigeria should prepare for disaster management. Certain problems that affect disaster management were identified from this study and the most striking ones are lack of disaster preparedness and recovery plans. The study revealed a number of strategies that could be put in place to ensure effective disaster management which include training of firefighting equipment in offices and raising awareness of libraries on the need to protect documents from disaster.

3. Eden, Paul (1997), in his article 'Disaster management in Libraries' a funded project looking at disaster management in British libraries. Based on visits to some 30

organizations within and outside the library profession and analysis of 62 library disaster control plans, highlighting the central role of the written disaster control plan. Emphasizes the need for these plans to be managed and supported by risk assessments and regular inspections of buildings and equipment, the identification and use of reliable expert advice, staff training programmes and contingency planning for temporary services, accommodation and storage. Underlines the importance of personnel issues such as the careful selection of those responsible for disaster management and staff counseling following a disaster, and also the need to investigate insurance cover and to consider the installation of fire detection and suppression systems.

4. Jaeger, Paul T. and others (2008) in their article, "The 2004 and 2005 Gulf Coast Hurricanes: Evolving Roles and Lessons Learned for Public Libraries in Disaster Preparedness and Community Services' stated that, in the aftermath of the 2004 and 2005 Gulf Coast hurricanes, public libraries played many important roles in their communities, though ensuring access to vital information may have been the most critical service.

5. Morgan, G. and Smith, J.G. (1997) stated in their research project entitled, "Disaster management in libraries: the role of a disaster plan" that, disaster management and planning should be one of the most important aspects of library management, but in practice it has been found to be a neglected field in librarianship, particularly in South Africa.

This article explores the main disaster management issues and reports on a study that investigated disaster planning in research, academic and public libraries in the Greater Cape Metropolitan Area. It was found that the majority of the libraries investigated was lacking in formal disaster plans and were generally under-prepared

for any potential disasters which may occur. This was attributed to inadequate resources and also to the apathetic attitude of library staff.

6. Singh, B.P.(2015) in the "Disaster Management Planning and its Best Practice for Libraries and Information Centres: An Overview" found that the libraries and information centres need to have strong disaster management plan to minimize damage and loss of their own valuable infrastructures and information resources. The research describes the best practice of disaster management for libraries and information centres to disaster control and reduce the damage, loss of own property and collections. It also highlights the major disaster management agencies in India.

7. Superio, Daryl L, Alayon, Stephen B. and Oliverso, Mary Grace H. (2017), in the study on "Disaster management practices of academic libraries in Panay Island, Philippines Lessons from Typhoon Haiyan" finds that although the majority of the libraries do not have a disaster management plan, they all had common disaster management practices that enabled them to save parts of their collections. Moreover, the study revealed that librarians lacked knowledge and skills on disaster management.

8. Zaveri, Parul (2012), studied on "Digital Disaster management in Libraries in India", and found that due to lack of knowledge about handling of digital data, and inadequate digital infrastructure setup in organizations, the chances of loss of digital data are high. However, common measures like taking backup of data manually are mostly followed by all libraries. The research has identified the trends in protection of digital data, as well as the lacunae, in Indian libraries.

Chapter 3: Data Analysis and Interpretation

Research Methodology

The present study is an attempt to study the disaster management plans prepared by the college libraries of the Ratnagiri district of Maharashtra. For this purpose a survey method using questionnaire and interview techniques was adopted.

Methodology procedure: The steps involved in the present research are-

1. Identification and selection of the sample of students' population to be studied.
2. Designing of questionnaire and interview schedules.
3. Collection of data.
4. Interpretation (Analysis) of data.

A survey method and Random sampling technique was used in this study. Accordingly well structured, opened, as well as closed ended questions were asked in the questionnaire. 17 questionnaires were distributed among Arts, Commerce and Science senior college Libraries, out of which 17 filled questionnaires were received. The response rate is 100 percent.

The collected questionnaires are analyzed and put in the form of tables and graphs with help of statistical Microsoft excel. By analyzing various questions in tabulation forms, following collective information is generated.

3.1: Streams of Colleges:

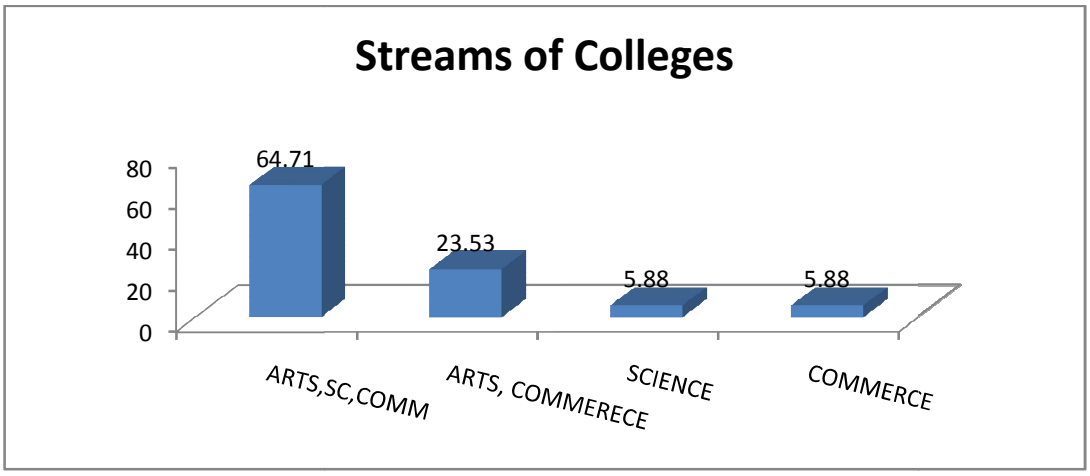
Before know the collection of the library, it was very necessary to conversant with the streams of the college, because, as many as the streams, bigger the collection. So it was decided to know about the streams. So, the researcher selected following colleges with variety of streams for the research. In Ratnagiri district, there are multi-

streams colleges affiliated to University of Mumbai. Out of these, the researcher has selected 17 senior colleges with Arts, Science and Commerce streams.

There are 64.71 % multi streams colleges in Ratnagiri, i.e Arts, Science and Commerce Colleges, selected for the research. 23.53% colleges are having the streams of Arts and Commerce, whereas, 5.88 colleges are having respectively Science and Commerce streams only. The analyses of these colleges are given in the Table No. 2.

