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Flood affected Public Libraries of South Kerala

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Abstract

This study was designed to examine flood affected public libraries of south kerala. The paper selected for the study was flood-affected public libraries of South Kerala, affiliated to Kerala State Library Council. According to Kerala Library Council, the 2018- 19 flood-affected 113 libraries in Pathanamthitta, Alappuzha, and Kottayam district, among which 95 libraries were selected.

1. Introduction

Libraries have been affected by many 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 of the information infrastructure is not so obvious. 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 artefacts represent the cultural and intellectual legacy of a country which is preserved and disseminated through libraries and archives. These resources are cultural artefacts, 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 artefacts and also cultural and intellectual records in 'memory institutions'. "Just as documents have symbolic value beyond the words they contain, archival institutions have symbolic value

beyond the manuscripts they contain"(Caswell, 2009) an archive becomes a cultural symbol of the power to formulate collective memory, and the control of the archive becomes synonymous with political power. An attack on a library is an attack on a particular culture. Using the destruction of books in Nazi Germany as a primary example, Knuth argues that "libricide" (the destruction of a book) is inextricably linked to genocide, as the social and political functions of libraries and archives make them symbolic targets for political violence (Caswell, 2009).

Flood is the excess availability of water in a region, and then it can usually hold is called a flood. Floods are usually heard of it in the news, and through channels as every year, large portions of India are drastically affected by floods. It is mainly during the monsoon season with the onset of rain, we hear of different floods and the havoc they have caused to humans, animals and plant life.

2. Disaster

Generally, disaster has the following effects in the concerned areas:

1. It completely disrupts the normal day to day life.
2. It negatively influences the emergency systems.
3. Normal needs and processes like food, shelter, health, etc. are affected and deteriorate depending on the intensity and severity of the disaster.
    - Unpredictability
    - Unfamiliarity
    - Speed
    - Urgency
    - Uncertainty
    - Threat

Thus, in simple terms, we can define disaster as a hazard causing heavy loss to life, property and livelihood. E.g. a cyclone killing 10,000 lives and a crop loss of one core can be termed as a disaster. In contemporary academia, disasters are seen as the consequence of the inappropriately managed risk. These risks are the product of hazards and vulnerability. Hazards that strike in areas with low vulnerability are not considered a disaster, as is the case in uninhabited regions (Biswas & Kumar, 2008).

3. Flood and Droughts

In our country, major floods are associated with the Ganga and the Brahmaputra rivers. Of the other rivers that are vulnerable to floods are the rivers of Orissa and Uttarpradesh Along with the Narmada and the Yamuna. Heavy sedimentation is a feature of the Ganga and the Brahmaputra. It is believed that these large deposits of sediments have their origin in the Himalayan Mountains. Sediments have their origin in the Himalayan Mountains. Owing to massive assaults on forests, the topsoil is washed away by rainfall into these two major river systems, namely, the Ganga and the Brahmaputra. Persistent deposition of sediments on the river bed has reduced the water holding capacity of these mighty rivers so that they are no longer able to stand an additional water load generated by spells of heavy rain.

4. The Indian Monsoon Summer

India is situated in the tropics, and its dominant climate system is monsoonal. There is excessively heavy rainfall during the four months of July to September, to compensate for the other months of the year. The monsoon broadly refers to an atmospheric phenomenon in which the mean surface wind reverses its direction from summer to winter. However, the monsoon is popularly used to denote the rains without any reference to the winds. The term "monsoon" originated from the Arabic word for season. Along with the progress in metrological sciences, more regional circulations have been categorized as 'monsoonal'. They are based on both wind and rainfall characteristics. Monsoonal regions over the globe are generally identified by certain characteristics of surface circulation in January and July, as laid down by Ramage (1971). These characteristics include a shift in wind direction by at least 120 degrees, average frequency of prevailing wind directions exceeding 40 percent, mean wind strength in at least one of the months greater than 3m/sec and less than one cyclone-anticyclone alternation in either month, in every two years. Although these monsoon criteria do not include rainfall explicitly, in seasonality in rainfall is the most important manifestation of the monsoon circulation.

