



**SCEaR Newsletter 2020
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First Memory of the World Global Policy Forum

**Disaster Risk Reduction and Management for
Sustainable Preservation of Documentary Heritage**

11 December 2018, UNESCO Headquarters, Paris

A Retrospective View

Edited by Akira Matsuda and Lothar Jordan

In cooperation with Fackson Banda and Kenji Tamura

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Editorial

by Akira Matsuda

This 1st Special Issue of the *SCEaR Newsletter 2020* offers a reflection on the output of the UNESCO's 1st Global Policy Forum on Disaster Risk Reduction and Management for Sustainable Preservation of Documentary Heritage, held at the UNESCO's Headquarters in Paris on 11th December 2018. We invited the speakers in the Forum to contribute to the present issue, which resulted in 13 succinct articles including the Greeting, the Opening Remarks and the Keynote Speech.

There are three recurrent themes addressed in the 1st Special Issue as a whole: 1) how to quickly and effectively salvage and recover damaged documentary heritage in the aftermath of disasters; 2) how to better prepare for disasters to mitigate the potential damage of documentary heritage, in particular by building regional networks of relevant experts and organisations; and 3) how to record and archive the damage inflicted by disasters on modern society. These three themes are clearly linked to each other, and the most important link seems to lie in connecting the third theme to the first two. Indeed, quite a few articles in the present issue give examples of recent disasters, suggesting that it is vital to feed our memory of recent disasters into our post-disaster efforts to recover damaged documentary heritage as well as our planning of disaster risk reduction and management. To attain this “feed-forward”, we need to find a way of socially activating the memory relating to past disasters, by involving not only experts but also members of the general public. This point is emphasised by Hidenori Watanabe and Anju Niwata, who were speakers in the Forum and introduce through [their recent article](#) how to “reboot the memory” of past disasters by using AI technology colorizing old black-and-white photos.

The 2nd Special Issue of the *SCEaR Newsletter 2020* is due to come out shortly, coinciding with the 2nd Global Policy Forum which is currently scheduled for 27th to 28th October 2020. Depending on the situation of Covid-19, the 2nd Forum might be postponed, but we plan to publish the 2nd Special Issue in autumn 2020 anyway. While the 1st Special Issue offers a retrospective view of the 1st Forum – seeking to “reboot the memory” of the discussion held in it – the 2nd Special Issue will provide a prospective view of the 2nd Forum, aiming to help generate better informed discussion.

Since the two Special Issues are closely connected with the two Forums, it is anticipated that the readers of one issue will also read the other issue. To facilitate this reading, the 2nd Special Issue will have the same structure as the 1st Special Issue, starting off with the Greeting, the Opening Remarks, and the Keynote Speech, and then followed by succinct articles by speakers in the 2nd Forum.

Finally, a few words must be said about Covid-19. Although this pandemic is not generally considered a “disaster”, which connotes a sudden social disruption caused in a fairly limited geographical area, the adverse effects of Covid-19 are surely comparable to disasters, both natural and man-made. It will therefore be pertinent to consider how we can reduce the risks that this pandemic poses to documentary heritage. UNESCO has

already launched [several initiatives](#) for this purpose, and it is hoped that the Memory of the World Programme will develop further to help us better prepare for the safeguarding of documentary heritage from various pandemics in the future.

Greeting

by Fackson Banda

As I welcome readers to this special issue of the newsletter, I need to contextualize the Global Policy Forum (GPF) in terms of the MoW Programme's activity profile. The idea is embedded in a three-year project on "[Preservation of Documentary Heritage Through Policy Development and Capacity-Building](#)"¹ supported by Japan, focusing on strategically important aspects for policy advocacy regarding the preservation and accessibility of documentary heritage.

The first GPF took place on 11 December 2018 at UNESCO Headquarters and dealt with disaster risk reduction as a preventive or preservation strategy for documentary heritage. The event gathered more than 60 experts from all over the world, including those from Small Island Developing States (SIDS) and Least Developed Countries (LDCs). It drew attention to the [Sendai Framework for Disaster Risk Reduction](#)² and focused on three specific aspects of policy conception, implementation and evaluation:

1. Safeguarding/rescuing/restoring damaged documentary heritage;
2. Documenting disaster through research, awareness raising and community engagement, and
3. Deploying an interdisciplinary approach towards preservation efforts for documentary heritage.

[A brief report of the first GPF](#)³ is available on the UNESCO MoW website. As a tool for sustainable preservation of documentary heritage, the forum serves to inform discussions on the need for effective national and international policy frameworks on disaster risk reduction.

Following the success of the first GPF, UNESCO is now organizing its [second MoW Global Policy Forum](#).⁴ This particular edition of the GPF seeks to amplify the outcome of the first event in order to develop a specific action framework for disaster risk reduction and management for sustainable preservation of documentary heritage, by focusing on national-level implementation and how it can be supported by the various regional and international stakeholders who will participate in the upcoming meeting. This is particularly important given that the COVID-19 pandemic has forced us to rethink disaster risk management in terms of the impact of global public health crises on documentary heritage and its utilization by memory institutions, governments and citizens. I think this will set the stage for the MoW Global Policy Forum to take onboard other equally challenging issues.

Finally, I would like to thank all the authors for their precious efforts in contributing to this special issue of the newsletter.

¹ https://en.unesco.org/sites/default/files/jfit_mow_project.pdf

² https://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf

³ https://en.unesco.org/sites/default/files/1st_mow_global_policy_forum_-_final_report.pdf

⁴ <https://events.unesco.org/event?id=171204301&lang=1033>

Opening Remarks

by Takeo Kato

President of the National Archives of Japan

Good morning everyone, and thank you for your introduction, Mr Meoz Chakchouk, Assistant Director General of UNESCO. It's truly an honour to have the opportunity to speak with you — experts gathered from all over the world — at the Global Policy Forum on Preservation of Documentary Heritage for Disaster Risk Reduction and Management. I believe our time together is of great significance.

As explained by Mr. Chakchouk, this Forum is part of the UNESCO Memory of the World Programme. It aims at fostering the consideration of how to preserve our documentary heritage, particularly from the lens of disaster risk management, by bringing together representatives and experts of research institutes, disaster management organizations and related agencies.

It has been 26 years since the start of the Memory of the World Programme. Over this time, the importance of preserving our irreplaceable documentary heritage has become internationally recognized, yet there are still dangers. Only a fraction of records around the world receives sufficient support for preservation. We can improve our care for a network for international cooperation among memory institutions and learn good practices from each other as we examine and strengthen policies and strategies for conservation and digitization.