Table No. 1

Streams of Colleges	Respondents	Percent
Arts, Science , Commerce	11	64.71
Arts, Commerce	04	23.53
Science	01	5.88
Commerce	01	5.88
Total	**17**	**100.00**



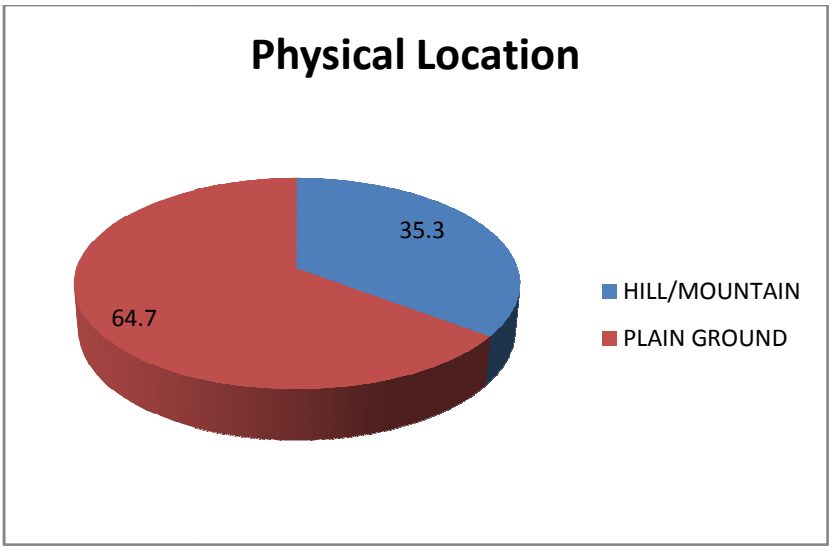
3.2: Physical Location of Libraries:

At the beginning, the location of the library is very important factor to know the seriousness of the disasters on it. So, a question was asked about the physical location of the library.

It is found from the below table 3.1 that, out of 17 libraries, 35.30 % libraries are situated nearby the hilly or mountainous area and 64.70 % libraries are situated in the plain ground. It means there is a small possibility of threats of land sliding or any other such disasters in these libraries. So, precautions must be taken in these libraries.

Table No. 2

Physical Location	Respondents	Percent
Hill/Mountain	06	35.30
Plain Ground	11	64.70
Total	**17**	**100.00**



3.3. Age of the Library Building:

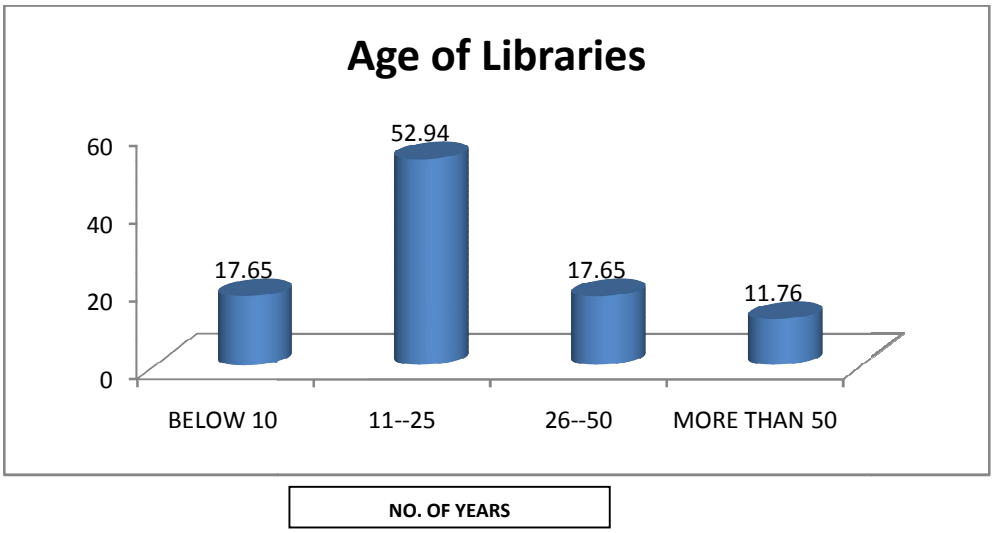
The structure of the building should be very powerful s kind that it can bear any kind of disaster in future. So the age of building is most important factor for knowing how old the building is.

Generally, a good structure can bare the load and face any circumstances upto 50 years. So, in this research, it is found that there are only 11.76% libraries having the building structure of more than 50 years. They urgently require necessary maintenance for their collection and other property. 17.65 % libraries are having their buildings with below 50years old. They are at the point of the threat. They must be careful in future about their building structure. 52.94% libraries are having their buildings upto 25 years. They come in the range of middle. And 17.65 % libraries are having their buildings below 10years.

Thus, from the above analysis, it is found that more than 50% libraries are built before 25 years, and hence, it requires necessary maintenance.

Table No. 3

Age of Libraries (Years)	Respondents	Percent
Below 10	03	17.65
11—25	09	52.94
26—50	03	17.65
More Than 50	02	11.76
Total	**17**	**100.00**



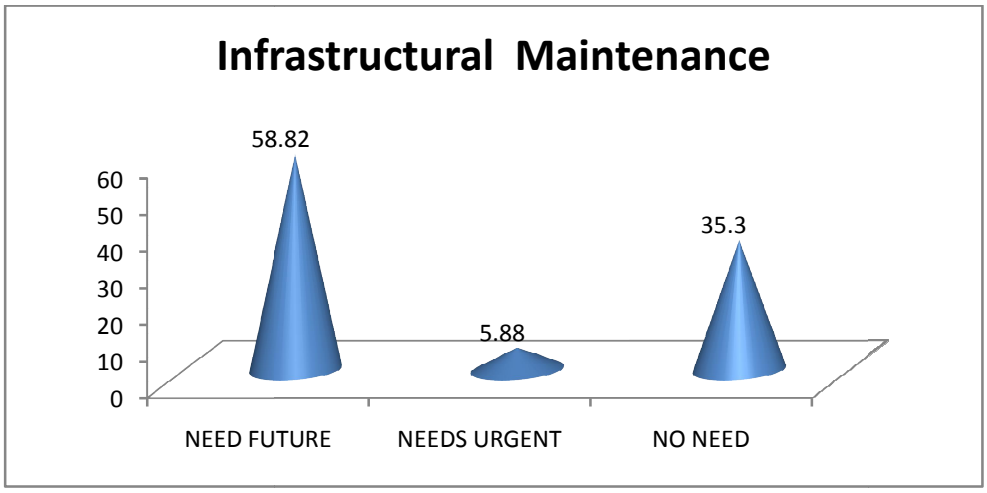
3.4 : Need for Infrastructural maintenance:

The age of the library mars the durability of the infrastructure. As old the infrastructure it requires specific maintenance. So, the question was asked regarding the infrastructural maintenance to the respondents. Following responses were received.

Nearby 35.3 % library buildings do not have any need for the repair or maintenance due to its new infrastructure, but, 58.82 % libraries requires maintenance in nearby future. It means, the urgency can be arise if, the authorities would not consider the maintenance on time seriously.

Table No. 4

Infrastructure Maintenance	Respondents	Percent
Need Future	10	58.82
Needs Urgent	01	5.88
No Need	06	35.30
Total	**17**	**100.00**

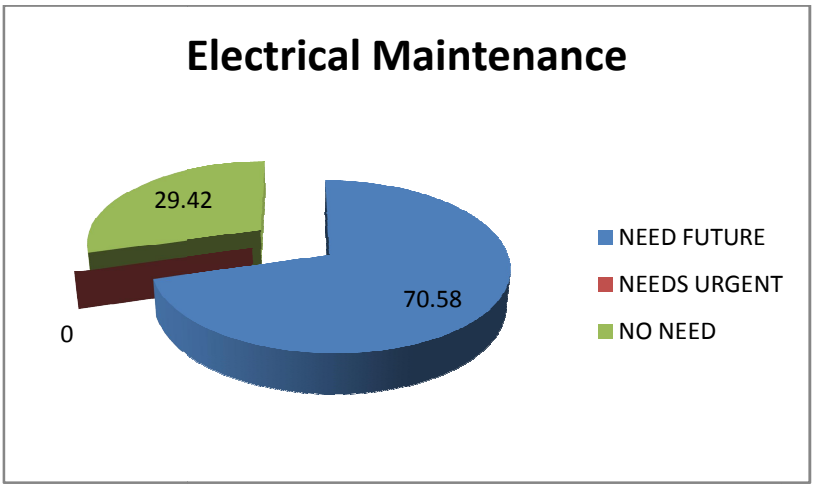


3.5: Need for Electrical maintenance:

Like building maintenance, the electrical maintenance also important to resist to any kind of disaster. So the question was asked about the maintenance of electrical fittings. It was found from the study that, 29.42% libraries don't need the maintenance of their library buildings, but 70.58 % libraries needs maintenance of electrical fittings in the future.

