Chapter 2: Disasters in Libraries: A Historical Perspective

2.1 Introduction

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, organisation, 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 artefacts represent the cultural and intellectual legacy of a country which is preserved and disseminated through libraries and archives. These resources are cultural artefacts 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 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, p. 11) The author further argues that 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. (as cited in Caswell, 2009, p. 9)

2.2: Damage to Libraries
A disaster affects a library in many ways. It damages the building, the furniture, the equipment and the shelving. Further it damages or destroys the collection which has been painstakingly developed over several years. The value of this collection is often difficult or impossible to arrive at. Disasters affect readers of the library who at least for some time do not get access to the materials they need. It traumatises the staff that has put in hours of work to develop a collection and provide the services. The physical, financial, intellectual and emotional effects of a disaster are extremely damaging. Creber (2003) referring to a particular disaster said “The losses and damage should not be assessed purely on a statistical basis. The loss in service was immeasurable. A city had lost its library and with it its access to knowledge and learning. A community had lost its record of heritage. Staff had lost their place of work. The work of hundreds of person-years had been destroyed”. (p. 193). This is equally true of every library which is affected by disasters.

From the time of the destruction of the Alexandrian Library in 48 BC, till date, several hundreds of libraries have been damaged due to different kinds of disasters. Valuable collections have been lost to posterity. A review of the factors that damage the collections, with select examples of the libraries affected are presented below. An overview of disasters in libraries in India follows.

Disasters – both natural and man-made - in libraries are not a new phenomenon. Dinca (2009) reports that some important Transylvanian libraries of the 14th, 15th and 16th centuries were affected by disasters, e.g. the medieval manuscripts collection at the Lutheran College was destroyed due to fire in 1689.

In East Asia, during the 15th century, the Timurid Dynasty controlled a vast kingdom which stretched from Turkey to India. Its capital Herat, now in Afghanistan, was the location of large and luxurious libraries which had beautifully illustrated and bound books. After the fall of Timurid in the 16th century, with the Uzbek invasion of Herat, all these libraries were ruined. (Amirkhani, 2001) Some significant disasters in more recent times have been reported in the literature.

2.2.1: Water
While all types of disasters have the potential of damaging libraries, water is not only the most common but also the most potent factor. Damage can be caused through a tsunami or floods from a nearby water body such as an ocean or river. Heavy rains, or wind driven hurricanes, cyclones and tornados also destroy collections. In all these natural disasters water is a key damaging factor. Apart from these natural causes, water can come into a library from broken water or drainage pipes, or seep in through leakages from walls, broken windows, doors or even from the ground. Moreover, even when the chief disaster is a fire, activation of water sprinklers and fire-fighting equipment requires extensive use of water, which in turn causes damage to books. Vulnerability to water damage is higher when the library is located in the basement or the ground floor, or near a fire hazard prone area such as a canteen or a chemical laboratory.

Water damages almost all types of library resources: paper-based, photographs, films or digital. Water damage can range from dampness, or wetness at the edges, to completely soaked or submerged items. The extent of damage depends on the force with which the water comes in and also on how long it stays in the library. Thus it can range from minimal to completely destructive, depending on the materials involved and the amount of water, the circumstances and the purity of the water.

All components which make up a book are susceptible to water damage. The type of paper, quality and amount of sizing used, ink, glue and binding are all affected by water to different degrees. For example blotting paper absorbs water much more than art paper; newsprint which has very little sizing gets damaged faster than photographic paper which uses different sizing material. When exposed to water some prints and materials soften and stick to adjacent surfaces. Papers that get wet can become distorted or warped and some may even dissolve completely in water. Water can cause bleeding of inks and dyes causing the text or the pictures to appear blurry and streaked. Binding of books may be severely damaged due to water. When wet books of different sizes are placed on top of each other they get warped and lose their
shape. Further wet paper is likely to attract mould and fungus thereby increasing the damage. If books are tightly packed on the shelf, the swelling of books with water makes it difficult to remove them without further damage.

There are numerous examples of library disasters caused by water. A few select examples follow. Floods in the River Seine in 1910 in Paris, France (Baryala, 2006) and in the River Arno in 1966, in Florence, Italy caused heavy damage to the respective national libraries. In the Florence floods, over two million rare and irreplaceable volumes and innumerable manuscripts were damaged. The basement of the Biblioteca Nazionale Centrale, Italy was filled by water and mud. Nearly 1,200,000 volumes and pamphlets were flooded, including 100,000 rare volumes of the Magliabecchi collection, 50,000 folios of the Palatina, a newspaper collection of 400,000 volumes. The card catalogue was damaged as well. Other collections in Florence suffered flood damage too, e.g. the 350,000 volume collection of the Vieuxsieux (including first editions and association copies). At the University Library in Florence, 200,000 volumes were under water. In the major libraries of the city, a total of 2 million volumes were submerged. (Lenzuni, 1989; van der Hoeven, & van Albada, 1996).