As you all know, Japan is home to frequent natural disasters, such as flooding caused by recent climate change, unprecedented earthquakes and accompanying tsunamis. Almost every year, historical records in my country are put in danger by natural disasters, and they indeed suffer damage.

We were brought to action in how we deal with record preservation, especially following 2011's massive earthquake, which displaced and killed more than 20,000 persons. In that tragedy, in addition to human rescue activities, valuable records were saved in various places, thanks to government initiatives as well as linked grassroots networks. Young people in particular volunteered as rescuers and they were incredibly successful.

Regardless of whether materials are held by the government or private organizations, conservation initiatives have advanced preservation technology, digitization, and disaster prevention. Support also poured in from overseas and we received the kindness of institutions such as Harvard University's Reischauer Institute of Japanese Studies, which started collaborating with us quickly after the earthquake in 2011 to archive electronic communications related to the disaster. We have learned from these efforts and established a cooperation system with experts to strengthen responses in case of disasters across museums, libraries, and archives.

UNESCO's *Recommendation concerning the preservation of, and access to, documentary heritage including in digital form*, which was adapted in November 2015, clearly states that

documentary heritage comprises documents of significant and enduring value to a community, a culture, a country or to humanity generally, and whose deterioration or loss would be a harmful impoverishment. The world's documentary heritage should be fully preserved and protected for all, and it should be permanently accessible and re-usable by all without hindrance.

Documentary heritage is an evidence of all human activities, on the individual level and as nations. In order to promote universal respect for human rights and freedom so as to create a peaceful, fair and inclusive global society, it is essential to learn from records of the past that have accumulated over our long haul. Protecting this documentary heritage is essential for humanity to build a brighter future, based on an understanding of evidence that reflects the past.

Today we gathered to share wisdom obtained from all of our experiences. Many of the lessons of our experiences have come from tragic and cruel disasters. Unfortunately, similar calamities will surely happen again in the not so distant future. But we can learn from past experiences; I believe that this forum is a crucial step towards preventing the loss of our irreplaceable documentary heritage as humans — we should share and preserve as much wisdom as we can.

Lastly, please allow me to show my gratitude to all those responsible for the hard work behind the UNESCO Memory of the World Programme, which is carrying out deeply meaningful projects. I trust that this forum will be a great success. Thank you very much everyone.

Keynote Speech

Disaster Risk Reduction for the Sustainable Preservation of Documentary Heritage

by Kirsi Madi

United Nations Office for Disaster Risk Reduction (UNDRR)

“It is urgent and critical to anticipate, plan for and reduce disaster risk in order to more effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems, and thus strengthen their resilience.”

(Sendai Framework for Disaster Risk Reduction, Paragraph 5)

The preservation of documentary heritage is critical to ensuring the availability of historical records for present and future generations. Sadly, the increasing impacts of climate change, natural and man-made hazards, and related technological, environmental and biological hazards and risks have led to the disappearance of considerable parts of our common heritage. For example, the 1966 flood of the Arno damaged or destroyed between 3-4 million rare books/ manuscripts and 14,000 works of art, while the 2004 Indian Ocean Tsunami severely damaged 300 libraries on the Eastern coast of Sri Lanka and the northern province of Aceh on Sumatra, leading to the destruction of 1.2 million books. These are only two of many such cases and highlight the need to integrate disaster risk reduction into strategies for the sustainable preservation of heritage documents.

Preserving Documentary Heritage through Disaster Risk Reduction

Disaster risk reduction (DRR) aims at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. In order to reduce existing risk, avoid the creation of new risk and build resilience, member states agreed on the Sendai Framework for Disaster Risk Reduction 2015-2030 at the World Conference for Disaster Risk Reduction in Sendai in 2015. The Sendai Framework is a non-binding agreement, which recognizes that the State has the primary role to reduce disaster risk, but that responsibility should be shared with other stakeholders, including local governments, the private sector and other stakeholders. Its implementation is monitored by the United Nations Office for Disaster Risk Reduction (UNDRR).

The Sendai Framework calls for the protection of institutions, such as museums, foundations and sites of historical, cultural and religious interest against hazards. It serves as an enabling mechanism for memory institutions and governments to: 1) elaborate preventive policy actions at the national and international level in the context of

documentary heritage and 2) frame approaches to the preservation of documentary heritage as an interdisciplinary undertaking, drawing upon knowledge from different fields.

Further, the Sendai Framework lays out priorities and recommended actions for the preservation of documentary heritage under each area:

Sendai Framework Priority 1 - Understanding disaster risk in order to better deploy risk assessment, prevention, mitigation, preparedness and response

- Systematically evaluating, recording, sharing and publicly accounting for disaster losses and understanding the economic, social, health, education, environmental and cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information
- Identifying and analyzing risk to natural and man-made hazards for documentary heritage
- Exchanging knowledge through the sharing of experiences, lessons learned, good practices, and training and education on disaster risk reduction
- Developing campaigns to increase awareness among existing documentary heritage networks

Sendai Framework Priority 2 - Strengthening disaster risk governance to manage disaster risk nationally, regionally and globally in order to manage disaster risk through collaboration and partnership

- Sharing information and knowledge based on good policy practices in safeguarding documentary heritage
- Developing guidelines on how to integrate DRR considerations into planning and business processes

Sendai Framework Priority 3 - Investing in disaster risk reduction for the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment

- Protecting or supporting the protection of cultural institutions and other sites of historical/ cultural heritage and religious interest
- Allocating the necessary resources, including finance and logistics support, to ensure the integration of DRR into policies, plans and practices related to documentary heritage
- Investing in building capacity, partnerships and research to strengthen DRR in relation to cultural heritage

Sendai Framework Priority 4 - Enhancing disaster preparedness for effective response, and “Building Back Better” in recovery, rehabilitation and reconstruction by taking action in anticipation of events, and ensuring

*capacities are in place for effective response and recovery at all levels, including through integrating disaster risk reduction into development measures*⁵

- Developing/ reviewing and periodically updating disaster preparedness and contingency policies, plans and programmes with the involvement of relevant institutions
- Ensuring that early warnings are received and that each individual and network is aware of how to prepare for and react in a case of a disaster

The Sendai Framework, therefore, sets the stage for identifying sustainable policy action that will preserve heritage assets, such as libraries, museums, archives, memory institutions, and research and educational organizations, in support of the *Recommendation concerning the preservation of, and access to, documentary heritage including in digital form* adopted by the UNESCO General Conference in November 2015.