Table No. 5

Electrical Maintenance	Respondents	Percent
Need Future	12	70.58
Needs Urgent	00	00.00
No Need	05	29.42
Total	**17**	**100.00**



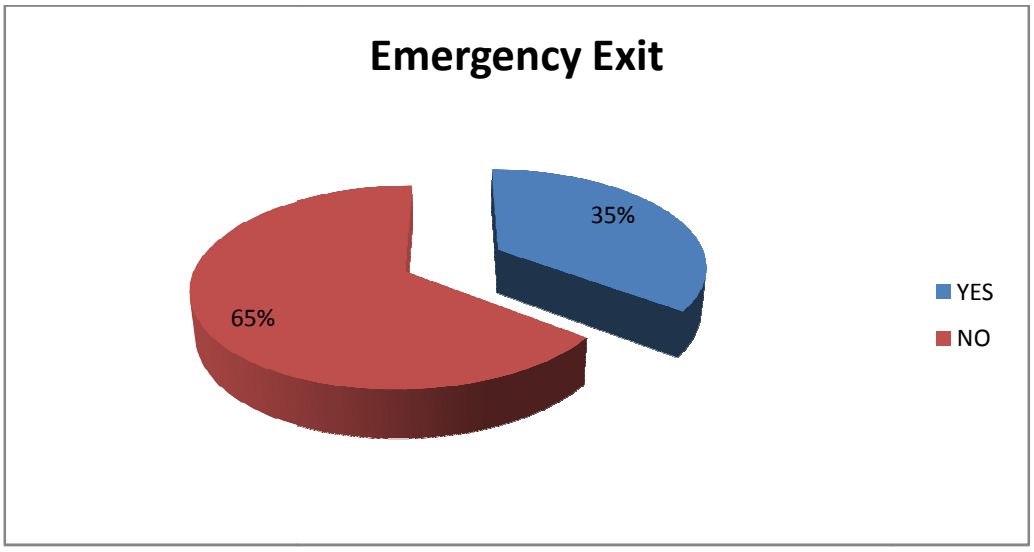
3.6 : Emergency Exits for the Library:

Whenever an emergency occurs during disasters, there should be a separate exit to the Library, to rescue the human lives, and the property. So, it is essential to know about the emergency exits of the libraries.

It is found that 64.7. % libraries have the system of emergency exits, where 35.30% libraries don't have such provision in their buildings. Thus, it is very serious matter about the libraries who doesn't have the emergency exits.

Table No. 6

Emergency Exit	Respondents	Percent
Yes	11	64.70
No	06	35.30
Total	**17**	**100.00**



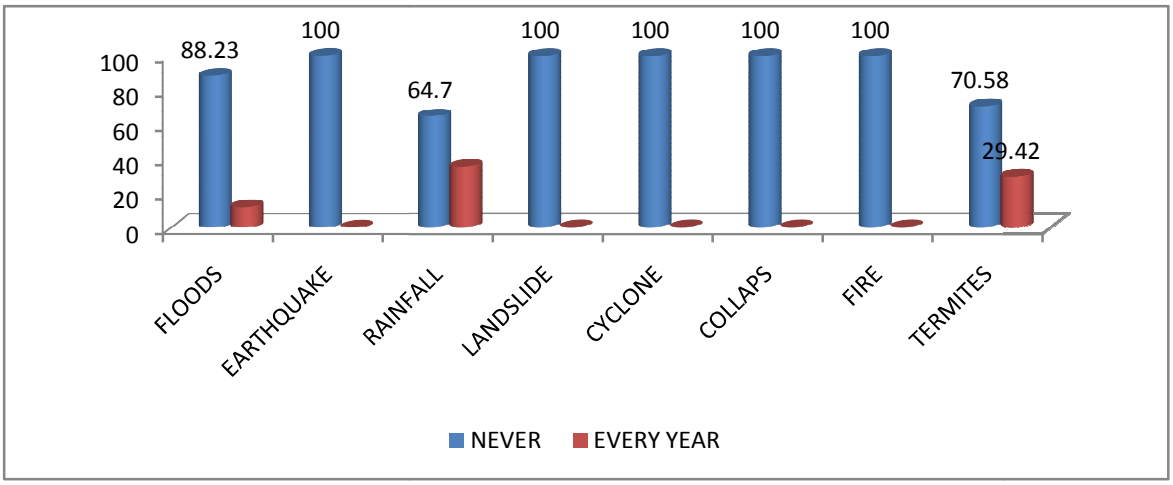
3.7: Occurrence of Disasters in the Library:

In the Konkan region, it is found that various types of disasters happens every year, like floods, earthquakes, heavy rainfall, land sliding, fire and menace of termites. So, the questions were asked to the respondents whether such disasters occurred in their libraries, or not.

It is found that, heavy rainfall is the main calamity in the Konkan region and it is responsible for heavy damage to the library resources. 35.30% libraries are suffered from the heavy rainfall and 11.77 % libraries are suffered from the floods due to heavy rainfall. It is also found that 29.42% libraries are having the menace of termites and fungus. Thus it's a threat to the libraries from the natural disasters.

Table No. 7

Disasters	Respondents (%)	Respondents (%)	Total Percent
	Never	Every Year	
Floods	88.23	11.77	100
Earthquake	100	0	100
Rainfall	64.7	35.3	100
Landslide	100	0	100
Cyclone	100	0	100
Collapse	100	0	100
Fire	100	0	100
Termites	70.58	29.42	100



3.8 : Facilities available for the disasters preparedness:

To be prepared for any kind of disaster is very essential activity for the betterment of the archival institute. So, the question was asked to the respondents regarding the facilities available for them to fight against disaster.

Following table shows that 70.58% libraries are having fire extinguishers in their libraries, and there is not a security alarm in any library. Only 11.76% libraries are having lightning arrester on the roof, while 70.58% libraries are having 'Smoking prohibition' boards in their libraries. 29.42% libraries are waterproof roofing and only 5.88% libraries are having air conditions (AC) facilities in their libraries.