5. India’s Vulnerabilities to Disasters: Natural and Manmade

India, with its geo-climatic conditions being what they are, is prone to natural disasters. Disasters occur with unfailing regularity and despite better preparedness to meet all such conditions in recent years; the economic and social losses are heavy. Among all disasters afflicting the country, river floods are the most frequent and often the most devastating. Earthquakes are considered amongst the most dangerous and hazardous, their impact being

sudden with little or no warning. In India, 59% of the landmass is susceptible to seismic hazard; 5% of the total geographical area is prone to floods; 8% of the total landmass is prone to cyclones; 70% of the total cultivable area is vulnerable to drought. Apart from these, the hilly regions are vulnerable to avalanches/landslides/hailstorms/cloudbursts. The intensity of natural disasters has been on the rise mainly due to reasons attributable to mankind in terms of wanton destruction and utilization of Earth's resources, thus leading to changes in the ecological balance of the earth as well as on overall global warming. Besides these, India is exposed to a countless number of manmade hazards which are frequent and cause huge damage to life and property. It is therefore important that we are aware of how to cope with their effects. The Indo-Ganga-Brahmaputra basin, stretching parallel to the Himalayan arc, carries water and silt from wide catchments through the longest alluvial plain in the world. About 12% of its geographical area (about 40 million hectares) is subject to reverie and flash floods, of which about eight million hectares are susceptible to annual flooding (Bandyopadhyay, 2007).

6. Kerala Flood 2018

The recent floods in Kerala are another perfect example of how human activities have led to the calling of nature's ire in different forms such as floods. Had it there been a proper drainage system with no blockages, Kerala would not have witnessed such a massive flood.

On 16 August 2018, severe floods affected the south Indian State Kerala, due to unusually high rainfall during the monsoon season. It was the worst flood in Kerala in nearly a century. Over 483 people died, and 140 are missing. About a million people were evacuated, mainly from Chengannur, Pandandu, Edanadu, Aranmula, Kozhenjerry, Ayiroor, Ranni, Pandalam, Kuttandu, Malappuram, Aluva, Chalakkudy, Thrissur, Thiruvalla, Eraviperoor, Vallamkulam, North Paravoor, Chellanam, Vypin, Island and Palakkadu. All 14 districts of the state were placed on red alert. According to the Kerala government, one-sixth of the total population of Kerala had been directly affected by the floods and related incidents.

The Indian government had declared it a Level 3 Calamity, or "calamity of a severe nature". It is the worst flood in Kerala after the great flood of 99 that took place in 1924. Thirty-four out of the fifty-five dams within the state were opened, for the first time in history. All five overflow gates of the Idukki Dam were opened at the same time, and for the first time in 26 years, five gates of the Malabuzha Dam of Palakkad were opened. Heavy rains in Wayanad and Idukki have caused severe landslides and have left the hilly districts

isolated. The situation was regularly monitored by the National Crisis Management Committee, which also coordinated the rescue and relief operations.

6.1 Causes of Flood

Kerala received heavy monsoon rainfall, which was about 116% more than the usual rainfall in Kerala, on the mid-evening of 8 August, resulting in dams filling to their maximum capacities; in the first 48 hours of rainfall, the state received 310 mm (12 in) of rain. Almost all dams had been opened since the water level had risen close to overflow level due to heavy rainfall, flooding local low-lying areas. For the first time in the state's history, 35 of its 54dams had been opened. The deluge has been considered an impact of global warming.

On 8 August 2019, due to heavy rainfall in the Monsoon season, severe flood-affected Kerala. As a security measure in the prevailing situation of heavy rains, the Government of Kerala had issued Red alert in the nine districts in Northern and Central Kerala, orange alert in 3 districts of Central Kerala, and yellow alert in the two districts of southern Kerala. Thousands of people have been evacuated to safer places, and relief camps total of 101 people have died due to rain-related incidents since 14 August 2019, these camps now host more than two lakh people from various parts of the state.

6.2 Flood-Damaged Public Libraries

Soiled books, smashed furniture, damaged equipment and rooms filled with mud tugged at the heartstrings of volunteers and officials at flood-hit public libraries in Kerala as they went to clean. According to an initial estimation by the Kerala Library Council, around 228 libraries affiliated with the council have been either seriously damaged or washed away in the recent Kerala floods. According to Kerala library council, the 2018-19 flood affected libraries in Pathanamthitta, Alappuzha, and Kottayam district, among which 96 libraries were selected for this study. The total flood affected libraries are arranged district wise in below table.