Partnerships for Cultural and Documentary Heritage

The Sendai Framework and the other agreements recognize the value not simply of preserving cultural heritage, but also its impact on socio-economic development. UNDRR, for its part, actively seeks out and works with relevant partners and stakeholders to undertake risk assessments and systemize good practices related to DRR and documentary heritage, facilitate knowledge exchange on disaster risks in the context of documentary heritage, build the disaster risk reduction capacities of memory institutions and enhance disaster preparedness.

For example, a dedicated session on Cultural Heritage took place during the European Forum for Disaster Risk Reduction (EFDRR) 2018 which highlighted the need for strengthening the evaluation of losses and applying specific DRR measures to reduce the exposure of cultural assets. The outcome documents recognized the “fundamental value of cultural heritage for the resilience of the communities” and called for “disaster risk assessments as a prerequisite for... cultural heritage conservation.”

UNDRR also engaged in a project on Increasing Resilience of Cultural Heritage, called ResCULT, which was launched during the 2018 EFDRR. In line with the Sendai Framework, the Paris Climate Agreement and the 2030 Sustainable Development Agenda, the project developed a transboundary database to understand the risk faced by cultural assets and offered a tool to support risk-sensitive decisions when developing or implementing disaster reduction strategies and identifying tailored actions and investments to improve both prevention and resilience capacities.

As evidenced above, it is important to build on existing partnerships and identify relevant partners and stakeholders that can enhance disaster preparedness in order to achieve the common goal of cultural and documentary heritage. In addition, UNDRR is

⁵ Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. Available through: https://www.preventionweb.net/files/44983_sendaiframeworksimplifiedchart.pdf.

proposing some actions that will accelerate the discussion on disaster risk reduction and documentary heritage:

- Systematize good practices on DRR and documentary heritage, e.g. establishment of building codes that will ensure buildings are seismic resistant and proper land-use planning based on risk analysis to ensure that libraries or museums are not built in flood-prone areas;
- Facilitate knowledge exchange and build disaster risk reduction capacities of memory institutions, e.g. in contingency planning; and
- Enhance the understanding of risk by undertaking risk assessments to inform decision making processes.

It is incumbent upon governments, along with memory institutions and other partners and stakeholders, to adopt policies and strategies that can effectively respond to documentary heritage-related disasters and prevent future such disasters from occurring. UNDRR is fully committed to supporting all stakeholders in this critically important endeavour.

At the time of her presentation, Ms. Kirsi Madi was the Director of the United Nations Office for Disaster Risk Reduction (UNDRR), based in Geneva, Switzerland. The role of the UNDRR is to support countries, UN agencies, and stakeholders in the implementation of the Sendai Framework for Disaster Risk Reduction (2015-2030). Prior to her professional career in different fields of the UN, which started in 1991, Ms. Madi worked in the Ministry of Foreign Affairs of her country, Finland.

Session 1

Overall Status of Documentary Heritage under Situations of Disaster

Salvaging Historical Documents and Rebuilding Communities: Lessons from after the Great East Japan Earthquake of 2011

by Daisuke Sato, J. F. Morris, Machiko Kamiyama

Miyagi Shiriyō Network was founded as a non-profit organization after Miyagi Prefecture in the northeastern part of the island of Honshū was hit by a series of earthquakes on 26 July 2003. We work to preserve historical documents and other heritage from being lost due to natural disasters and other causes. An important part of our work focuses on building networks with residents and local governments, and promoting the use of historical heritage in building or rebuilding local communities.

We would like to tell you about the state of our salvage work after the tsunami and earthquake of March 2011, and the problems we face today. Furthermore, we want to talk about some exciting new discoveries that we have made about how saving and restoring heritage can help people and communities recover after a major disaster.

1. Historical Heritage throughout Japan and Managing Disasters

All over Japan, a countless number of historical documents are held in private hands. In particular, the volume of historical documents dating from the Edo Period, that is from the 16th to mid-19th centuries, is overwhelming.



Historical documents stored in an old warehouse (photo by author).

According to one calculation, the number of such documents might be some two hundred million items. This averages out at over 42 million items for every prefecture in Japan. However, the number of historical documents held in public archives in Miyagi Prefecture is only about two hundred thousand items. Local governments do not have enough money nor the professional staff to handle this volume of documents, and most historical documents do not get public protection.

Large-scale disasters make things suddenly worse. In disasters, the historical documents themselves and the buildings where they are kept are damaged and, in many cases, the owners and local society lose the capacity to protect their documents. As a result, the affected region suddenly loses all records of its history.

People became aware of this problem after the Great Kōbe Earthquake of 1995. After this earthquake, historians throughout Japan joined hands with local citizens and governments to form regional “Heritage Salvage Networks” to protect local historical heritage in danger of being lost, and to mobilize after disasters to salvage endangered heritage.

2. Historical Heritage Salvage Operations after the Great Eastern Japan Earthquake of 2011: Current Conditions and Problems

2.1. An Outline of Salvage Operations

Miyagi Prefecture suffered the worst damage from the tsunami of 11 March 2011. The tsunami took a heavy toll not only in human lives and property, but it also destroyed much of the familiar landscape and unique historical documents recording parts of the history of the affected areas. There is no way of assessing how many collections of documents were lost.

The case of the Naganuma Family documents was an exceptional one. Between 1999 and 2010, a group of historians, including myself, surveyed the documents held in private collections in a part of Ishi-no-maki City. In all, we found collections of documents held by seven different families, with a total of about 15,000 documents.

The documents were kept in a warehouse. The warehouse itself was washed away totally in the tsunami of 2011, but the photographs of the original documents that we took before the disaster survived. The photographs shown below are sad witnesses to the importance of working to preserve documents before they are lost.



