

Fires, Floods and Failures: Future Proofing against Disaster

ALIA Universities and Research Libraries (URLs) & Blue Shield Australia

<p>SLIDE: FLINDERS UNIVERSITY</p>	<ul style="list-style-type: none"> • Thanks • Traditional Owners
<p>SLIDE: TORRENS RESILIENCE INSTITUTE</p>	<ul style="list-style-type: none"> • Executive Officer at the Torrens Resilience Institute based at Flinders University in South Australia. • Led by Professor Paul Arbon • Aim is to address severe disruptive societal challenges and advance thinking in the concept of resilience ... if you want to know more about the work we've been undertaking over the past few years, please feel free to check out our social media
<p>SLIDE: UNIVERSITY LIBRARY DISASTERS</p>	<p>I've been asked to present today on case studies of disasters that have affected university libraries around the globe and my research into that came about due to a project I undertook last year which asked the question 'Are University Librarians in Australia actively protecting special collections from disaster?'</p> <p>I won't go into too much detail about that today but if you want to read more you can read it in Issue 63 of the Journal of the Australian Library and Information Association.</p> <p>But the surprise from the research was this...</p> <p>90% of the University Librarians surveyed HAD experienced a disaster of some magnitude – either small or large in their library at some point in their career BUT most felt that the chances of a disaster happening were really low – so there seemed to be this disconnect – they said the chances of anything happening was really low and yet nearly all had experienced something at some point in their career.</p>

	<p>In addition to this someone made a comment on social media about why was I was bothering to even look into university library disasters – nothing even happens!!!</p> <p>So I think it is fair to say a simple web search will bring up a few examples of library disasters – although then I had to sift through to find the University relevant case studies as part of the literature review. And that is what we will look at now - examples from around the globe of disasters affecting UL and then I hope I can conclude with some thoughts for you to consider</p> <p>Primarily the limited research on emergency management in libraries has focussed on case study examples of first hand experiences; practical advice on developing an emergency management plan or how to recover and restore items held within the Library such as sodden books, smoke affected journals or damaged items held within special collections which need specific expertise for handling</p> <p>We will now look at a few examples and then conclude with some thoughts about how can utilise the lessons learnt from these examples and consider them for ourselves....</p>
<p>SLIDE: Hurricane Katrina, Tulane University</p>	<ul style="list-style-type: none"> • We talk a lot in emergency management about the effect of a changing climate and how we may adapt to that and what challenges we may face in the future – in particular more extreme weather events. • There was a report just published by Dr Robert Glasser who served as Special Representative of the UN Secretary General for Disaster Risk Reduction and Head of the UN Office for Disaster Risk Reduction – Robert is actually based here in Canberra at the moment as a Visiting Fellow at the Australian Strategic Policy Institute – he recently release a report entitled “Preparing for the Era of Disasters’ which discusses in more detail about how climate change/ADAPTION will affect Australia and how the as the frequency and severity of sudden onset hazards occur, they are also likely to be concurrent extreme events following in closer succession. <p>So let’s look at a few examples of how extreme weather has impacted on Uni libraries....</p> <ul style="list-style-type: none"> • Prior to Katrina, Tulane University was the largest private employer in the city of <u>New Orleans</u> • Katrina closed the university campus for over 4 months, only the second time in history the uni had to close, the first being the civil war!