List of flood affected public libraries affiliated to library council in south Kerala(2018-19)	
Districts	**No. of flood affected libraries**
Thiruvananthapuram	-
Kollam	-
Pathanamthitta	36
Alappuzha	57
Kottayam	20

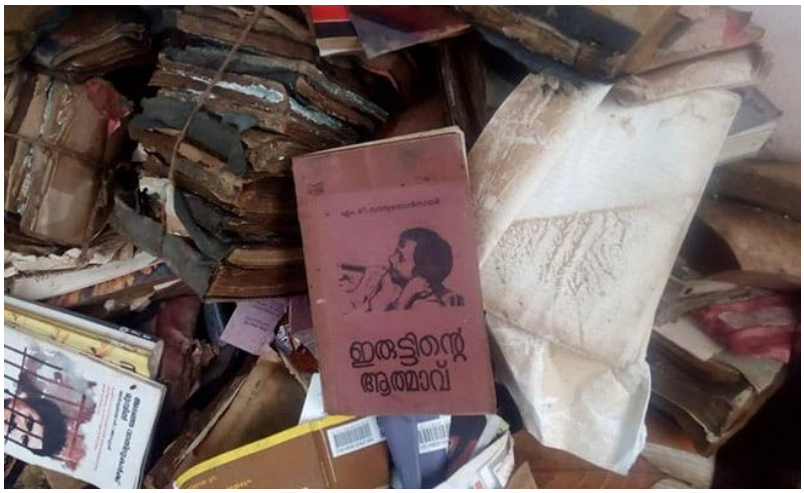

Fig.1 Flood- Damaged Books in Public Library (Wikipedia, 2009)

The Council has around 9,000 libraries affiliated with it while 6,000 of them receive grants from the council. However, activists said the number of damages libraries which are not affiliated with the council would be much higher as the state has the tradition of most organizations, clubs and social groups building their own libraries. Activists have also called for the participation of civil society and professional agencies in rebuilding the libraries in these areas (NDTV, 2018).

6.3 Impact

As of 14 August 2019, 121 people have been killed due to the floods across the state of Kerala. Over 2 lakh people have been directly affected by the flood, and have been shifted to 1318 relief camps in different parts of Kerala. Airport authorities suspended operations of the flood-affected Cochin International Airport till 15:00 (IST) on 11 August 2019. The data

from the Kerala State Disaster Management states that, as many as 1,789 houses had been damaged fully in between 8 and 19 August, while the number of partially damaged houses is 14,542. There have been 80 landslides in the span of 2 days, as said by the Chief Minister. Many people who are feared to be buried alive under them are being rescued. It is still a critical situation as the calamities interfere with the rescue operations. A district that has been severely affected includes Wayanad, Malappuram, Kozhikode, Kannur, Palakkadu, Thrissur, and Ernakulam district (Wikipedia, 2020).

Fig. 2 Impact of Flood (Wikipedia, 2019)

6.4 Alappuzha

All but four libraries in Kuttanad in Alappuzha are affected over flood. At MV Library and Reading Room at Pandanad, books were swept away by the surging waters. Parts of the structure where Anandapradayini, an old library near the KSRTC bus-station in Alappuzha, used to function came down, burying the books underneath. As the floodwaters raged through the State last month, they left behind a trail of destruction. Along with houses, schools, and establishments, libraries, big and small, were inundated. Thousands of books were left a sodden mess, and years, even decades, of hard work came undone in no time. While some of the books may be irreplaceable, efforts are on to salvage the others. The Kerala State Library Council, which has 8,417 libraries under it, estimates that 211 libraries have been affected by

the deluge. The council is pinning its hopes on the government's promise that libraries would be compensated for their losses and, thereby, gets back on track.

Going by preliminary estimates, the loss of books, furniture, and other equipment comes to over 12 crores. The government has sought a detailed report, and district council secretaries are sending across the details. The worst affected was Alappuzha district; preliminary reports go on to say, with over 60 libraries affected 31 libraries in Kuttanad and 15 in Chengannur flooded.

6.5 Support Gives to Libraries

Needless to say, libraries will also have to decide what to do with books that are in no condition to be put back on shelves. In some places, they have been dumped outside to be sorted, exposed to the elements. The Library Council has been promised books for its libraries by the Kerala Sahithya Academy, Kerala Book Marketing Society (Bookmark), DC Books and Poorna Publications. The Council has also planned a book collection drive with the support of the people and has appealed to the public to donate books to libraries affected by the floods. According to State Librarian P.K. Sobhana says a number of libraries had suffered huge losses after becoming inundated, and the State Central Library plans to collect books to hand over to them. General books from the public will be collected. Then, there are many students pursuing higher education who have lost their textbooks. We want to collect books for them and hand these over to the Director of Education so that they can be passed on depending on the requirement of each institution. The State Central Library would also collect books from libraries across the country with the support of the Indian Public Library Movement and hand these over to the flood-affected libraries that had asked for books. Books published before 2010 would not be accepted, though.