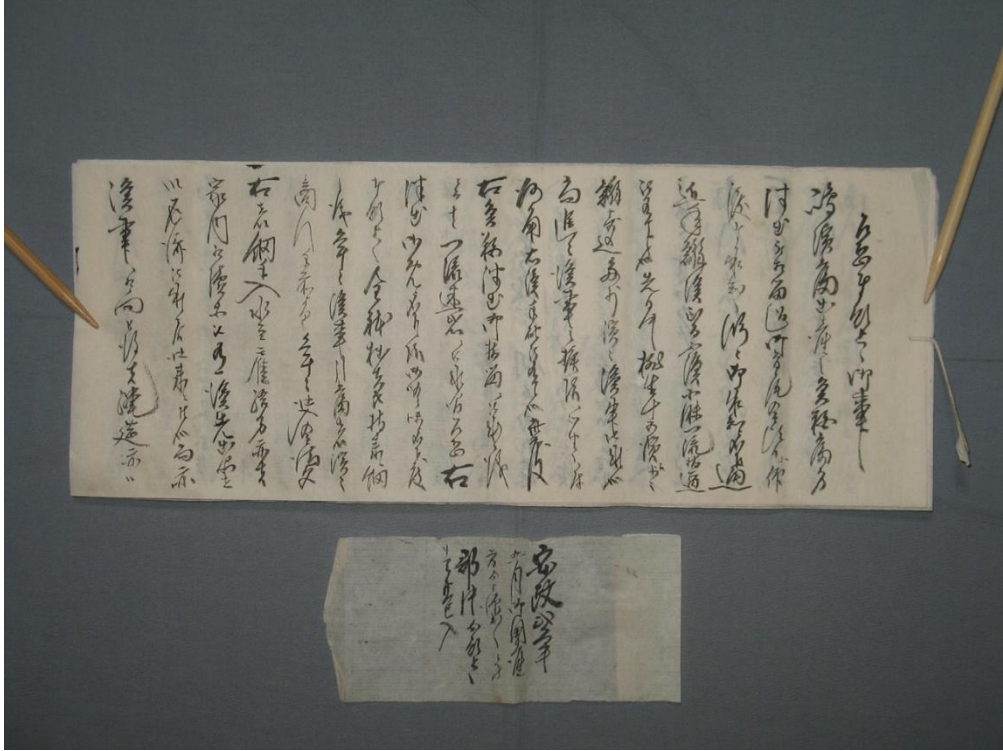
Naganuma warehouse (March 2001, photo by author).



Documents stored in a box in the Naganuma warehouse (Sept. 2009, photo by author).



The warehouse and documents were wiped away by the 3.11 Tsunami (photo by Yuichi Ebina, Tohoku University).



The data of Naganuma documents, preserved in Sato's computer (photo by author).

On the other hand, many original documents survive despite suffering damage from the tsunami and earthquake. For example, we conducted salvage operations in the Honma Family warehouse, in Ishinomaki City on 8 April 2011. This area is close to the coast, and suffered serious damage from the tsunami. All the houses were reduced to debris, but the old warehouse seen in the photo survived. We removed the collection of old documents kept inside the warehouse to a safe place, and did basic cleaning and washing of the documents to prevent further damage to them. Later on, we gathered donations from all over Japan and saved the warehouse itself from demolition in the clean-up and reconstruction process.

After the disaster of 2011, Miyagi Shiryō Network conducted over 100 salvage operations, and rescued about 100,000 documents, which we have stored temporarily.

2.2. Current Problems

Seven years have passed since the disaster of 2011, but there is still no end in sight to our activities. On the other hand, there are many problems facing us when we try to use old documents effectively in the reconstruction after the disaster.

First of all, in Miyagi Prefecture we still get requests for help, and in Fukushima Prefecture salvage operations inside the area affected by the nuclear reactor disaster have only just begun.

Secondly, we have trouble finding mid- to long-term safe storage for the documents we have salvaged. We have salvaged and treated about 100,000 documents, but the majority of these are in temporary storage. In many cases, the original owners cannot provide a new safe storage space for their collections of documents.

Thirdly, the preservation work that we have conducted on most documents is just emergency first aid treatment. In order to preserve the documents in a stable condition, it is necessary to do full-scale repair work on them. This will require a lot of money.

The fourth and last problem is how to use salvaged documents in the reconstruction process after the disaster. In order to do this, we need to sort and study the documents, but there are not enough people with the necessary skills.

3. Achievements and Future Possibilities

Next, we would like to tell you a little about what we have learnt from our salvage work on historical heritage after a mega-disaster, and what might lie ahead in the future.

3.1. Recreating Past Disasters

We can learn important information from old documents and use this to study the process of past disasters. By putting together the contents of documents throughout Japan, we can reconstruct earthquakes, tsunamis, the path of typhoons and floods in the past. This helps scientists to reconstruct the past natural environment.

3.2. Creating Opportunities for the Elderly to Contribute

Our activities depend on the support of citizen volunteers. In particular, our ongoing activities of cleaning, restoring and cataloguing salvaged documents depends entirely on these volunteers, most of whom are elderly, retired people.

After a mega-disaster, elderly people want to help, but cannot do heavy manual work such as cleaning up debris. Helping to clean and restore historical documents gives these people a way to feel that they are contributing to the overall process of reconstruction after a disaster. It also gives them a sense of belonging to a place and to a group, which in turn provides a form of psychosocial support for them.

Volunteers who continue also start to become interested in the content of the documents they are treating. Many of them develop a new interest in the history of their region, and some even acquire the specialized skills needed to read and interpret the documents. These volunteers can form the nucleus of citizens who will be able to locate, identify, and act to preserve important historical heritage in future disasters.

3.3. Hands-on Education for Students

Getting students involved in the process of salvaging heritage and giving the results back to a community can play a very important role in their education, and their choice of career.

3.4. Preserving Documents and Rebuilding Communities in the Disaster-affected Areas

The most important message we wish to give you concerns the importance of preserving historical heritage for people and communities affected by disasters.

The Honma Family warehouse in Ishinomaki, Miyagi Shiryō Network helped to save this warehouse from demolition, and it has become a focus of the community for events such as weddings. The documents housed in the mini-museum inside the warehouse tell locals and visitors the story of the community before the disaster. In the three years since the museum opened, some 2,000 people have visited it.



The salvage operations of the Honma Family warehouse (11 April 2011, photo by Saitō Shū'ichi).



Wedding ceremony held in front of the warehouse (20 April 2014, photo by Honma Eiichi).



The warehouse restored and turned into a mini-museum (26 April 2016, photo by author).

Miyagi Shiryō Network has collaborated with a team of psychologists to evaluate how our work has helped owners of collections of historical heritage recover after the disaster. The psychologists have found that, in many cases, restoring people's heritage and history has helped them recover their identity and purpose in life, and to face up to the task of rebuilding their shattered communities. Sometime it can help people who have lost family members, all worldly belongings, and their ties to their local community to recover the will to live, and to rebuild ties to surviving family and the community. Saving historical heritage can be an effective and valid form of psychosocial support for individuals and communities, as defined in the IASC Guidelines on Mental Health, and the Sendai Framework for Disaster Risk Reduction (2015).