- When Hurricane Katrina struck New Orleans on August 29, 2005, the 40,000 square foot basement of the Howard-Tilton Memorial Library was flooded with more than eight feet of water.
- Four feet of water filled the basement of the library annex in Jones Hall. These areas housed the library's special collections, the Maxwell Music Library, and a very large collection of government documents.
- Due to serious flooding and damage to nearby neighborhoods, the library was inaccessible to reconnaissance teams for several days. In that time, the standing water in the basement, combined with the lack of electricity (and, thus, lack of temperature control and air circulation), lead to high humidity and temperature and thus the development of mold in the library at large. Took a month to remove all the water from the basement.
- The damage from the flooding was significant. Basement walls were coated in slime and muck. Furniture and shelving had floated to the corners of the space, dislodging the materials that they once had housed, and subjecting them to submersion.
- The Maxwell Music Library had held more than 43,000 titles including books, scores, journals, and many rare and historic sound recordings on CD and LP. More than 70 percent of the printed books and scores were salvaged for restoration, but no recordings could be saved. The Government Documents Archive, which had held over 500,000 volumes, lost 90% of its collection. Nearly all of the salvaged government documents were trapped in storage units containers that had to be ripped apart to get at the saturated material inside.
- A very large Microforms area on the north side of the basement had held more than 30,000 titles of facsimile collections of rare or scholarly material and newspaper archives. Less than five percent of these materials could be salvaged because of the damage that lengthy immersion in dirty water
- None of the materials from the original 19th century Howard Collection could be salvaged, due to structural wreckage and especially dangerous conditions in that area of the library.
- Also reports of damage by evacuees at other Uni libraries but I could only find a brief mention in newspaper report – nothing to substantiate that at this point.
- Despite the significant obstacles to success, more than 300,00 important print volumes, 18,000 reels of microfilm, and 629,711 archival items affected by the storm were salvaged and restored
- To rebuild the physical spaces destroyed because of Katrina's flooding, Tulane University developed a Hazard Mitigation and Build-Back Program with funding assistance from the Federal Emergency Management Agency (FEMA). The program led to the construction of two additional floors on top of the existing Howard-Tilton Memorial Library building. This addition,

	<p>completed in early spring 2016, houses elements of the library that were formerly located in its basement, as well as elements from the flooded lower special collections stacks level of Jones Hall. The new floors provided replacement of lost library spaces as well as the replacement and relocation of the building's primary mechanical and electrical systems, which were also destroyed.</p>
<p>SLIDE: McNeese State University</p>	<ul style="list-style-type: none"> • Hurricane Rita in 2005. Cat 3 when it hit land, a month after Katrina, caused 120 deaths, total damages amounted to over \$10.5 billion. • McNeese State University Library suffered flooding and two consecutive years of mould growth and I have no doubt we will start seeing literature about more recent hurricanes and the impact they had on university libraries as the following years progress....
<p>SLIDE: Oakland</p>	<ul style="list-style-type: none"> • This is a more recent example, occurring in February this year • When the Polar Vortex hit the USA, it caused the fire suppression water lines to freeze within the café area of the library. • These burst at about 5am • The library was closed for several days • I found this short news clip which shows you some of the damage • INSERT video here • It did re-open about a week later with limited services
<p>SLIDE: Delmar T. Oviatt Library at California State University</p>	<ul style="list-style-type: none"> • In this example, we look at how the physical infrastructure played a part in a lengthy recovery...and I suppose highlight that we only know what we think we know till we find out we don't know • Earthquakes have caused multiple case studies such as California State University library during the Northridge earthquake in 1994. • The epicenter of the 6.7 magnitude quake was about a mile from the California State University, Northridge campus. • The Oviatt Library had three structural parts: the original reinforced concrete core building built in the early 1970's and two wings that opened in 1991. • The core suffered repairable structural damage and reopened in late 1994. The east and west wings were built as steel frame structures to be more earthquake resistant. However, the earthquake instead gave engineers an education about the performance of steel frame buildings