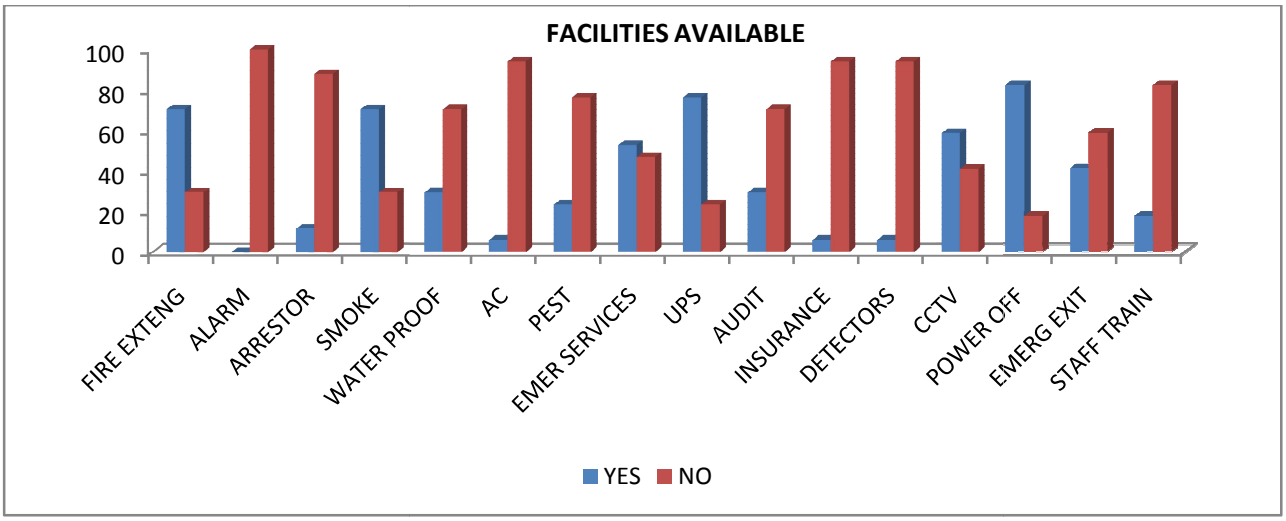
23.52% libraries doing pest control activity in their libraries, and 52.94 % libraries are ready with emergency services during the disaster circumstances, like connections with fire stations, police stations, Disaster Relief Force etc. 76.48% libraries are having UPS backup or emergency electrical power supply in their libraries, and 29.42% libraries are doing their structural audit activity and only 5.88% libraries are have insured their property with the insurance company; and the same percent libraries are having metal detectors in their libraries against the misuse of the libraries by the users. 58.83% libraries are having CCTV cameras in the library premises, and 82.36% libraries are having automatic power off system in the library for the security matter. 41.17% libraries are having 'Emergency Exits' during the troublesome situation and 17.64% libraries are providing their staff the proper disaster management training during the emergency.

This was very important question regarding the emergency services during disasters of the libraries. In short it is found that, very few libraries are strongly ready to face any kind of disasters, while many libraries are yet to be prepared to face such disasters.

The tabular ad graphical presentation of these responses is as follows.

Table No. 8

Facilities Available	Responses (Yes)	Responses (No)	Percent
Fire Extinguisher	70.58	29.42	100
Safety Alarm	0	100	100
Arrestor	11.76	88.24	100
No Smoking Boards	70.58	29.42	100
Water Proofing	29.42	70.58	100
Air Conditions	5.88	94.12	100
Pest Control	23.52	76.48	100
Emergency Services	52.94	47.06	100
Ups	76.48	23.52	100
Regular Audit	29.42	70.58	100
Insurance	5.88	94.12	100
Metal Detectors	5.88	94.12	100
CCTV	58.83	41.17	100
Auto Power Off	82.36	17.64	100
Emergency Exit	41.17	58.83	100
Staff Training	17.64	82.36	100



3.9: Digital Backups:

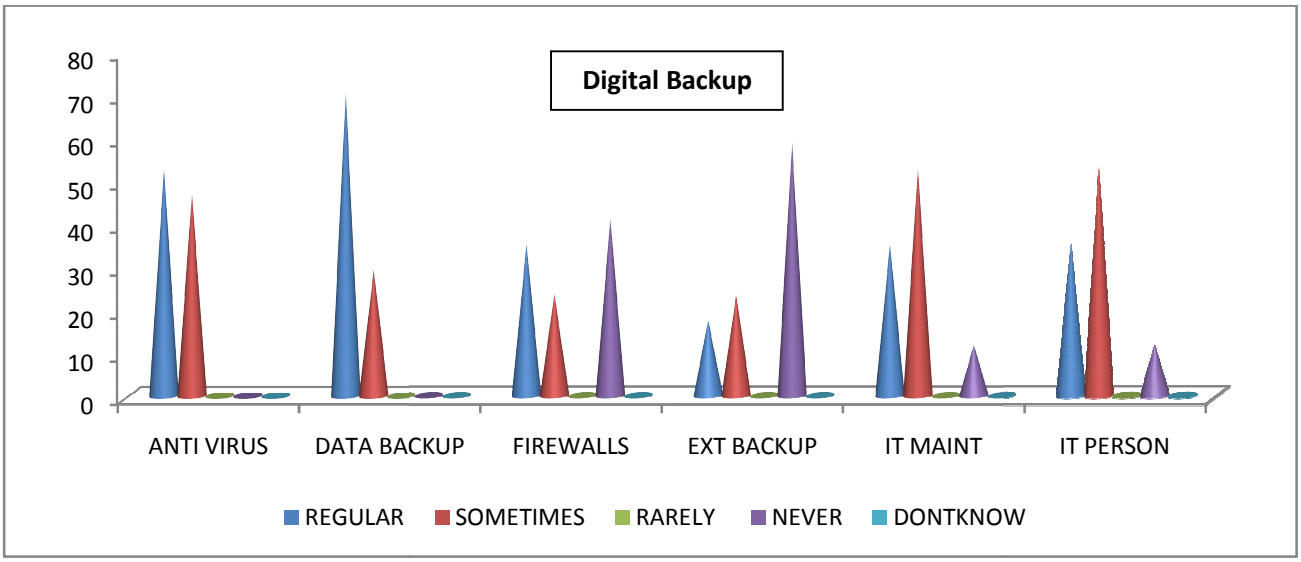
Whenever disaster occurs, everything can be vanished including the digital data and I.T. infrastructure. So, it is very essential to be alert about the digital backup during the disaster. Everyone has to protect the data from the disaster. So, the key question was asked about the condition of digital backups in their libraries.

It is found from this study, that 52.95% libraries are having regular anti-virus protection in their computers, while 70.58% libraries are safe with data backups regularly. 35.29% libraries are using firewall protection system. 17.65% libraries are providing external backup facility to store extra data on the hard-disc. 35.29% libraries are doing I.T. maintenance regularly, while same percentage of libraries shows that the I.T. person visits the library regularly.

Overall, it is found that the safeguard of the library against the disaster is yet to be achieved. More precautions are to be taken in the digital backup area.