Conclusion

Seven years and nine months have passed since the mega-disaster of March 2011. We still have not finished treating, repairing and cataloguing all the collections of documents that we have salvaged since then. We face many serious problems however. The biggest problem we face is getting people to understand that preserving historical documents is important. This is the key to solving all our other problems. If we can show how historical documents can help promote resilience, and help people and communities recover and rebuild after a disaster, we are halfway to solving all our other problems.

Daisuke Sato is an Associate Professor at the International Research Institution of Disaster Science, Tohoku University. He specialises in Japanese history with a particular focus on the Edo period, and also

actively works for the preservation of historical documents. Building on his research activities in Miyagi which has been affected by a number of natural disasters, notably the 2011 Great East Japan earthquake and tsunami, he investigates the relationship between modern society, natural disasters, and the preservation of cultural heritage.

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Session 2

Safeguarding/ Rescuing/ Restoring Damaged Documentary Heritage

Disaster and Recovery in a Coastal City Vulnerable to Hurricanes

by Andy Corrigan

This presentation addressed disaster planning from a perspective gained through helping to coordinate library salvage and recovery operations at Tulane University in New Orleans after Hurricane Katrina. The City of New Orleans is located in the United States near the mouth of the Mississippi River. Low elevation and close proximity to the Gulf Coast have made New Orleans vulnerable to flooding.

Tulane University is a private research university founded in 1834. It is the largest private employer in New Orleans and a principal steward of the region's cultural memory. Its library is the largest in the central Gulf Coast region. It holds about 4.5 million books and significant collections of archival research material. Its unique collections focus on studies related to the surrounding region and more widely on Latin America and the Caribbean.

At least 23 tropical cyclones, including about a dozen hurricanes, have affected this geographic area since 2000. The most significant was Hurricane Katrina, which approached the mouth of the Mississippi River, just below New Orleans, on August 29, 2005, with sustained winds of more than 260 kilometers per hour.

More than 1,100 people in the New Orleans area lost their lives to the storm and its immediate aftermath. Storm surge caused the walls of drainage canals leading out of the city to collapse, which caused about 80 percent of the city to fill like a bowl. Hurricane Katrina is still considered the most expensive natural disaster in U.S. history, having caused more than \$160 billion in damages. Around 1.7 million people in the area had evacuated and within a week or so, New Orleans was effectively abandoned. Its perimeter was guarded by military personnel, while rescue operations continued in its flooded interior.

After the storm, the ground level of Tulane's main Howard-Tilton Memorial Library had filled with more than eight feet of water. The space housed large collections of books, journals, recordings, government documents, newspapers, and microforms. A second, older library building nearby houses the library's archival Special Collections. Its ground level also filled with water, and flooded collections of historical manuscripts and ephemera.

For more than three weeks, about 1.5 million of the library's books and folders of manuscripts were submerged in the floodwater, as were roughly an equal number of individual pieces of microform such as microfilm reels and microfiche cards.



Materials salvage in Howard-Tilton Memorial Library September 2005. (All photos by Andy Corrigan).

At the time, the library had been prepared with a detailed disaster plan. However, very little in that plan proved useful when a real large scale disaster occurred. The plan had provided directions for organizing library staff to address impacts onsite, but in this case the staff had evacuated and most could not return. The plan incorrectly assumed damages would mostly involve collections; it failed to address other critical disaster impacts on the building conditions needed to sustain collections and library operations. Overall, the plan did not appreciate the potential scale of a real disaster, which would have catastrophic effects outside of the narrow individual scope of the library.

The library's disaster plan today is primarily a communication plan that identifies emergency contact information for key personnel and backup contacts if these individuals cannot be reached. Importantly, it includes a scalable Incident Command System that is part of a larger, coordinated Incident Command System maintained by the University. These systems connect external and internal partners to produce a coordinated response to any kind of disaster.

The Incident Command System is one of the main principles of the U.S. government's National Incident Management System. Tulane University has adapted these principles to coordinate disaster preparation and response with the City of New Orleans, the State of Louisiana, federal agencies, and potential additional responders including qualified disaster management firms.

The University's Incident Command System identifies an **Incident Commander** who is in charge of incident response onsite and coordinates teams of university first responders as well as those from local fire and police departments, or other resources, that may require access to university property and buildings. An **Emergency Operations Group**, synonymous with the university's Administrative Council, is the largest component of the system and primary collaborative group for a response. When activated for an emergency, it serves as the central point of information flow and coordinates its operations with local and regional agencies. The library is in this group.

An **Executive Policy Group** includes the university president and others charged with senior oversight. It serves as the primary decision-making group for handling actions recommended by the Emergency Operations Group. A **Business Continuity Group** oversees the transition to modified or normal operations following an event. A **Student Affairs Group** coordinates safety measures for students that may include evacuating students to a safe location.

The essential priorities of the university's Incident Command System include:

- Ensuring life safety
- Protecting University assets
- Communication
- Safeguarding the environment
- Maintaining continuity of University programs
- Recovery, restoration and resumption of operations

The Library's internal Incident Command System is similar to the university's in establishing primary contacts for initiating a scalable response. Each link in the system maintains contacts to be used when addressing the unpredictable circumstances of each event. For instance, in the event of flood damages, a Collections Salvage Coordinator would be ready to seek help from the university's coordinators for Facilities Services or for government assistance, as needed, and could directly seek help from pre-identified expert contractors that provide specialized collections salvage and recovery services.

Recovering from a major disaster may take many years. At Howard-Tilton Memorial Library more than a dozen years were required to recover from Hurricane Katrina. But establishing scalable recovery operations through a system of coordinated contacts greatly assisted the library through the following recovery stages.

Building and internal climate stabilization

After Katrina, recovery engineers and response crews mobilized to drain the flooded library spaces and stabilize their interior climates. In the 225,000 square foot main library building this required installation of generator power and a temporary exterior HVAC system that could blow cool or warm air into all five levels of the building, using temporary towers connecting to its back windows. The system was used for 11 years, until permanent remediation could be arranged and completed.

Collections salvage

Flooded materials were selected for salvage, in an operation that froze salvaged wet materials in refrigerated truck trailers onsite. All rare or unique materials that were affected were salvaged for restoration. Materials selection was overseen by a small number of library representatives who could make their way into the city. The salvage work was accomplished by the same recovery engineers and response crews noted above.