In 1975, the Case Western Reserve University Library, Cleveland, Ohio was flooded. Almost 40,000 books and 50,000 maps became wet and muddy; the cost of recovery was $540,000. (Buchanan, 1988) In 1985, heavy rains and overflowing of a river resulted in the flooding of the basement of the 450 years old Innsbruck Museum and library in Austria. The ice cold water flowing with heavy force damaged 80% of the Museum collection and part of the library collection stored in the basement. (Tarmann, 2000) The Morgan Library at Colorado State University faced a catastrophic flood in 1997. The water damaged the power supply of the library building and completely submerged half of the library’s collection. About 500,000 bound journals, government documents, and microforms were damaged irreversibly. The entire collections of bound volumes and science monographs were damaged. The water also destroyed 81,000 linear feet of shelving, two staff offices, the Electronic Information Laboratory, and five study rooms; telecommunication closets, mechanical rooms, and three elevators; and more than 500 chairs and tables. (Lunde & Smith, 2009; Parker, 2007)

Floods struck in Prague city of Czech Republic in August 2002, destroying and damaging large collections in more than 40 libraries, including 14 major research libraries and the National Library of the Czech Republic and the Prague Municipal Library. More than 8,000,000 documents were damaged or destroyed. Damage to the National library was estimated at $11,000,000 whereas for Prague Municipal Library it was $15,000,000. The worst damage occurred to special collections in the basement of the Holesovice Branch of the Prague Municipal Library where 20,000 rare and historical books, including a 1488 Prague Bible - the first in Czech language and one of only 12 copies world wide - were soaked. (Ray, 2006; Floods..., 2002; Polsensky, 2002)

In June 2006, due to heavy rains, the Sidney Memorial Public Library, New York, USA was flooded with 5 feet of water in the basement area which housed a large storage room, staff members’ workspace, the boiler room, a storage room for two 500 gallon oil tanks and all of the phone and computer lines including the computer server. (Flaherty, 2009-2010) Iowa, USA had heavy floods due to two rivers overflowing in 2008. Museums and University of Iowa were affected: Iowa City collections of the University of Iowa Libraries and Cedar Rapids collections of the National Czech and Slovak Museum and Library and the African American Museum of Iowa were affected. (Baum, 2009)

The tsunami in 2004 in South and Southeast Asia affected several libraries. The magnitude of the disaster was so great that libraries were almost wiped off from the map. In Sri Lanka about 170 school libraries, 55 public libraries and 68 libraries attached to religious institutions were either destroyed or damaged. (Gamage, 2005; Amarasiri, 2005) Libraries in the Aceh Province of Indonesia were badly damaged. Two public libraries were destroyed. The Centre for Documentation and Information of Aceh with its manuscript collection was practically obliterated. Moreover there was human loss; 23 staff members of the Aceh Provincial Library including the Director of the Library perished in the tsunami. The collection and equipment on the ground floor of the library were completely destroyed. These libraries had to be started afresh and efforts to re-establish these libraries received support from national and international organisations. (Robertson, 2005)
Examples of hurricanes, cyclones and tornados damaging libraries are also common. One of the biggest hurricanes faced by Jamaica was hurricane ‘Gilbert’ in September 1988; it caused extensive damage to the library of the Norman Manley Law School, University of the West Indies, Kingston. The driving wind and the rain soaked a large part of the collection, scattering books and papers, damaging furniture and soaking the carpet. 50% to 75% of the collection was exposed to water damage. Hurricane ‘Gilbert’ hit Jamaica Library Service system and many of its branches were also damaged. Overall loss of over 150,000 books and periodicals was reported due to it. (Aarons, 2003) Hurricane ‘Hugo’ in 1989 in Montserrat Island damaged the Montserrat Public Library. The library was under approximately four inches of water. Materials from the newspaper and paperback racks and from the magazine display had ended up in the water gathering on the ground. Children’s books were lying in water. A cabinet of local history materials from the Montserrat National Trust was broken and the materials it held suffered water damage. The library lost some 6,800 books; broken window panes and furniture were strewn on the floor. The public library also had to be shifted and re-shifted due to volcano eruptions in August and December 1995, and April 1996 which again resulted in disruption of services. (Cassell, 2004)

Typhoons and hurricanes severely damaged libraries in 2005. In January of the year, a hurricane affected the archives in the city of Falkenberg, Sweden. It was flooded, as the strong winds pressed the sea-water up to a hitherto unseen level and due to a broken window uncontrolled water entered into the archive, which resulted in the damage of several hundred thousand archive boxes. (Cullhed, 2006)

Hurricane Katrina in August 2005 was one of the deadliest storms in the last 100 years and the costliest natural disaster ever to strike the United States. It assaulted the Gulf Coast with winds up to 140 miles per hour affecting Southeast Louisiana and two thirds of Mississippi. It affected a very large area and destroyed and damaged several libraries. Of the 188 public libraries in Louisiana, 23 were destroyed, 33 suffered severe damage and 37 more had moderate damage. In Mississippi 8 public libraries and 43 school libraries were destroyed. One of the libraries that the hurricane destroyed was the Howard-Tilton Memorial Library at Tulane University. The basement of the library was flooded for three weeks with 8 feet of water. A total of 700,000 items in the collection including print volumes, archival folders, recordings, microfilm reels and cards were damaged. More than 60% of the damaged collection was lost. (Eberhart, 2005; Clareson & Long, 2006; Topper, 2011) During a severe summer storm water collected outside the North Dakota State University Main Library, broke the window panes and entered the library. More than 4 feet of water mixed with sewage and petroleum products flooded the lower levels causing a damage of approximately $2,000,000 to the collection and $1,000,000 to furniture and equipment. (Flood..., 2000) Yongquan Monastery in China which had a rare collection of ancient books was damaged due to typhoon Longwang in October 2005. Many of the documents were already infested with mould and the typhoon made the situation worse. More than 5,000 volumes of Buddhist classics were immersed in the water. The paper of the documents was fragile and was damaged by the muddy water. Particularly in the Blood Classics, a kind of Buddhist classics said to be written with the blood of the monks; the characters had faded. (Pinhong, 2006)