Table No. 9

Digital Backup	Regular	Sometimes	Rarely	Never	Don't Know	Total %
Anti Virus	52.95	47.05	0	0	0	100
Data Backup	70.58	29.42	0	0	0	100
Firewalls	35.29	23.53	0	41.18	0	100
Ext Backup	17.65	23.53	0	58.82	0	100
It Maint	35.29	52.94	0	11.77	0	100
It Person	35.29	52.94	0	11.77	0	100



3.10: Preparedness with Disaster Management Plan:

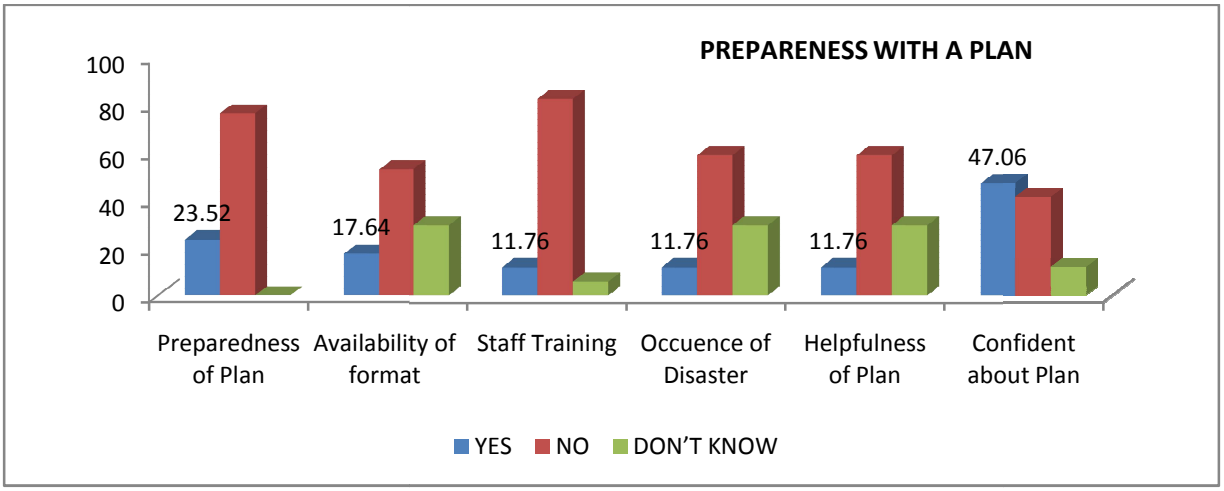
To cope up with any type of calamity, one has to be prepared with some sort of disaster management plan. The plan should be prepared by the experienced person and sanctioned by the authority.

In this connection, a question was raised to the Respondents about their preparedness for the natural calamity and about their disaster management plan. It is found that, 76.48% libraries are not prepared for the disaster management. 52.94% libraries don't have their management plan. Even 82.36% librarians said that they have not provided any type of disaster management training to their staff.

It's very fortunate that, 58.82% libraries didn't face any kind of disaster in their libraries yet. Those who have prepared their management plan, it is known that 58.82% of them didn't found their plan helpful, and only 47.056% librarians are confident about their plan during natural disaster. The figures are explained in the following table no.10.

Table No. 10

Disaster Management Plan	Yes	No	Don't Know	Percent
Preparedness of Plan	23.52	76.48	0.00	100
Availability of format	17.64	52.94	29.42	100
Staff Training	11.76	82.36	5.88	100
Occurrence of Disaster	11.76	58.82	29.42	100
Helpfulness of Plan	11.76	58.82	29.42	100
Confident about Plan	47.06	41.18	11.76	100



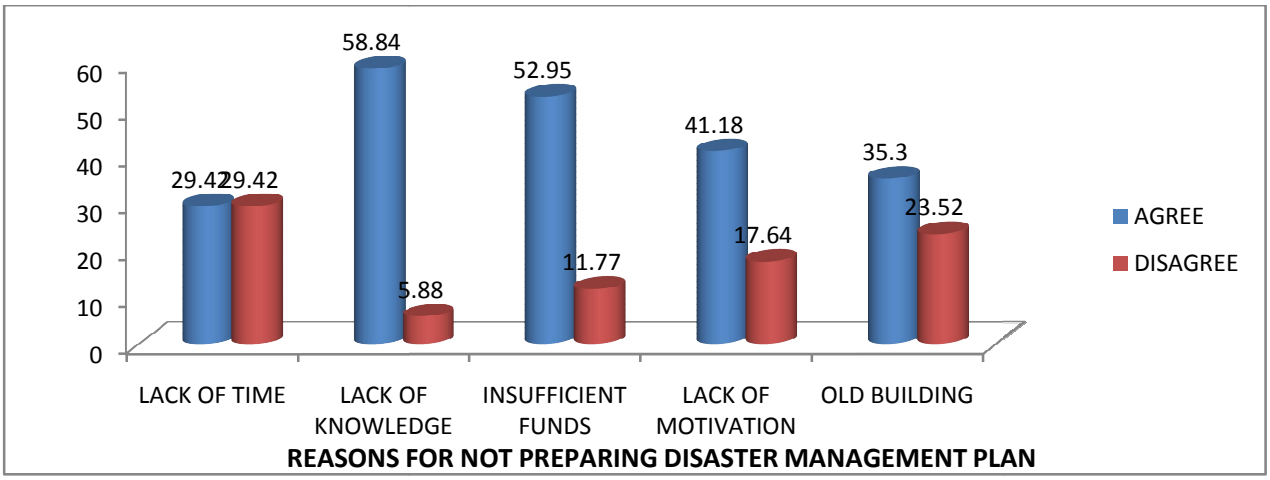
3.11: Problems in preparing a disaster management plan:

Preparing a disaster management plan is very necessary for every library. To overcome the losses in the disaster, one has to be very prompt in preparing the disaster management plan. But there are many problems faced by the library authorities in preparing such plan. So, the researcher asked the question about the reasons for not preparing the disaster management plan.

It is found that, 29.42% Respondents said that they have lack of time to prepare a disaster management plan, the same percent participant also disagree about the reason, that there is a shortage of time to prepare the plan. 58.84% Respondents are agreed that, they have lack of knowledge about the disaster management plan. 52.95% Respondents said that they have insufficient funds to tackle the disaster plan. 41.18% Respondents feel lack of motivation from their authorities in preparing the disaster management plan. 35.3% Respondents said that it is because of their old type of building, they are unable to prepare a disaster management plan.

Table No. 11

Reasons For Not Preparing Plan	Agree	Strongly Agree	Strongly Disagree	Disagree	Can't Say	Percent
Lack of Time	29.42	5.87	5.87	29.42	29.42	100
Lack of Knowledge	58.84	17.64	0.00	5.88	17.64	100
Insufficient Funds	52.95	11.77	5.87	11.77	17.64	100
Lack of Motivation	41.18	5.87	0.00	17.64	35.31	100
Old Building	35.30	11.76	0.00	23.52	29.42	100



Chapter 4: Conclusion

4.1: Findings

1. Multi-Faculty colleges are more than single stream colleges in Ratnagiri Districts. It is due to the demand and scope of the curriculum available in the colleges.
2. Konkan region is full of hilly and mountainous area. So many of the colleges are situated near the hilly areas, which is very dangerous to the college premises, especially the libraries.
3. When the comparison of building structure was considered, it is found that most of the library buildings are built before 25 years, and it is to be repaired in the nearby future.
4. Electrical fittings are very necessary activity to overcome the natural disaster. It is found that 70.58% libraries need its electrical maintenance in the future.
5. It is also found that 74.70% libraries have emergency exits to face the emergency situation. These types of extra exits are very necessary for the benefit of library users' security.
6. When the question asked about the occurrence of disaster in the library, with many disaster options, it is found that, in many libraries, heavy rainfall, flood situations and nuisance of termites are the main disasters occurred every year.
7. The preparedness for disaster situations, there may be required many types of facilities. But it is found that many of the necessary facilities are not available in the libraries. Following facilities are scarcity in the library. Emergency alarm, water-proofing of walls, Air-conditions in summer season, pest control programe, building structural audit, lightening arrester on the roof, insurance of

all valuable item in the library, and training of library staff to face the natural or man-made disasters.