	<p>in quakes. Severe structural damage to the wings during the earthquake eventually led to demolition and rebuilding of the wings. Four-inch thick steel base plates cracked where the four-story high vertical steel structural columns came into the foundations of the wings. (Reconstruction was completed during the summer of 2000. The wings were reoccupied approximately six and one half years after the earthquake)</p>
<p>SLIDE: Barr Smith Library</p>	<ul style="list-style-type: none"> • An example here of things happening in your surrounding environment that can have an impact • In South Australia, the Barr Smith Library at the University of Adelaide suffered a major flood in March 2005 when construction works damaged a fire main on North Terrace Campus. Beaumont (2008) in “The Water Incident” stated that over 200,000 litres of water was released, 1,200 sq.m of internal space was damaged, 40 tonnes of mud affected the library, the IT server room was damaged and the incident closed the University for 3 days. There was potential for the flood to close the University for a semester, with projected losses of \$90 million in lost revenue.
<p>SLIDE: National and University Library of Bosnia and Herzegovina</p>	<ul style="list-style-type: none"> • Again here, examples of how the actions of humans and political unrest can impact on Uni Libraries and highlights the target that libraries are due to their representation of culture, ideas and thoughts homed within them... • The library was based in <u>Sarajevo</u>. During the war in Bosnia and Herzegovina, during the siege of Sarajevo, in the night from 25th to 26 August 1992, members of the <u>Army of the Republic of Srpska</u> shelled <u>Vijećnica</u> where the library was located at that time. As a result, many of its archival and library holdings were destroyed.
<p>SLIDE: ISIS – University of Mosul</p>	<p>2014 Islamic State of Iraq and Syria (ISIS) destroyed 8,000 books and 10,000 manuscripts as they looted and ransacked the library at the University of Mosul.</p> <ul style="list-style-type: none"> • Built in 1967, Mosul University Library was the largest in northern Iraq and one of the largest in the Middle East and North Africa • When the university was first formed over 60 of the city's largest private libraries donated their historic collections • 40,000 students at its peak • The Medical College Library was the primary repository for rare books and manuscripts • Held over 1 million documents including a Quran from the 9th Century and had over 600,000 items in Arabic language

	<ul style="list-style-type: none"> • Destroyed 2014-2016 by ISIS forces who destroyed the university campus, in particular the library – occupation was only 32 months • Became known to the international community via the Mosul Eye • Became the symbol and epicentre of Iraq’s cultural rebirth • The Mosul Book Bridge campaign was started by a lecturer at the university, with the goal of replacing all the lost books. • Challenges have been in getting books to Iraq and ‘dumped’ books • It is quite a well-known case study – I have uploaded a number of videos on my You Tube channel so if you want a deeper dive into anything please feel free to check it out
<p>SLIDE: Institute of Scientific Information on Social Sciences, Moscow</p>	<ul style="list-style-type: none"> • Fire – either by accident or through criminal activity – the impact can be enormous – not just by fire, which actually tends to be localised but water damage and soot. • In 2015, the Institute of Scientific Information on Social Sciences in Moscow, suffered major loses during a fire. • About 15 per cent of the collection had been damaged at the library, which includes one of the world's richest collections of Slavic language works, as well as documents from Britain, Italy and the US. • He added that much of the damage was caused by water from the firefighting operations that included 200 firefighters – cause still unknown!
<p>SLIDE: University of KwaZulu-Natal’s</p>	<ul style="list-style-type: none"> • UKZN’s Howard College law library. The library was damaged as part of wider unrest on all three UKZN campuses as students protested against the increase of university fees. The library – which had been renovated in 1994 – was not entirely destroyed, but was seriously damaged by fire. • Whilst rare, Universities can face protesters, especially if the University is involved in controversial issues or hosting controversial speakers, and libraries may find themselves unwillingly involved as demonstrated in 2016 when students at University of Sydney protested against the Federal Education Minister speaking at the Fisher library and riot police were called in. Also South African Institute in Amsterdam.
<p>SLIDE: HALE</p>	<p>Hale Library is the main Kansas State University library.</p> <ul style="list-style-type: none"> • It was dedicated in 1997 after a multiyear renovation and expansion project of the original campus library building, Farrell Library, which opened in 1927.