The Michel Orradre Library, the main campus library for Santa Clara University is only a few feet above sea level and is on top of an underground stream. A heavier than normal rainfall normally results in seepage from the ground. Standing water would cover the floor at the basement, and at the foot of the elevator shaft. The air would get mouldy and visible fungal growth would begin to appear on the walls. This continued for several years until four wells were dug at the four corners of the building and a de-watering system that pumped out the ground water automatically was installed. (Kim & Goodwater, 2003)

Flash floods sent a wall of water - up to 15 feet at its highest point - through the ground floor of the Hamilton Library of the University of Hawaii at Manoa in October 2004, ripping out office walls and soaking 230,000 rare maps and aerial photographs, thousands of government documents and books, more than 100 computers and the entire library and information science school. The water pushed through with the force of a tsunami resulting in materials turning up as far as five blocks away. The chairperson of the School, Rebecca Knuth commented, “It was an experience to see our files under cars, a computer smashed into a tree, a small table perfectly upright 50 yards away”. (Flash..., 2004, p. 16; Davis, 2006)
Negligence, lack of maintenance and human error can also cause water damage. In 1998 the basement of the Boston Public Library was flooded due to a break in a water pipe. (Fithian, 1999) The Library of the Culture Palace for Nationalities of China (LCPN) faced a minor flood in 2005, due to a broken heating pipe. Hot water damaged more than 20,000 newspapers and books including about 290 packs of the Tibetan Buddhist sutras, about 600 traditional-thread-binding Chinese ancient books. Many books became unrecognizable as ink spread. It also damaged the artifacts and objects kept in the Museum of the Culture Palace for Nationalities. Because of water, the paper became gluttonous and groups of pages adhered together, several books were worn down to cotton fibers and some documents were blurred and the characters were unrecognizable. The paper fibers were degraded forming red marks on paper. The disaster reduced the lifetime of the collection for at least 100 years. (Zhiaqing & Daying, 2007). Due to bursting of unwrapped fire suppression pipe, water flooded the Science and Technology Library of University of Akron in 2010. (Calzonetti & Fleisher, 2011) The construction work going on in an adjacent building caused a steam pipe to burst, the fire sprinklers to discharge in the basement of Sterling Memorial Library at Yale University in January 2006. It damaged the special collection of Cambodian newspapers and 4,500 documents of Southeast Asian collection. It also created problems in the library’s computer networking system. The four servers in the library were damaged. (Kennedy, 2006)

2.2.2. Earthquakes
While water damages the books directly, earthquakes damage the building which houses the library, indirectly affecting the books. High intensity earthquakes lead to building collapse burying the books among the debris. The quantum of debris makes it very nearly impossible to separate the books from the rubble. Half broken buildings expose the library collection to ravages of nature and greed of man. Looting and theft are frequently observed in such situations. The shaking of the earth results in books falling off the shelves, requiring a lot of re-shelving. Further, loss of lives, damage to housing, communications and transport infrastructure disrupt day to day lives of people. Coping with day to day problems and the psychological trauma faced prevents people from returning the borrowed books thereby further adding to the loss of books. Often, an earthquake is followed by tsunamis, heavy rains, landslides or fire, which in turn increases the damage. Restoration of services in earthquakes usually takes longer since the buildings and furniture are destroyed.

The Imperial University Library in Tokyo was hit by a massive earthquake in 1923. 700,000 volumes of that included government documents, manuscripts and old prints were completely destroyed. (van der Hoeven, & van Albada, 1996). Stanford University Campus Libraries were affected by an earthquake in 1989 (Loftus, 1999) while the Oviatt Library at California State University at Northridge, USA was damaged due to a 6.7 magnitude earthquake in 1994. The library building was structurally damaged and 50% of the building had to be demolished. The collection was thrown on the floor, water damaged it and mould had spread into the collection. It took six years to restart the library. (Curzon, 2006)

An earthquake of the magnitude of 6.8 along the west coast of USA damaged libraries in 6 counties on 28 February 2001. Though only one library suffered structural damage, stacks tilted precariously, shelves got torqued and twisted into bizarre angles and fell on the floor rendering much of the collection temporarily inaccessible due to safety concerns. (Washington..., 2001)

In May 2008, the Sichuan Province of China was hit by an earthquake measuring 7.9 magnitude. The earthquake completely destroyed four county level libraries and severely damaged 29 others. Another 25 county libraries were also damaged. In all about 670,000 books were destroyed and the total damage was estimated to be equivalent to $69,000,000. (National..., 2008)

On 08 October 2005, a major earthquake of 7.6 magnitude shook the Azad Jammu and Kashmir region of Pakistan. 67% of schools and colleges in the quake area were destroyed or partially damaged. The Katharish National Library in Muzaffarabad founded in 1988 and the only public library in the area was completely destroyed as it was near the epicentre. It fell into one of two huge crevasses that opened up suddenly within the city. More than 3,500 books and about 40,000 documents related to the history of Jammu and Kashmir and its freedom movement were destroyed. The Central Library and Kashmir Information Resource Centre (KIRC) housed in a single building at the campus of the University of Azad Jammu & Kashmir were damaged
but not destroyed. Books fell off the shelves and cracks developed in the wall and ceiling tiles fell. But as many people had left the area due to continuous aftershocks, the library was closed with everything inside. Due to abandoning the library in this condition, as it happens during the disasters, the costly equipments which included computers, fax machine, photocopiers, multimedia and other resources were stolen. (Shaheen, 2007, 2008)