8. After the occurrence of any disastrous situation, everything can be vanishes. So, it is very necessary to keep a digital backup of the entire library database. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet. But during this research, it is found that many libraries are not using firewall system in their day-today activities. They are also not taking regular backup on the external media of their database.
9. To tackle the disastrous situation one should be prepared with a specific, exclusive disaster management plan with them. So, it is found from this research that, 76.48% libraries don't have such kind of plan with them. Even many of them don't have a proper format of disaster management plan. It is also found that, 82.36% libraries have never given their staff a training to fight against any kind of calamities or disasters.

   Those who have a disaster management plan with them are found that their plan is not helpful for them during the emergencies. Some respondents even not sure about the usefulness of the disaster management plan.
10. Those who haven't prepared a disaster management plan yet, had been asked about the problems in preparing the plan. It is found that, due to lack of time, many libraries have not prepared their disaster management plan. Library staff is always under the pressure of work. Lack of library staff, insufficient funds and space are the main problems of the library staff. So, they are totally unaware about the disaster management plan. Lack of motivation from the authority is the second important reason which is found difficult in the disaster management plan.

4.2: Suggestions:

1. Libraries are full-fledge of valuable information resources. To keep it secure from various calamities, the place of the library should be at the plain ground and not near the hill or dangerous place.
2. Libraries of more than 25 years of age deliberate practice of structural audit at specific time duration. If the need arises, proper maintenance should be done by the professionals.
3. Like building maintenance, electricity provision is very important activity for the library. Electrical maintenance should be done regularly.
4. Emergency exits are very essential in the library, because it is useful to save the lives of library users or personnel during disasters.
5. Proper staff training should be organized on time to time to face the challenges during heavy rain-fall and flood like situations. Natural calamity, like nuisance of termite, mice etc. may be avoided with necessary arrangements.
6. To face the natural or man-made disasters, we requires many types of facilities, like emergency alarm system, Air-conditions to maintain the proper atmosphere in the library, pest control activity on time to time, structural audit of the building construction, water-proofing of roof and walls, lightening arrester at the roof top, and insurance of all library resources, library users and library staff. Unless these facilities are made available, we cannot face any kind of disaster occurred in future.
7. Digital backup is an important activity in the emergency, because after the disaster occurrence everything becomes ruins. So to safeguard the database of the library, digital backup must be done regularly.
8. To tackle the disastrous situation during emergency, one should have a proper disaster management plan. It is suggested here that, every college library must have their own disaster management plan. They may also check it whether their

plan is useful during emergency or not. If college authority or librarian is unable to prepare a disaster management plan, it should be prepared by the eternal disaster management professionals.

9. Library staff should be given proper training to handle such disastrous situations.
10. To soften the workload of the library staff, their human resources must be increased. They must be provided proper staff according to their staffing formulae. If staff is available with sufficient number, then they can fight in any disastrous situations.
11. Staff motivation is the important factor from the authority side. The college authority must motivate library staff to face such natural calamities.

Conclusion:

Libraries are the heritage of our knowledge and wisdom. It must be protected from any kind of disasters for future generation. But unfortunately, precautions are not been taken to its security and protection, as compare to collection development. Many libraries are far way from its basic infrastructure and facilities. Disaster management plan is the neglected issues for many libraries, where it becomes the most important and essential part in the age of digital library management.

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APPENDEX-I

QUESTIONNAIRE FOR LIBRARIANS

A Minor Research Project On

A Study of Disaster Management Plans Prepared by College Libraries in Ratnagiri District (Affiliated To University of Mumbai, Mumbai)

A) General Information

1. Name and Address of the College :
2. Establishment Year : College: Library:
3. Name of the Librarian :
4. Qualifications :
5. Date of Appointment :
6. Mobile No._____ Email: _____
7. Any expertise in Disaster Management activity, please specify.
8. Total No. of Library Staff :
   a) Professional :
   b) Semi and Non-Professional :
9. Total Area of Library :

10. Total Collection of the Library as on March 31, 2017_____

Sr No.	Resources	Total Number	Approx. Cost
1.	Text Books		
2.	Reference Books		
3.	Journals/Periodicals (Total subscribed)		
4.	Newspapers (Total Subscribed)		
5.	Non-Book Materials (CD's/Cassettes etc.)		
6.	E-Resources (Online E-Books, E-Journals)		
7.	Any other (Manuscripts/Reports/Theses)		

11. Furniture available in the Library:

Sr. No.	Furniture	Total Number	Approx. Cost
1.	Wooden Cupboards		
2.	Steel Cupboards		
3.	Book Racks		
4.	Display Racks		
5.	Newspapers stands		
6.	Wooden tables & chairs		
7.	Any Other furniture		

B) Disaster vulnerabilities Pls. Tick (√)

1. Physical Location of Library in the college:

a) At the Entry point ( )

b) Far away from main Building ( )

c) At Central place ( )

2. Natural location (Neighborhood) of the Library

a) River/Ocean/ Lake ( )

b) Hill/Mountain/Steep slope ( )

c) Plain ground ( )

3. Please mention the present condition of the following particulars.

Sr. No.	Particulars	Approx. years Pls. Tick (√)	Present Condition Pls. Tick (√)
1.	Age of Library Building	100 years ( ) More than 50 years ( ) 25-50 Years ( ) More than 10 years ( )	Needs urgent maintenance ( ) Needs maintenance in future ( ) No need to maintained for more than 15-20 years ( )
2.	Electric fittings	100 years ( ) More than 50 years ( ) 25-50 Years ( ) More than 10 years ( )	Needs urgent maintenance ( ) Needs maintenance in future ( ) No need to maintained for more than 15-20 years ( )

C) About Library Building: (Strike out wherever necessary)

1. Library Building structure: a) Separated b) Attached

2. Total floors of Library : a) One b) Two c) More than Two

3. Exact Location of Library: a) First floor b) Second Floor c) Third Floor (In case of attached)

4. Various sections of library: a) Separated b) Attached c) Partly Separated

5. Has the Library building been constructed to be earthquake resistant?

a) Yes b) No c) Don't know

6. Does the Library have an emergency exit?

a) Yes b) No

7. Are collections stored at a safe distance from plumbing, electrical and mechanical installations? a) Yes b) No c) Don't know

D) Disaster Occurrence:

1. Please mention of the following, which **disasters have occurred in your Library in the past.**

Sr. No.	**Type of Disaster**	**Pls. Tick (√)**	**Loss of Library**			
			More than 75%	**Up-to 50 %**	**Nearby 20-50%**	**Less than 10 to 20%**
1	Floods					
2	Earthquake					
3	Heavy Rainfall & Lightening					
4	Collapse of building					
5	Fire					
6	Termites/Fungus /Mice nuisance					