Restoring and rebuilding collections

The materials restoration process took place at a restoration facility located 550 miles away in Ft. Worth, TX. Salvaged materials were cleaned and then dried in vacuum chambers to avoid paper expansion or wrinkling. The library matched catalog and finding aid records to flooded locations within its buildings, and then checked these against the inventoried restored items to determine losses.



Materials restoration in Fort Worth, Texas, November 2005.

Processing of recovered or replaced materials

The library obtained federal assistance to build and staff a recovery center in a warehouse space to sort, process, and temporarily house more than 1 million restored or replaced items that would be coming back to its collections.



Hazard mitigation and building remediation, Howard-Tilton Memorial Library, September 2014.

Structural building restoration and hazard mitigation

Lastly, the library needed to acquire federal assistance to rebuild its library spaces and mechanical systems destroyed after Katrina and do so in a way that would avoid problems if future flooding occurred. This was accomplished by replacing the flood-destroyed lower level spaces with a 70,000 square foot, two-level addition on top of the main library building. The addition was completed in 2016.

References

- Laska, Shirley (ed.) (2020) *Louisiana's Response to Extreme Weather, 2020*. SpringerOpen. Retrieved from <http://library.oapen.org/bitstream/handle/20.500.12657/22944/1007217.pdf>
- Knabb, Richard D., et al. (2005, 2011). *Tropical Cyclone Report: Hurricane Katrina*. United States National Oceanic and Atmospheric Administration's National Weather Service. Retrieved from https://www.nhc.noaa.gov/data/tcr/AL122005_Katrina.pdf
- Federal Emergency Management Agency (2020). *National Incident Management System*. United States Department of Homeland Security. Retrieved from <https://www.fema.gov/national-incident-management-system>
- Corrigan, Andy (2016). *Hurricane Katrina and the Library*. Howard-Tilton Memorial Library, Tulane University. Retrieved from

<https://library.tulane.edu/about/collections/hurricane-katrina-and-libraris-collections>

Corrigan, Andy (2016). *Tulane Libraries Recovery Center*. Howard-Tilton Memorial Library, Tulane University. Retrieved from

<https://library.tulane.edu/about/collections/tulane-libraries-recovery-center>

Corrigan, Andy (2016). *Howard-Tilton Memorial Library Build-back and Hazard Mitigation Project: New 5th and 6th Floor Construction*. Howard-Tilton Memorial Library, Tulane University. Retrieved from <http://h-tml-addition.blogspot.com>

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Session 3

Documenting Disaster: Research Perspectives, Awareness Raising and Community Engagement

Tsunami, Sri Lankan Experience and the Indian Ocean Tsunami Archives: Motivation and Objectives in Inscribing on the Memory of the World International Register

by Saroja Wettasinghe

1. Introduction

Bangladesh, Indonesia, India, Malaysia, Myanmar, Somalia, South Africa, Sri Lanka, Thailand, the Maldives, Burma (Myanmar), Madagascar, Kenya, Tanzania, and the Seychelles in the Indian Ocean were affected by the tsunami in 2004. It was a novel experience for the generation at the time.

2. Tsunami

A 20 feet high wave struck more than 600 miles of Sri Lanka's coast, rushing inland close to three miles and wiping out everything in its path. As mentioned above, many countries which were affected faced similar experiences: Many lives were lost and properties were disturbed.

<i>Country</i>	<i>Lives lost</i>	<i>Displaced</i>
Indonesia	167,540	566,898
Sri Lanka	35,322	519,063
India	16,269	647,599
Thailand	8,212	n/a
Other (10 countries)	555	34,700
Total	227,898	1,768,260

Some figures are approximate.

3. Documentary heritage affected due to the tsunami in Sri Lanka

Although memory institutions such as the National Archives, National Library and Documentation Services Board, and the National Museum were not affected as they are located inland away from the sea, many libraries and government offices in the coastal areas were caught up in the tsunami.

Government records in 25 government offices were affected in the Southern Province of Sri Lanka. Loss of electoral registers, survey plans and other documents of the Survey Department, land records in the Land Registries, birth, marriage and death certificates in the Registrar General's Office are some of the records that were destroyed fully or partially.

Seventy-five temple libraries with valuable manuscripts on various subjects, including indigenous medicine, were either fully or partially destroyed. In addition, 182 school libraries, 62 public libraries, 40 community libraries were affected either fully or partially.

4. Steps undertaken to preserve and conserve documentary heritage affected by the tsunami

4.1. Formation of Task Forces

Sri Lanka National Library and Documentation Services Board, Sri Lanka Library Association and the National Archives of Sri Lanka together formed several task forces to manage the documentary heritage affected by the tsunami. They are: Interim Relief Task Force, Library Building and Furniture Task Force, School Library Task Force, Public Library Task Force, General Library Task Force (other libraries), Planning Task Force, Conservation and Preservation Task Force, Twinning/Adoption Task Force, Education and Training Task Force, and Publicity, Coordination with Centre for National Operations (CNO) and other agencies.

Each Task Force had a chairman/chairperson, a secretary and 5-7 members and Terms of Reference. Examples of the Terms of Reference of the Preservation and Conservation Task Force are as follows:

- Identify the damages caused to government documents and library material
- Develop a short- and long-term action plan
- Work in close cooperation with the CNO, relevant ministries and other agencies
- Work in close cooperation with other relevant task forces
- Develop a model archival plan for government departments and other agencies
- Develop a preservation plan for libraries
- Prepare a list of necessary equipment and material for the conservation unit/units
- Identify the difficulties face by the government departments and libraries in the conservation of documents
- Propose suitable remedial measures to overcome the situation
- Any other necessary activities to implement the project.