An earthquake followed by heavy rain in the city of L’Aquila in Central Italy happened on 06 April 2009. Many buildings including the university, hospital, state archives and provincial library were damaged or destroyed. One of the wings of the library of the Convent of Santa Chiara in L’Aquila collapsed damaging many documents which also included 52 volumes with parchment binding belonging to the 17th and 18th centuries. (Batori, 2009)

Many of the libraries in Haiti were damaged due to a 7.0 magnitude earthquake on 12 January 2010. The Bibliothèque Nationale d’Haïti, the National Library of Haiti was heavily damaged, but did not collapse. Other libraries which were destroyed or damaged in the earthquake included St. Gonzague’s Patrimonial Library, and The Library of the University Quisqueya. The country’s oldest library Bibliothèque Haïtienne des Pères du Saint Esprit, (also known as St. Martial) collapsed and the manuscripts collection from the 17th to 19th century was destroyed. (Mincio, 2010)

There were 89 earthquakes reported in Japan from 1997 to 2006 which resulted in damage and destruction of several libraries. (Varaprasad, 2008) In the year 2011, two earthquakes in two different parts of the world affected libraries. The combination of earthquake, tsunami and nuclear disaster resulted in heavy damage in northeast Japan in March 2011 with after shocks continuing for two more months. It is reported that many libraries were completely wiped out due to the tsunami which followed the earthquake. In addition 251 libraries were damaged. At the National Diet Library, 1.8 million books fell off the shelves and had to be re-shelved. (Okahisa, 2011) In August 2011, the earthquake that hit Maryland, USA resulted in falling of 27,000 books from the shelves and damage occurred to 700 items at McKeldin Library of University of Maryland. It also damaged the building. (University of Maryland, 2011)

2.2.3: Fire

Fire is another disaster threat faced by libraries. It can happen due to negligence, short circuit caused by loose or faulty wiring or faulty switches. Sometimes fire can be intentionally caused to damage the cultural history and identity of a nation. Library resources are most often on paper or film, while library furniture is often wooden. All these materials are inflammable. A fire in adjacent premises can easily spread to the library. The fire can damage and turn the books and other resources to ashes. Even when materials are not directly burnt soot and smoke affect the other collection in the library. Moreover the fire prevention and fire fighting methods also add to the damage of the material. The damaged material can be categorised as follows: 1. burnt and wet, 2. completely burnt, 3. partially burnt e.g. only casings and edges affected, 4. heat damaged e.g. CDs, and 5. soot damaged. (Perry, 2006)

In May, 1943 a fire completely destroyed the National Library of Peru, with the loss of 100,000 volumes as well as 40,000 manuscripts. Another fire at the Jewish Theological Seminary Library, New York, in April, 1966 destroyed many books which had escaped destruction in Europe during the Second World War. About 70,000 books were burned while the remaining 150,000 were damaged by water. Another event noted by the authors is a fire at USSR Academy of Sciences Library in Leningrad, in February 1988 which destroyed or damaged about 3.6 million books. The library also lost 400,000 newspapers and scientific periodicals. (van der Hoeven, & van Albada, 1996).

The Artificial Intelligence Library at University of Edinburgh was destroyed due to fire in 2002. The library housed a unique and historic collection of publications on the topic, dating from the early years of the development of the field. (Battersby, 2005) The Law School Library at University of Buffalo, USA was affected due to fire in the lower floor of the school building in March 2005. No books were burnt or destroyed, but the collection was covered with soot and the infrastructure was damaged. The Library was closed down and services were shifted to other libraries in the campus. (Milles, 2004) In August 2006, due to a fire in the building next door, Dongola Illinois Public Library was affected. The building wall and roof adjacent to the restaurant which caught fire was badly damaged and the whole collection was covered with soot and smoke. (Holderfield, 2007)
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A fire due to old wiring resulted in the loss of a medical library having rare materials at Radcliffe Infirmary at Oxford, England in 1971. (Buchanan, 1988) Norfolk and Norwich Central library in UK was destroyed in 1994 due to a fire caused by faulty wiring. It took a day and a half for the fire to be extinguished. The losses resulting from the fire were quite substantial: 125,000 books destroyed or damaged beyond repair, 11,500 audio and video items, 25,000 local history books destroyed or severely damaged, catalogue of local studies stock, 75 years of local newspaper cuttings, all ground floor furniture including shelving, 30 computers and other IT devices and the building itself which was seriously damaged and eventually declared unsafe. In addition three million manuscripts and records of the county archive were damaged by water from the fire hoses, 500,000 items including photographs and maps were badly smoke damaged. The card catalogue was completely burnt to ashes. (Hammond, 1996; Creber, 2003)

The Los Angeles Central Library lost nearly 400,000 volumes out of a total of 2.1 million due to a deliberately-set fire in April, 1986. Another 700,000 volumes were water-soaked or dampened, while all remaining books suffered smoke damage. The largest and oldest collection of patents and inventions in the American West and large collections of cook books were lost. (van der Hoeven, & van Albada, 1996)