2. In your opinion what are the chances of disasters may happen in your Library in future?

Sr. No.	Type of Disaster	Pls. Tick (√)	Loss of Library			
			More than 75%	Up-to 50 %	Nearby 20-50%	Less than 10 to 20%
1	Floods					
2	Earthquake					
3	Heavy Rainfall & Lightening					
4	Collapse of building					
5	Fire					
6	Termites/Fungus					

E) Disaster Preparedness:

1. Does the library have following facilities (Pls. Tick √)

Facilities	Availability		Facilities	Availability	
	Yes	No		Yes	No
Fire Extinguisher			Emergency power supply		
Fire & smoke alarm			Regular structural audit		
Lightening arrester			Insurance of whole collection		

Smoking prohibitions boards			Metal detectors		
Water proofing ceiling, walls			CCTVs		
Air conditioning systems			Automatic power supply disconnector		
Regular pest & termite control			Emergency exits		
Emergency services connections (Fire stations, disaster relief force, police sations etc.)			Training of emergency management to the staff		

2. Please specify which of the following emergency activities are practiced in your Library? (Pls. tick √)

Activities	Performed Regularly	Sometimes	Rarely	Never	Don't Know
Checking and maintenance of fire extinguisher					
Checking & maintenance of alarm system					
Maintenance of electrical equipments					
Training of staff					
Database backup and security					
Proper building					

maintenance					
Conducting structural audit					
Insurance of whole/partly properties					
Termite/fungus/pests control					
Maintenance of storage house					

3. Digital backups: Please specify about your digital backups.(Database security and maintenance) (**Pls. tick √)**

Digital Activities	**Regularly**	**Sometimes**	**Never**
Anti-virus software & up-gradations			
Library data backup			
Backup on external hard-disk/cloud			
Firewall & its up-gradations			
IT maintenance			
IT personnel supervisions/Help			

4. Insurance policy: Please specify about the insurance policy, if adopted.(Pls. tick √)

Insured property	**Yes**	**No**	**Don't Know**
Library building			
Library collection			
Library staff			
Library properties (Dead-stocks)			
Library users			

F) Disaster Management Plans:

A disaster plan is a written document which concerns the safety and rescue of people, collection and the safety of the building. **(Pls. tick √)**

1) Does the Library have any disaster management plan? Yes / No

2) If yes, in which format the plan is available?

a) Print b) Digital c) Don't know

3) When did the Disaster management plan prepared?

a) Previous year b) Current year c) Don't know

4) Who has prepared the disaster management plan?

a) College committee b) Disaster experts c) Librarian

5) Have you or your staff been taken training of disaster management?

a) Yes b) No c) If yes, pls. explain in short

6) Do you have any kind of disaster in your library or in the vicinity in the past?

a) Yes b) No c) Don't know

7) If yes, have you applied your disaster management plan at the time of emergency? a) Yes b) No c) Don't know

8) If yes, was it helpful? Please specify with following points.

a) Very much helpful b) Little bit helpful c) Not helpful

9) If not helpful, have you modified your plan since the emergency occurred?

a) Yes b) No c) Don't know

10) If you don't have a disaster management plan, how could you manage the situations during emergencies?

a) Self experiences b) Authority advice c) Expert advice d) Do nothing

11) If an emergency arises in your library, how confident are you and your staff to face the disasters?

a) Very confident b) Somewhat confident c) Not confident

12) Following are some important factors which affect the awareness or readiness of the disaster management plans. Please specify with appropriate reasons.

(Pls. tick √)

Statements	**Strongly Disagree**	**Disagree**	**Can't say**	**Strongly Agree**	**Agree**
Lack of time					
Lack of knowledge					
Insufficient funds					
Lack of motivation from Authority					
Old and tedious building structure					

13) Please suggest ideas and opinions on how libraries in konkan area can improve their disaster preparedness?

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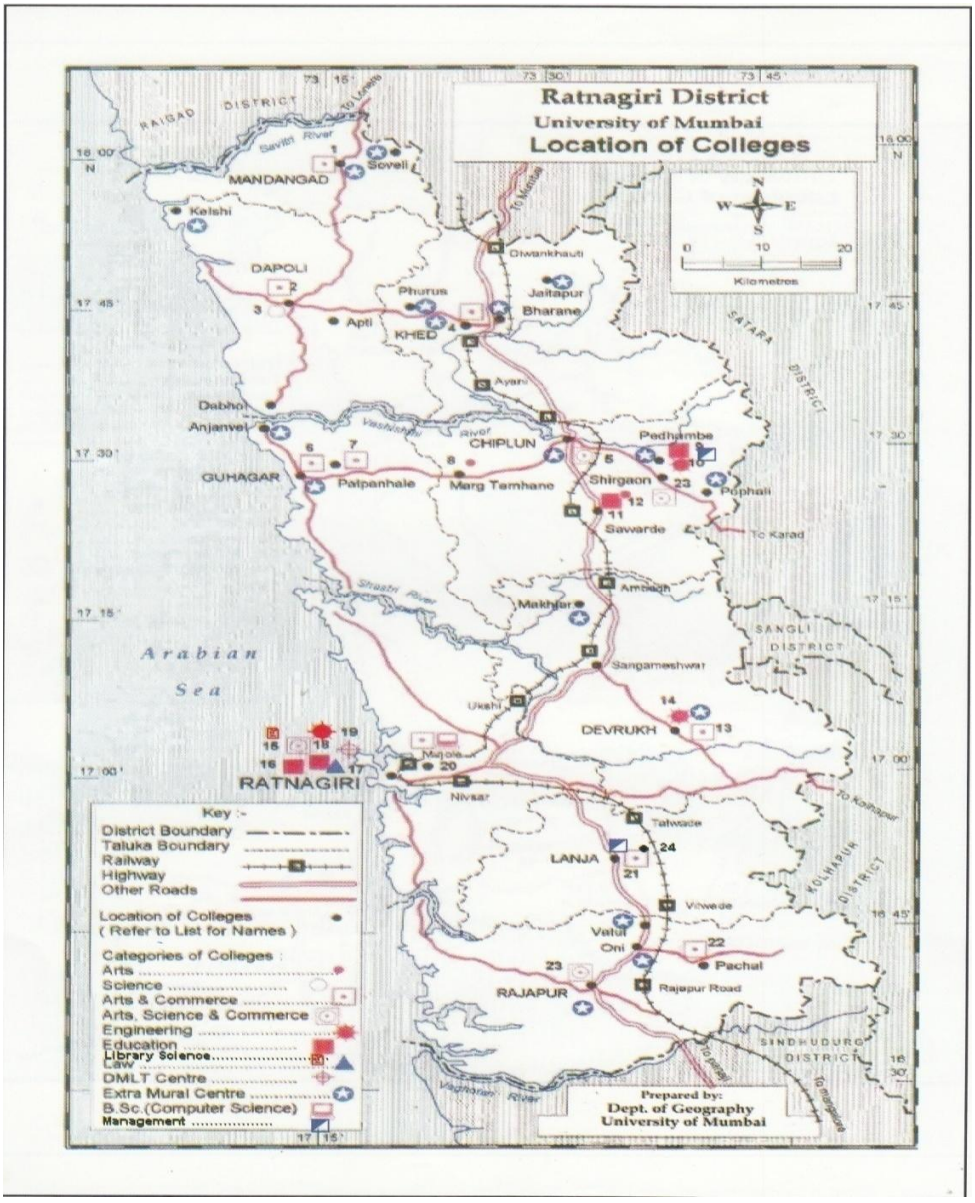
Appendix-2

Ratnagiri District College map



Appendix-3

Pictures depicting the disastrous loss in Libraries

Tornado damage - Stamping Ground Public Library, Kentucky - April 4, 1974

Appendix-4

Model Disaster Management Plan for Libraries

Introduction:

The purpose of this plan is to provide a basic guide for response to and recovery from disasters affecting library holdings, archives, and other records. It is designed to assist library staff, as well as other personnel who are responsible for maintaining library records.