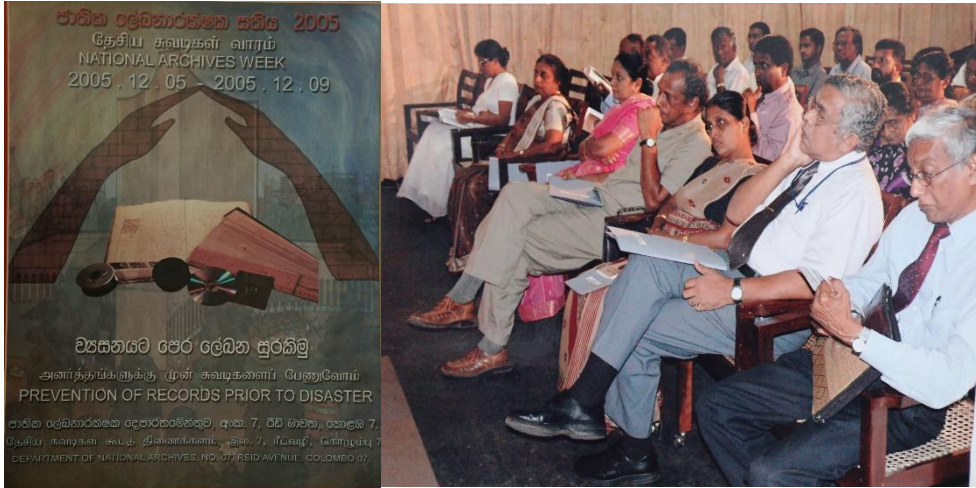
4.2. Training in restoration of tsunami-affected documents

National Archives conducted many training programmes in government institutions, enabling officers in the respective organizations to commence preservation and conservation of tsunami-affected documents. When there were large numbers of documents, the organizations managed to obtain the services of school leavers for cleaning and drying the affected documents after giving them a very thorough training. The training included minor first-aid and restoration work as well.

National Library and Documentation Services Board also commenced the rehabilitation of tsunami-affected libraries in Sri Lanka, in addition to the restoration of rare books which were affected by the tsunami.

4.3. Training and Awareness Programmes on disaster mitigation, preservation and conservation of documents

With the experience of tsunami, it was decided to hold a Conservation Day during the National Archives Week in 2005. On the day a seminar and an exhibition were organized on preservation and conservation of documents. There were practical demonstrations on salvaging water damaged documents. Since it was advertised on media, not only government officials, but also students and general public participated in the event.



Poster and the seminar in the National Archives Week 2005 (Photos with the courtesy of the Sri Lanka National Archives).

A Disaster Management Workshop was organized by the National Library and Documentation Services Board in 2005. Many librarians and asst. librarians participated in the event, and a resource person from Germany conducted the workshop, assisted by the German Cultural Centre in Sri Lanka.



Disaster Management Workshop at the National Library (Photo with the courtesy of the Sri Lanka National Library and Documentation Services Board).

Public awareness was also warranted by television and radio interviews on disaster mitigation and restoration of damaged documents, in addition to the printed articles and publications on the subject by the National Archives, Library and Documentation Services Board and Sri Lanka Library Association.

5. The Indian Ocean Tsunami Archives

Although 14 countries were affected by the tsunami, only Indonesia and Sri Lanka jointly applied for the inscription of the Indian Ocean Tsunami Archives on Memory of the World (MoW) International Register.

It consists of records pertaining to the tsunami, deadly catastrophe, disaster response to the event and rehabilitation and reconstruction in Indonesia and Sri Lanka. In Indonesia, the records are housed in the National Archives of Republic of Indonesia and Aceh Tsunami Archives Centre.

In Sri Lanka very few tsunami archives exist in the National Archives, and some of the records exposed to tsunami disaster in government institutions were restored as mentioned above with the assistance of the National Archives and they remain with those government institutions which created the records.

The National Archives of Indonesia holds 9.311 linear meters textual archives, 500 photos, 196 audio cassettes, 1230 electronic CD/DVDs and 13 magnetic videos on the tsunami, while the National Archives of Sri Lanka holds records pertaining to the Inquiry on Tsunami Train Disaster 2004 (RG 550): 70 files and 23 audio cassettes. The Presidential Commission of Inquiry into the National Disaster Tsunami that occurred on 26th Dec. 2004 (RG 543) consists of 21 files, 121 cassettes, and 24 electronic CDs, Tsunami Photo Collection (75 photographs) and two videos from Sri Lanka Rupavahini Corporation.

6. Motivation to Inscribe on MoW International Register

The tsunami is significant as one of the largest natural disasters in Asia in recent history, which led to extraordinary humanitarian efforts indicating reflection of the spirit of unity, and solidarity among the nations in the world. It is also very significant as the largest aid effort by the international community. With the experience of rehabilitation through reconstruction, there is a possibility of improving disaster risk reduction. Hence, the records pertaining to all these activities are unique and versatile for the future in historical perspective, as well as being knowledge resources.

7. Objectives in inscribing on MoW International Register

In inscribing in the MoW International Register, there will be awareness of the collection of Tsunami Archives among communities throughout the world. Moreover, it would preserve the memory of this unique experience and protect human rights, by taking special measures to preserve the collection. In addition, disaster risk mitigation could be carried out with the experience gathered in disaster rehabilitation and renovation.

8. Conclusion

The memory of the tsunami disaster, and the rehabilitation experience which created very important documentary heritage that is indicative of human rights protection, and the unity and solidarity of the international community, is to be preserved. Inscribing the Tsunami Archives in the MoW International Register has given strength and validity to the collection. The experience gained would assist in mitigating disasters and proper disaster risk management.

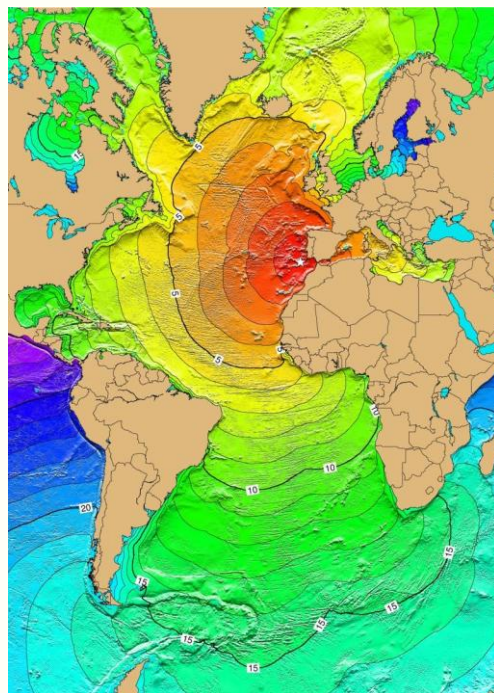
Saroja Wettasinghe holds a B.Sc (Hons) in Chemistry from Panjab University, India and a Ph.D. in Archival Science from University of London. She joined the National Archives of Sri Lanka as the Asst. Archivist (Technical) in 1983 and retired as the Director General of the National Archives in 2017. She was a member of the Sub-Committee of Technology of the Memory of the World Programme of UNESCO and was a member of the Expert Group of the Archives Buildings and Environment of the International Council on Archives (ICA). At present she is a member of the Evaluation Commission of ICA and the National Committee of the MoW Programme in Sri Lanka.