Records of the 1924 flood are very few. To ensure that the mid-August floods are documented properly, Ms Sobhana plans a year-long initiative to document newspaper and online magazine reports from the start of the flood. Social media such as Facebook too would be covered. The final product would be brought out in the form of a book, with proper indexing so that it could be accessed by the public (How Floods Damaged Public Libraries in Kerala, 2018).

7. Disaster in Libraries

Libraries are the centre of learning. They act as repositories of cultural heritage. Libraries collect, stock, process, organize, disseminate and distribute information/ knowledge recorded in documents. Libraries play a pivotal role in the educational process of formal and non-formal learning, research and development, cultural activities, spiritual realms, recreation and entertainment. It would be no exaggeration to say that libraries act as a cornerstone of the cultural and civilization edifice. Modern society is heading towards an information society in which the central instruments of change, force and direction of change are knowledge and information. Libraries through their books, journals and other learning materials enable the readers to partake of the wisdom and knowledge accumulated, treasured and enshrined in documents over the centuries. Access to existing knowledge and information is essential for research. Thus, libraries support and promote research, thereby contributing to the development of a nation's economy. Libraries cater to the recreational needs of the users. Libraries act as the heart of an academic institution supporting teaching and research. They provide an environment in which creativity is facilitated and fostered. They help preserve the wealth of knowledge which symbolizes the onward march of mankind on the path of progress and enlightenment from the stage of primitivism to modernism. Libraries and information centres are vulnerable to the whole range of disasters. No library is entirely free from risks and disorders. Paul Eden and Graham Matthews have defined disaster keeping the importance of library in society as, "an incident which threatens human safety and/or damages, or threatens to damage, a library's buildings, collections (or item(s) therein), equipment and systems". They also indicate that a disaster occurs due to several natural or man-made factors Water (e.g. burst pipes or heavy rains leading to flooding) and poor storage and environmental conditions (e.g. dampness leading to mould growth) inadequate security leading to break-in and theft n Building deficiencies poorly maintained buildings (Eden&Matthews, 1996).

Libraries have a stack of books, journals, reports, conference-proceedings, rare materials and antiquities, equipment (computers, photocopiers), furniture which form an integral part of library's material, all of which as well as building is susceptible to disaster. Libraries are the heart of academic institutions and have the sources of information collection in a variety of formats which are required to be protected from disaster through disaster planning. In this new technological era, libraries have modernized and automated their operations and services.

Libraries are adopting new technology, formats and contents to better meet service delivery mandates. Changes are accompanied by new risks to library operations and additional challenges to the recovery of essential services after a major interruption. Libraries safeguard the tangible as well as intangible products of human intellect. But these repositories of information are amenable to the natural process of deterioration. Some of the causes of natural deterioration include acidity of paper, copper corrosion of miniatures, chemical burning of leather, pest infestation, termite etc. Libraries also face a threat from computer viruses. Apart from these inevitable causes of decay, natural hazards such as earthquakes, landslides, floods, storms, volcanoes, accidental fires and man-made disasters like theft, vandalism, mutilation, war, terrorism, neglect etc. put libraries at high risk. These disasters have come to pose a grave threat to the gains made by the development. Horrendous natural and man-made disasters in the past years decimating very richly equipped libraries resulting in the disfiguring and destruction of rare collections have reinforced the need for libraries to be prepared to cope with disasters adequately in a bid to minimize the loss which occurs in the wake of such a disaster.

Libraries and information centres must play a vital role to preserve their collection and accessibility of information. Otherwise, also libraries have to maintain the fragile balance between preservation versus access. Libraries should take adequate measures to prevent the eruption of disasters. Hazards or disasters in libraries can be mitigated or avoided altogether through meticulously elaborate disaster planning. Activities aimed at averting the occurrence of the disaster constitute disaster management. For example, fires can engulf a library altogether, leaving no traces behind. So disaster plan is essential for libraries to identify the risk factors pertaining to their areas and formulate a disaster plan to deal with any unforeseen eventuality (Lyall, 1995).