Response to Emergencies:

Response to emergencies is based upon the following priorities:

1. Most importantly, safeguard human life. Evacuate the building promptly, and call for help.

2. Assess and contain the damage to collections if it is possible to do so safely.

3. Salvage as many library materials as possible, beginning with the rare materials in Archives and Special Collections.

4. Staff of departments other than the library should focus on saving vital operational records first; then prioritize salvage of remaining items.

5. Keep the following emergency contact numbers ready with the circulation desktop. Fire, Ambulance, Police, Guard Room, Physical Plant.

Evacuation Procedures and Accountability Teams:

The responsibility of the Library authority is to insure the safe evacuation of all personnel from the building in the event of an emergency. If the Library authority is

absent the alternate will assume this responsibility. In the event of an emergency one should do the following:

1. Insure each floor of the Library is clear of personnel.
2. Insure handicapped persons are evacuated or moved to Areas of Rescue Assistance.
3. Insure accountability of all Library personnel

Most important duties during emergencies:

1. Fire:

If the fire alarm is activated, do not assume that it is a false alarm. When the alarm sounds, do the following:

a) Identify location of activated alarm from the fire near the front door of the library.
b) Either go yourself or send someone to investigate the area to see if there really is a fire.
c) Do Not Use the Elevators. If There is Fire first priority is to ensure the safety of people in the building. If a fire cannot be easily and safely extinguished, call the fire station and proceed to evacuate the building.
d) Use common sense and don't panic. A minor, contained fire can be extinguished with the fire extinguishers located on each floor.

2. Floods/Water Emergencies:

a) If there is a serious leak, broken pipe, or a flooded area in building, if water is leaking from the ceiling, cover the area with plastic sheeting.

b)If there is water on the floor, remove books or records from lower shelves/file drawers onto higher shelves or tables well away from standing water. Do not place any material on the floor, even in a seemingly dry area, as the leak may spread.

c) If possible, turn off electrical circuits to the flooded area, and unplug electrical equipment in the area if you can safely do so. If electricity in the building needs to be turned off, call electricity department.

d) The building needs to be evacuated only in case of major water damage and when structural damage can be expected. The decision to evacuate should be made by the department head, who will organize a team to assist in evacuation.

3. Tornadoes:

Tornadoes can occur in mountainous regions as in more flat terrain. Tornadoes move rapidly. Most likely, there will be little warning if there is a tornado; consequently, there will be little time to seek shelter.

a) When a tornado occurs, the building should not be evacuated. If possible, persons in the building should move to the lowest level, staying away from windows; or to an inner hallway or small inner room away from windows.
b) Do not use the elevators.
c) In the library, stay away from book stacks, since they may collapse.
d) In addition to water damage, walls, ceilings, and shelves may collapse. When structural damage occurs, the person in charge of the over-all building maintenance needs to assess the structural damage and determine when it is safe to enter the building to assess damage and begin salvage efforts.

4. Earthquakes:

The danger from earthquakes is caused by what they do to man-made structures-debris falling from damaged buildings, flying glass from broken windows, fires caused by broken gas lines, and flooding due to broken water mains. There is no warning before an earthquake occurs.

a) If an earthquake occurs, do not attempt to evacuate the building. Persons in the building should stay in the inner core of the building away from windows. Shelter should be taken in a doorway, in a narrow corridor, or under a heavy table, desk, or bench.
b) Exits which lead into stairways should not be used because they may have collapsed.
c) A battery-powered radio should be available so that instructions concerning the earthquake can be monitored.
d) Damage from an earthquake may include structural damage to the building, collapsed shelving, damage to equipment and furniture, water damage from broken pipes, and fire and/or smoke damage caused by broken gas lines. All damage will need to be assessed by person in charge of building maintenance before re-entering to begin recovery operations.

After disasters:

The most common emergencies (fire, flood) involve water damage. If possible, loosely sort materials according to degree of wetness (soaked, damp, dry). Pack like materials together, e.g. damp records in one box, soaked in another etc. See also specific instructions below relating to water damage and fire damage.

a) Materials must be removed from affected areas, either to a salvage/drying area within the building, or to another area. Likely locations are a classroom or gymnasium.
b) Files: Place folders in boxes or milk crates. Place the folders vertically in boxes (standing as they would in a file drawer.) Fill boxes only about 75% full to allow for swelling.
c) Bound Volumes: Load onto metal book trucks, or into boxes or plastic milk crates for transport. Place normal-size volumes in a spine down position. Pack large volumes flat in boxes. If time allows, loosely place sheets of freezer paper or waxed paper around every volume. Boxes should be packed only about 75% full to allow for swelling.
d) To ensure inventory control and for insurance purposes, it is necessary to know the condition and disposition of materials. As materials are removed, a staff member should be assigned to label each container with a brief designation of its contents (by call number range; cabinet/drawer, record group etc.); damage type (wet, dry, smoke etc), and salvage priority; and destination.
e) Assign a photographer to document the damage and salvage operations.

Water Damage:

Evaluate the situation and decide whether the materials can be air-dried on-site or if they must be removed to a freezer facility. If the damaged materials are not too numerous or too thoroughly soaked, air-drying will be a viable option and a drying area will be required. A summary of key steps is listed below.

a) Consult the complete document for details. Secure a clean, dry environment where the temperature and humidity are as low as possible. The temperature must be below 70 degrees F. and the humidity below 50%, or mold will probably develop and distortion will be extreme.

b) Keep the air moving at all times using fans in the drying area. This will accelerate the drying process and discourage the growth of mold.

c) Thoroughly soaked books, and books with coated paper should be frozen as soon as possible. Wrap them loosely in freezer paper or wax paper and pack them flat in boxes, preferably plastic mail crates, for transport to a freezing facility. If they cannot be frozen before they dry, interleave the pages with unprinted newsprint or paper towels. Keep an inventory of books packed and removed to freezer facilities. Wet books with covers intact can be air dried.

d) Inter-leave every few pages, starting from the back of the book, turning pages carefully. For interleaving, use paper towels or clean, unprinted newsprint. Be careful to avoid interleaving too much or the spine will become concave and the volume distorted.

e) When books are dry but still cool to the touch, they should be closed and laid flat on a table or other horizontal surface, gently formed into the normal shape, with convex spine and concave front edge (if that was their original shape) and held in place with a light weight.

f) Do not stack drying books on top of each other. In no case should books be returned to the shelves until thoroughly dry; otherwise mold may develop, particularly along the gutter margin.