The Municipal Library in Linkoping, Sweden was set on fire in 1996. The fire which lasted for almost 24 hours was targeted at the immigration office set-up in the library building. 150,000 monographs were destroyed. The card catalogue of about 400,000 books was lost. Books bound in original 18th century binding and displayed in display-cases were fire-damaged. Soot spread to older collections. Portraits and museum objects were severely damaged. (Cullhed, 2006, 2003)

A fire in the basement of the University of New Mexico’s Zimmerman Library in April 2006 destroyed 30,000 bound volumes of periodicals and also damaged and destroyed library furniture. Shelving had leaned by 45 degrees with wet books. Smoke spread into the whole building and the walls of the reference area on the first floor were streaked with soot. Since the local disaster recovery team was not allowed to enter, many documents lay in water adding to the damage. An accelerant was used to start the fire. (Gugliotta, 2006)

The California Aerospace Museum and Library at San Diego was totally destroyed in 1977 by an arson fire resulting in a loss of $16,000,000. (Buchanan, 1988) In July 2003 a fire was deliberately started on second floor of the Ilah Dunlap Little Memorial Library at the University of Georgia. Through the air-conditioning system smoke spread throughout the whole building. Many books were either burnt and wet or completely burnt or partially burnt or damaged by heat or damaged due to spreading of soot. (Perry, 2006)

The library of 15,000 to 20,000 books at the Sikh Cultural Society Temple in Queens, New York city was virtually destroyed in 2002 because of a fire. Many of the destroyed books on Sikh culture and Punjabi history were out of print and impossible to replace. (Fire..., 2002)

In September 1999 an electrical fire in the basement of the Bush Memorial Library at Hamline University in St. Paul, Minnesota caused smoke and water damage of more than $200,000. The fire started in a cable hidden behind a wall in a television studio in the library’s basement and went unnoticed for several hours. Water damage from fire fighting was limited to a certain portion of the basement but smoke circulated to all the upper floors through the ventilation system and deposited soot everywhere - on books, furniture, computers and equipments. The building had to remain closed for one month for the cleaning work. (Electrical..., 2000)

Flames leaped through a historic library in Weimar, Germany in September 2004 destroying an estimated 30,000 volumes, many of them rare or unique works and donated by renowned German writers like Goethe and Schiller. Thousands of other volumes suffered smoke and water damage as some 330 fire fighters extinguished the blaze which broke out on the top floor of the 16th century palace that had housed 120,000 volumes in the main building of the 1,000,000 volumes Duchess Anna Amalia Library since 1766. The library was not insured as its collection was irreplaceable. (Cullhed, 2006; German..., 2004)

2.2.4: War and Vandalism

There are a number of reasons libraries become targets during times of war, conflict, and regime change. Sometimes they are simply collateral damage, in the wrong place
at the wrong time. At other times they are deliberately targeted as part of a systematic destruction of a community’s collective knowledge. Looting of libraries, burning library collections in times of war, terrorist attacks, destroying library collections for political reasons are not uncommon, causing libraries to suffer a great loss. The UN’s International Criminal Tribunal of former Yugoslavia for the first time in 2003 recognised deliberate destruction of libraries as a war crime in a court of International Law at the trial of Slobodan Milosevic (Riedlmayer, 2004)

Perhaps the most famous of the libraries in ancient times, the Royal Library of Alexandria in Egypt, was destroyed due to fire. Ancient and modern sources identify four possible occasions for the partial or complete destruction of the Library of Alexandria: Julius Caesar's fire in the Alexandrian War, in 48 BC; the attack of Aurelian in 270-275 AD; the decree of Coptic Pope Theophalus in AD 391; and the Muslim conquest in 642 AD or thereafter. (Library..., 2012)

Warfare and fire accounted for the destruction of the Hamlin Library at Peking in 1900 resulting in the loss of many manuscripts dating back to 15th and 16th centuries which were irreplaceable. (Davis & Huanwen, 1997).

Many libraries suffered during the period of two World Wars. In World War I, as a result of the German invasion, the Library of the University of Louvain in Belgium was damaged due to fire in 1914 destroying over 300,000 books, manuscripts and incunabula. It was once again damaged and destroyed by fire during the Second World War in 1940, due to firing by German artillery. The stacks were completely burned down and the library lost about 900,000 volumes, 800 manuscripts, all incunabula, and 200 prints of old masters. (van der Hoeven, & van Albada, 1996).

The systematic cultural purification drive of the Nazis destroyed libraries in large parts of Europe. Polish libraries suffered the most and Polish books and arts collection were looted or destroyed. From 1939-1945, after the German occupation of Poland, Polish libraries, archives and museums were ruthlessly destructed and suffered losses of collections and catalogues. In 1939 the Western provinces of Poland nearly lost all their public and private libraries. About 700,000 volumes, including manuscripts, older printed works, and music and map collections were completely destroyed in October 1944, at the National Library in Warsaw. The Central Military Library, containing 350,000 books on the history of Poland, was totally wrecked. In January 1945, when Germans were evacuating Poland, they burned the main stacks of the Warsaw Public Library. Many other books were taken to Germany after the war. It is estimated that, 15,000,000 out of 22,500,000 volumes in Polish libraries were destroyed. The Great Talmudic Library of the Jewish Theological Seminary in Lublin was burned and the remaining collection of about 24,000 volumes was taken to Germany along with other Jewish books from private or public collections. All of these were destroyed by air raids, especially in Berlin. Of the books that remained in Poland, many were either pulped or burned. (van der Hoeven, & van Albada, 1996).