8. Disaster Management of Libraries

Libraries should follow an effective disaster control plan. The plan should be occasionallymonitored and reviewed. Periodic full scale mock drill should be carried out. Library Buildings, equipment, gatherings and computers should be completely insured. There should be good drainage and flood-proof system. Library building should be constructed in such a way that it may be seismically safe. Even checks of library building regarding water leakages should be carried out. Library building and resources should be suitably maintained and regular inspections of buildings and equipment should be conducted. Fire-extinguishers should be checked and staff members should be trained in handlingthe equipment in case of

emergency. The lay-out of library building should be such that the ground floor does not have any valuable reading materials that could be lost in floodsparticularly where the area is prone to it. Basement should be avoided in the librarybuilding. Electrical installations should be fitted in a safe mode and single switch control should be installed. Stacks should be properly shelved and cleaned. Termite treatment should be periodically done in the library. Library building should be considered in such a way that when the earthquake strikes, minimum possible loss may occur. Mock drillsshould be carried out periodically not only to check the equipment but also to give training to the library staff. The first priority in case of any disaster should be human safety. Disaster control plan should integrate a list of all the members of the disaster team, obviously stating their responsibilities during all phases of a disaster. The frequency with which this task needs to be carried out should also be specified. Committed and dedicated staff members are necessary for coordinating the activities of disaster plan and making it successful. Digitization is an important means of preservation for priceless heritage and cultural materials. Digital archiving is indispensable. Archiving materials implies standards and formats that will never decline and is often an active process of continual migration. Metadata standards such as EAD (encoding archival description) for discovery guides and EACs(encoding archival content) form the backbone of archiving of digital resource files, and are instrumental in validating digital archives.(Gyankosh,2015).

9. Disaster Plan in Libraries

This usually involves four phases: The following guide to producing a disaster plan outlines recommended action in all four phases, but prevention is the best protection against disaster, natural or man-made.

1. **Prevention**

Identify and minimize the risks posed by the building, its equipment and fittings, and the natural hazards of the area.

- Carry out a building inspection and alter factors which constitute a potential hazard.
- Establish routine housekeeping and maintenance measures to withstand disaster in buildings and surrounding areas.
- Install automatic fire detection and extinguishing systems and water-sensing alarms.
- Take special precautions during unusual periods of increased risk, such as building renovation.

- Make special arrangements to ensure the safety of library or archival material when exhibited.
- Provide security copies of vital records such as collection inventories, and store these off-site.

2. **Preparedness**
   - Develop a written preparedness, response and recovery plan.
   - Keep the plan up-to-date, and test it.
   - Keep together supplies and equipment required in a disaster and maintainthem.
   - Establish and train an in-house disaster response team.
3. **Response**
   - Follow established emergency procedures for raising the alarm, evacuating personnel and making the disaster site safe
   - Contact the leader of the disaster response team to direct and brief the trained salvage personnel
   - When permission is given to re-enter the site, make a preliminary assessment of the extent of the damage, and the equipment, supplies and services required.
   - Stabilize the environment to prevent the growth of mould.
   - Photograph damaged materials for insurance claim purposes.
   - Set up an area for recording and packing material which requires freezing, and an area for airdrying slightly wet material and other minor treatment.
   - Transport water-damaged items to the nearest available freezing facility.
4. **Recovery**
   - Establish a programme to restore both the disaster site and the damaged materials to a stable and usable condition.
   - Determine priorities for restoration work and seek the advice of a conservator as to the best methods and options, and obtain cost estimates.
   - Develop a phased conservation programme where large quantities of material are involved.
   - Discard items not worth retaining, and replace or re-bind items not justifying special conservation treatment.
     - Contact insurers.
     - Clean and rehabilitate the disaster site.
     - Replace treated material in the refurbished site.

- Analyse the disaster and improve the plan in the light of experience (Bansal& Jivesh, 2008).

10. Conclusion

Kerala, God's own country, as it's called owing to its rich natural resources and stunning beauty of the land, invited a series of floods in the recent years owing to the overexploitation of its natural resources. As all the actions revert to the doer of an action and Keralites is not an exception to this universal truth. The destruction caused to the treasure house of knowledge, libraries is definitely a hefty loss to bibliophiles. The flood displayed it's might to all inhabitants of the state of Kerala only to set an example of how nature must be treated by the inhabitants. With the advent of a flood, the normal life of the village and city dwellers was disrupted beyond the scope of recovery. In this process, the treasure house of knowledge, libraries were also not spared. The topic that I have chosen is an expedition into the causes of the flood and the remedies that's to be taken in order to reinstate the facilities that were disrupted by the floods in Kerala hit in the year 2018-19.

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