	<ul style="list-style-type: none"> • Hale Library has more than 400,000 square feet of space and has more than two million books in its collection. • May 22 2018, a fire broke out in the roof; damage was limited to a portion of the roof of the original Farrell Library section with extensive water and smoke damage throughout. Controlled in four hours. Seventy firefighters responded on 12 fire apparatus. • Belfor Property Restoration continues assessing damage, cleaning up Hale Library and determining what can be salvaged. More than 175 workers from eight states were involved. • Furniture was destroyed by toxic soot and smoke damage that it filled a large industrial dumpster 65 times. This toxic soot also had the impact that the ductwork (550,000 sq ft building) had to be taken out and cleaned. In addition, of course, firefighters used several hundred thousands of gallons of water. • Having the plan and the various relationships in place meant the Libraries were able to move quickly to address the perils Hale’s collections were in as the air conditioning, electricity, telecommunications and other basic building services failed. • As of May 22 2018 – and due to all be re-opened in 2021... <p><i>So a 4 hour incident will take approximately over 4 years to correct.... a few things here to note – documented the lessons and progress – really recommend you take a look if possible – the blog goes into detail about the unexpected consequences of the incident;</i></p>
<p>Australian Examples</p>	<ul style="list-style-type: none"> • I will mention that in 2003 (CAVAL) conducted a survey on disaster response included incidents cited by Australian university libraries over a 6 year period (1997–2003). • Examples included a fire hose which burst, affecting the Rare Book room; power failure across multiple sites caused by a bushfire; the loss of a complete library in a bushfire; a sewage spill; a small fire and flooding caused by workmen which disrupted services, and multiple examples of storm damage caused by hail, resulting in a university having to close libraries for a period of time and limiting services. • Also recently of course Canberra and Tasmania
<p>SLIDE: Discussion</p>	<p>So what can we pull from these examples....</p> <p>There are a few issues perhaps not considered within the normal scope of emergency management planning that university librarians may wish to consider. Interestingly, the majority of lessons learnt from these particular cases focus on preparedness things that could be done priorof course</p>

each of your libraries is different – you will have to consider your own requirements within the context relevant to you

The biggest things for me to take away from the literature and these case studies on this subject were

- no emergency plan or if there was one, it was focussed on damage to collections rather than a continuity of services. A plan is one tool and actually the value of creating a plan really is within the discussions that take place around and during its development – this is when the policies and processes tend to highlight the gaps and it is often the simple things which make the biggest difference
- Many comment that they also had no plan to deal with media or spontaneous volunteerism
- Insurance?? There is very little information on determining best practices regarding insurance in university libraries
- The question of insurance for items, which are deemed irreplaceable, is evident in the limited literature related to insurance of special collections. However, in the majority of cases, they survive, unless destroyed by fire or theft, so can be treated and restored, which costs
- Corrigan (2008) notes his own example that two years post –Katrina, his library is still awaiting an insurance settlement to address its collections losses and the costs associated with the restoration of salvaged materials.
- Pre-contract negotiations with salvage companies
- **No data of incidents globally – this was a key for me – I could not locate any international database, which logged incidents that have occurred in Uni libraries.**
- Highlight that the recovery process will take longer than expected and have consequences not considered within a plan. Read and learn from other examples and think about how that would apply to your library.

Disasters are never the same, they are always changing, always have unexpected consequences and lessons and a plan will never capture all scenarios – a plan is a great tool to have your kit but we also need to consider what we do every day as an organisation to build resilience to any type of disaster

Are we limiting our thinking around risk to just ‘standard garden variety’? Are we only focussed on natural hazards...- the things we have learnt to expect?

What about organisational resilience and how that will help in disasters? As an organisation is your plans focussed on response and recovery of just collections – what about delivery of services? Do we have a vulnerability matrix for core services.... a planning framework for libraries that moves beyond immediate emergency response and toward a longer-term goal of building strategic resilience.

Environment within the work place – do you encourage? Employees at Morgan Library in Colorado noted their ability to innovate and change during the disaster, was the result of an environment where experimentation and trial and error were welcomed by library management.

What about constructive disobedience – do employees feel able to go against policy and procedure to warn off any potential issues....does your training encourage people in critical thinking and flexibility?

And also let's remember that events can also have a positive impact in that it can allow libraries permission to release long established practices, and an opportunity to charter a new direction and opportunity to adopt build back better framework. It is important for Library Management to focus on positive outcomes in disasters, as disasters can “have a tendency to unveil in stark clarity the mission-critical things that really matter and they can wipe the slate clean for eventual improvements” (Corrigan, 2008).

Finally, of course the bigger picture of the relationship between cultural heritage and emergency management – in Australia there are rudimentary links between the two sectors. State EM plans and national frameworks make very little mention of cultural heritage and yet the cultural heritage sector is doing work that can link into not only resilience building but also response and recovery. I believe this potential is worthy of further exploration by both sectors.

Thank you for listening and please ensure you continue to share your experiences and lessons – it is very important and I thank you for sharing all the stories today.



Torrens
Resilience Institute

Johanna Garnett
Contact 0434 106 734
johanna.garnett@flinders.edu.au