The Second World War (1939-1945) proved disastrous for German libraries also. Millions of books were lost. It was estimated that a third of all German books were destroyed. For example The Hessische Landesbibliothek library at Darmstadt was destroyed by fire due to bombing in the area in September 1944. Collection of about 760,000 volumes were lost, which included 2,217 incunabula and 4,500 manuscripts. The Library of the Technical University lost two thirds of its collection. (van der Hoeven, & van Albada, 1996)

The National and University Library at Strasbourg, France was partially destroyed by an air raid in September 1944. Literary periodicals and publications of learned societies and the greater part of the medical collection were lost. About 300,000 out of 800,000 volumes were destroyed. (van der Hoeven, & van Albada, 1996)

Italian libraries also suffered damage during 1940-1944 as a result of war. More than 20 Municipal libraries were destroyed and many public libraries suffered the same fate. Almost 2,000,000 printed works and 39,000 manuscripts were destroyed. German soldiers set fire to Naples State Archives whose collection dated back to the 13th Century and contained irreplaceable histories of Europe, Asia and Africa. Books were burnt or turned into waste paper. Many books were thrown in the river. (van der Hoeven, & van Albada, 1996)

In April, 1941 the National Library in Belgrade, Serbia was destroyed due to bombing. About 1,300 Cyrillic manuscripts from the 12th to 18th centuries were
burned. Incunabula and old printed works including Serbian books printed between 1832 and 1941 were turned into ashes. The German invasion damaged Russian libraries during 1941-1944. More than 100 million books were damaged or destroyed from public libraries. (van der Hoeven, & van Albada, 1996)

Post World War II in Eastern Europe, the USSR in order to propagate the communist doctrine, purged the libraries of several countries such as Hungary and Romania. Nearly all small public and special libraries were destroyed and many large libraries suffered serious damage during the siege of Budapest, Hungary in 1944-1945. The libraries of Parliament and of the Academy of Sciences were among the libraries most severely hit. The library of the Polytechnic Institute was completely destroyed. (van der Hoeven, & van Albada, 1996)

How libraries were looted or destroyed due to war is described by Reidlmayer (2007); Garcia (2007) and Danelewicz (2005). Garcia (2007) commented “Nazi and Communist destruction of European intellectual and cultural heritage pales in comparison, though, to the destruction of the National and University Libraries in Bosnia and Herzegovina in Sarajevo”. (p. 362) The rivalry and hatred among the different ethnic groups resulted in their destroying each other’s culture leading to what has been called ‘cultural suicide’. During the wars in Croatia, Bosnia-Herzegovina, and Kosovo in the 1990’s many libraries were destroyed. In 1992 Bosnia’s National and University Library was bombed and set on fire by Serbian nationalist forces in an attempt to completely destroy Bosnian culture; the National Archives, over 155,000 rare books, and 478 manuscript codices were destroyed in the blaze. As Reidlmayer (2007) describes, this was not an isolated incident; destruction of libraries and museums was one of the hallmarks of the war in the former Yugoslavia in the 1990s and was inextricably linked to acts of genocide. The author claims that destruction of archives, libraries, and cultural institutions has been used as an initial intimidation tactic that leads to ethnic cleansing if not stopped.

The 9/11 tragedy affected libraries in the twin towers as well as in nearby buildings. Several libraries attached to business houses, legal firms and consultants were destroyed. For example, the US Customs Service which had an office in the World Trade Centre lost its complete collection of rulings on custom issues in USA. Librarians, who were on duty on the higher floors, lost their lives in this attack. Historical materials going back to the 1840s and customs working documents in the archives were destroyed. The trauma these librarians suffered was tremendous. “We were dealing with not only emotional stress, physical stress, lack of collection, lack of facilities, but we had to provide the information”. (Remembering... , 2002, p.31) The Pentagon Library with the collection of 200,000 volumes and the new quarters being prepared for it were both damaged when the aircraft crashed into the building. (A moving..., 2002)

During the Iraq war in 1990’s, archives, academic and public libraries were destroyed due to looting and fire. Many expensive equipments and books were either damaged or half burnt. Vandals destroyed these libraries not for looting or profit, but because they had a thirst for destruction. The National Library which faced two arson attacks in April 2003, lost about 30% of its collections, while the Baghdad University Library and the University Library of Mossoul lost about 10% of their collection. Another university library, the University Library of Bassorah suffered a loss of about 20%. The Public Library of Bassorah and the library of the Museum of Ethnography lost all of their collections. Many religious libraries for e.g., the religious library of Baghdad (Awqaf library) lost all of their manuscripts and printed books. The Library of Congress, USA sent its team for reestablishment of the library. (Al-Tikriti, 2007; Arnoult, 2003)

Long drawn out conflicts severely affect libraries. Long periods of political turmoil are accompanied by damage to library collections and library services are affected. The Japanese invasion of China, the guerilla warfare in Cambodia, the long drawn out political instability in Afghanistan or the political trouble in Northern Ireland, all have negatively affected library development. Not only do they destroy collections and disrupt services, but they also prevent library development in affected regions. (Haley, 2004; Garcia, 2007).

Political trouble in Northern Ireland during 1969-1994 affected public libraries in Belfast. They were affected due to bombing and fire attacks. Libraries were invaded by protestors and militants. Libraries were forced to shut down their services temporarily whenever a parade or paramilitary funeral passed the library. Mobile
libraries were also hijacked and burnt. Library staff was threatened. Many librarians tried to run the services during the troubled period, but it was a risky situation. Belfast Central Library, Linen Hall Library and many other were damaged repeatedly due to bombing or attacks in near by areas. For example Linen Hall Library suffered in 1994 as two incendiary devices ignited a fire on its second floor. 1000 biography books were lost. The Falls Road Branch Library was in an area which was the hub of the troubles in Belfast. The library was raided and its books were burned in 1971. (Topping & Evans, 2005)

Recently on 17 December 2011, the Egyptian Institute and its historic library caught fire due to a clash between Egyptian security forces and pro-democracy protestors. Many volunteers ran into the building to rescue as many books as possible. Still many books were damaged by the water used to stop the fire. One of the important multivolume works on Egyptian history written by French scholars and published between 1809 to 1829 was lost. (Eberhart, 2012) In Sri Lanka, Jaffna Public Library with the collection of nearly 97,000 books was consigned to flames post elections in 1981. Several rare historical collections were destroyed. (Maheswaran, 2008)

During the Taliban regime in Afghanistan, many modern university and public libraries were affected. In 1998 the Taliban set the library at the Iranian Cultural Centre in Mazar-e-Sharif on fire. Hakim Nasser Khosrow Balkhi Cultural Centre Library with 55,000 volumes at Pole Khomri in North Afghanistan was also burned down. The Library originally in Kabul had been moved to Pole Khomri which was considered as safe, however, when Taliban spread to the northeast they destroyed it. (Amirkhani, 2001; Loving, 2002). Many items from the Kabul University Library, especially Persian language books were burnt because the Taliban had decided to destroy Afghanistan’s Persian heritage and restrict books to the Pashtu language. (Amirkhani, 2002).

2.2.5: Other Disasters

In addition to national calamities there are several other types of disasters which can confront a library. These may be local but cause serious damage which is difficult to come out of. One such type of disaster is a building collapse. Like in an earthquake, a building collapse results in the collection getting buried under the debris. The City of Cologne, Germany collapsed on 03 March 2009, destroying many old historical records and manuscripts. Approximately 15% of the collection was lost. From the rescued 85% collection, 35% were badly damaged, 50% suffered moderately and 15% were lightly affected. The damage to the documents like tearing, creasing and deformation happened due to strong mechanical forces when the building collapsed as well as while removing the debris. The reason for collapse is not clear, but it is assumed that an underground tunnel built nearby may have caused this collapse. (Iona & Plassmann, 2009).

The Stevens Institute of Technology in Utica, New York had a peculiar problem in its library building. The building was constructed in 1968. The staff in the four storied library regularly complained of a variety of health problems. The authorities conducted various investigations and tried to rectify the air-conditioning system and keep the building clean. However this did not solve the problem and symptoms among the staff kept on recurring for nearly 20 years. Different companies tried different solutions after undertaking building analysis. The cause of the problem was identified to be a fault in the design of the building; the building is so constructed that a major portion of its air-conditioning is delivered through concrete vertical ducts and horizontal sandwiches of floors and ceilings with an air space in the middle. A lot of debris had collected in this hollow space. New air-handling systems were installed. Several such measures have kept the problem under control; however the only real solution was to restructure the whole building. (Widdicombe, 2006)

Crisis situation in libraries can also happen due to power failure especially if it is long drawn out. Such a situation occurred in February 1998 in New Zealand. Thirteen libraries on the campus of the University of Auckland, New Zealand had to be closed due to power failure. As the main server was down, no catalogue access was available. Libraries lost seven days of work in the beginning of the academic year. (Grant, 2000)

Mould being a part of the natural environment, is an unwelcome visitor in libraries. Physical climate like heat, humidity, light, animals and insects can be disastrous for libraries specifically in South-East and Asian Pacific regions which have hot and humid climate. Mould, termites and other pests flourish in such an environment.
These affect the books and cause damage. If treated at early stages the damage can be controlled, if not it can grow into a disaster for the library, affecting both books and library staff.

Books get damaged by biological contaminations like insects and mould in most cases. Mould can damage the material such as paper, leather, parchment, by digesting them. Insects can also feed on books and cause irreparable damages by digging galleries in text blocks or binding leathers. Factors that can cause these are faulty air conditioning system, mismanagement of collections, due to bad maintenance of collection and place, and contamination due to human mistakes. (Basset, 2007a, 2007b).

Such a disaster occurred in the Main Library of the University of the South Pacific in Suva, Fiji in 1995. The evidence of larvae such as Stegobium panicenum, more commonly known as the ‘drug store beetle’ was found in the general book collection requiring the treatment of all materials. (Reade Fong, 2001) In 2007 the entire collection of 8,760 books and 2,054 magazines in the Ridgeway branch of the Lenawee County Library, Michigan had to be disposed off because it was contaminated by mould. The building had been badly maintained and there was a hole in the roof resulting in books being covered with three different colours of mould. (Leaky... 2008)

Major and minor mould breakout was found in collections of the University of Iowa Libraries in Summer 2002. This happened due to the fact that part of the HVAC system had stopped since construction work was going on outside, thus increasing the humidity in the area. Different types of mould were found namely sepedonium, and aspergillus. This mainly affected various parts of the collection like rare books and the special collection area. The mould also spread into other parts of the building such as the auditorium. (Kraft, 2006)

Digital resources such as e-books, e-journals, digital library records such as OPAC, digitised resources, library automation software and many other computer based activities are very common in libraries today. These are all managed by professionally qualified librarians who may not be IT specialists. Loss of digital data can be by mistake or intentional. But if this data is lost, especially internally created digital data and if backup of that data is not available or even if available but is not in usable condition it would be a disaster for a library. Computer virus is one of the biggest threats to digital data. Digital technology including hardware and software gets outdated very fast and may not remain usable. Data stored on outdated storage media using outdated software can be lost causing a digital disaster. Improper maintenance of IT infrastructure can result in loss and corruption of data making it a digital disaster for a library.

2.3: Damage 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. A very sketchy picture emerges from what is known. The information has been scattered and is collected from various references.

Ancient Indian civilization had the world's finest universities and centres of excellence. Libraries in India existed in these universities and centres of excellence. Written literature, in manuscript form was kept in gurukuls or ashramas, Jain and Buddhist monasteries, and madrasas. Nalanda University, the University of Vallabhi, Odantapuri University, are some of the examples of universities which had huge libraries storing oriental literature. It is not known for sure what happened to these libraries. Over time, they were either destroyed or merged with other institutions.

The University of Vallabhi 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. Odantapuri University was founded by King Gopala (660-705 A.D.) and had a library that was rich in Brahanical and Buddhist works. It is reported that Mohammad Bakhtiyar Khiilji destroyed this monastic university along with its library. The Vikramshila monastery built in the 8th century A.D. had a rich collection of texts in Sanskrit, Prakrit and Tibetan languages. Muslim invaders are said to have caused the disappearance of the excellent collection at Vikramashila.
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). The first building was nine storeys high and the two others were of six storeys each. The library also undertook to publish new volumes and preserve valuable manuscripts. This superb institution did not die a natural death through deterioration. It fell 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. But it is said that a sizable number of books added to the library were obtained from his conquests, from libraries in Gujarat, Jaunpur, Kashmir, Bihar, Bengal, and the Deccan. There is no record of how they were acquired: whether they were received as gifts, purchased or forcibly acquired.

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. (Narlikar, 2003; Weeraratne, 2003; Gul & Khan, 2008; Bhatt, 2009; van der Hoeven, & van Albada, 1996)

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 Dahur Panti, 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. (Palm-leaf,…,n.d.),

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. “No wealth in the world can ever restore what was destroyed during the Operation Blue Star by the Indian government”. (Walia, 2003, np.)

In May 1995, the 600-year-old shrine at Charar-i Sharif was destroyed by what the Indian occupation forces described as ‘cross-firing’ with a group of mujahideen who allegedly had taken shelter there. No mujahid was found when the shooting stopped. Three years earlier, in 1992 the library at Srinagar’s main mosque was set ablaze. A large number of priceless manuscripts were destroyed. (Qazi, 2011)

During 1993, Thapar University library and Panjabi University Library were affected due to unprecedented floods on the night of 11 July 1993. Thapar Technology Campus was submerged under 1.4 meter to 2.4 meter of water for four to five days. The library on 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 stabiliser was damaged. Only those books were damaged which were borrowed by the users who lived in areas that were flood affected. (Trishanjit Kaur, 2009)

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.

Sundarayya Vignana Kendram, Hyderabad, India has two libraries: 1. The main Research Library having a rich collection of rare books, journals, newspapers, reports, pamphlets, manuscripts, private papers, and other materials in different languages from the 12th through 20th centuries. 2. The Urdu Research Centre Library having a valuable collection in Urdu language and literature. Both these libraries were affected due to unusual heavy rains during the week of 21 August 2000 which caused severe
floods in Hyderabad. The flood reached its peak on Thursday 24 August 2000 when a fifteen-foot wall of water inundated much of the city. Flooding ravaged the Sundarayya Vignana Kendram building which housed the two invaluable library collections. Within minutes both collections were completely submerged in water. (Sundarayya….., 2000)

In the unique experience of the devastating flood of the Barak Valley, Assam, in the year 2004, all the major libraries in the downstream areas were completely flooded and damaged. (Satpathy, 2007)

In Western India, too, several libraries were damaged due to natural and man made disasters. A massive earthquake in 2001 damaged many libraries especially in Kutch region of Gujarat.

Sojitra Sarvajanik Vachanalya in Gujarat was established in 1878. This library was totally burnt on 28 June 1985 in communal riots. The library had 25,000 books including many rare books which were turned into ashes. (Sojitra….., 1986) Vandalism at Bhandarkar Oriental Research Institute, Pune in 2004 damaged the library collection. Floods caused by heavy rains in Mumbai and other parts of Maharashtra, in the last week of July 2005 and floods in Surat, Gujarat, due to the sudden release of dam waters on 07 August 2006, destroyed collections in many libraries.

The above narrative illustrates the damage caused by natural and man-made disasters to libraries. Libraries, globally and in India have suffered great losses to their buildings, equipment and collections. It is in this context that the problem of library disaster management becomes relevant.

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