A Proposal to Use Documents of Literature for Disaster Sensitization

by Lothar Jordan

This article is based on my presentation “Disasters and Memory: Some Perspectives of Education and Research in the Context of Memory of the World” in the First Political Forum (2018). As the matter of Disaster Prevention and the significance of raising awareness for the danger of disaster for the project of documentary heritage is a growing subject for Memory of the World, by this article I want to give an example from Literature how we could try to sensitize young people to this increasingly important issue.⁶

The Earthquake of Lisbon (1755) was a watershed in the history of natural disasters, as it is well documented, generated reactions in literature, as well as the arts and scholarship. It consisted of both a tsunami and an earthquake, and generated many fires. Felt in Western Europe, North Africa, and the Caribbean Islands it caused somewhere between 30,000 -100,000 casualties in the region of Lisbon, as well as a great number in North Africa.



NOAA's National Geophysical Data Center (NGDC) - NOAA's National Geophysical Data Center (NGDC) http://www.ngdc.noaa.gov/hazard/icons/1755_1101.jpg

⁶ The article is planned to be published as a sub-sub-chapter of the *Memory of the World School Kit. A Teachers' Guide*. The final draft of the *Kit*, prepared by the Working Group Schools of the SCEaR, was presented to UNESCO in 2019. I thank the organization for allowing me to publish a slightly modified version here.

The destruction it wrought included numerous churches as well as the National Library. Immediately after the earthquake, research began on the conditions and the details of the consequences of such disasters with the intention to minimize damages in the future.

The earthquake of Lisbon also had a huge impact on the intellectual discourses (philosophy, literature, theology, sciences) in Europe.

The first writer to react was Voltaire (“Poème sur le désastre de Lisbonne”, Poem on the Lisbon Disaster, 1756). What concerned him was that in 18th century Europe enlightened thinkers and writers before 1755, such as Leibniz or Pope, had in general a tendency to make optimistic assumptions about the world (“This is the best of all worlds”.- ‘God is benevolent’: There is a continuous progress of humanity through philosophy, education, and the sciences). The earthquake of Lisbon weakened such a worldview. On the other hand Voltaire could not accept the ideas of some churchmen and others that this disaster was a godly punishment (as e.g. in a painting by J. G. Ströberle of that time⁷).

At the age of six, German writer Johann Wolfgang von Goethe experienced this earthquake as a shock. He speaks of it in his autobiography *Dichtung und Wahrheit* (1811):

“But an extraordinary event deeply disturbed the Boy’s peace of mind, for the first time. On the 1st of November, 1755, the earthquake at Lisbon took place, and spread a prodigious alarm over the world, long accustomed to peace and quiet. A great and magnificent capital, which was, at the same time, a trading and mercantile city, is smitten, without warning, by a most fearful calamity. The earth trembles and totters, the sea roars up, ships dash together, houses fall in, and over them churches and towers, the royal palace is in part swallowed by the waters, the bursting land seems to vomit flames, since smoke and fire are seen everywhere amid the ruins. Sixty thousand persons, a moment before in ease and comfort, fall together, and he is to be deemed most fortunate who is no longer capable of a thought or feeling about the disaster. The flames rage on, and with them rage a troop of desperadoes, before concealed, or set at large by the event. The wretched survivors are exposed to pillage, massacre, and every outrage: and thus, on all sides, Nature asserts her boundless capriciousness.

Intimidations of this event had spread over wide regions more quickly than the authentic reports: slight shocks had been felt in many places: in many springs, particularly those of a mineral nature, an unusual receding of the waters had been remarked; and so much the greater was the effect of the accounts themselves, which were rapidly circulated, at first in general terms, but finally with dreadful particulars. Hereupon, the religious were neither wanting in reflections, nor the philosophic in grounds for consolation, not the clergy in warnings. So complicated an event arrested the attention of the world for a long time; and, as additional and more detailed accounts of the extensive effects of this explosion came from every quarter, the minds already aroused by the misfortunes of strangers, began to be more and more anxious about themselves and their friends. Perhaps the demon of terror had never so speedily and powerfully diffused his terrors over the earth.

⁷ [https://commons.wikimedia.org/wiki/File:O_Terramoto_de_1755_\(1756-92\)_-_Jo%C3%A3o_Glama_\(MNAA\).png](https://commons.wikimedia.org/wiki/File:O_Terramoto_de_1755_(1756-92)_-_Jo%C3%A3o_Glama_(MNAA).png)

The Boy, who was compelled to put up with frequent repetitions of the whole matter, was not a little staggered. God, the Creator and Preserver of Heaven and Earth, whom the explanation of the first article of the Creed declared so wise and benignant, having given both the just and the unjust a prey to the same destruction, had not manifested Himself, by any means, in a fatherly character. In vain the young mind strove to resist these impressions. It was the more impossible, as the wise and scripture-learned could not themselves agree as to the light in which such a phenomenon should be regarded.“ (*The Auto-Biography of Goethe: Truth and Poetry: From My Own Life* [1811]), transl. J. Oxenford. London: H.G. Bohn, 1848, pp.18-19⁸).

Now we can tell a story that should be apt to win the attentiveness of school students. When Goethe prepared this passage of his autobiography, he went to the Library in Weimar to find the oldest literature he could get on the matter, literature from the time when he was a six year old child learning the news about the earthquake in Lisbon.

It is important to take into consideration that Goethe at that time was not only a famous writer and poet, but one of the two head librarians in Weimar. School students may be surprised about that, as a widely spread stereotype would not let expect a poet to work as a librarian. But Goethe did. He thought that the development of the library would help to develop the city he lived in. That fact could help to underline the significance of memory institutions, in this case a library. Today the library belongs to an ensemble of buildings that are a UNESCO World Cultural Heritage site (which opens the path to reflecting synergies between World Cultural and Natural Heritage and MoW).



Duchess Anna Amalia Library, Weimar; UNESCO World Cultural Heritage.

<https://commons.wikimedia.org/w/index.php?curid=42874816>

⁸ <https://archive.org/details/autobiographyofgoet/page/n3/mode/2up>.

From this library Goethe (you can see his image on the painting left column, bottom) took home a booklet (three brochures in fact) that represented the first publication in Germany on the earthquake in Lisbon. After he had used it for his autobiography, he brought it back to the library.

This is its title page:⁹

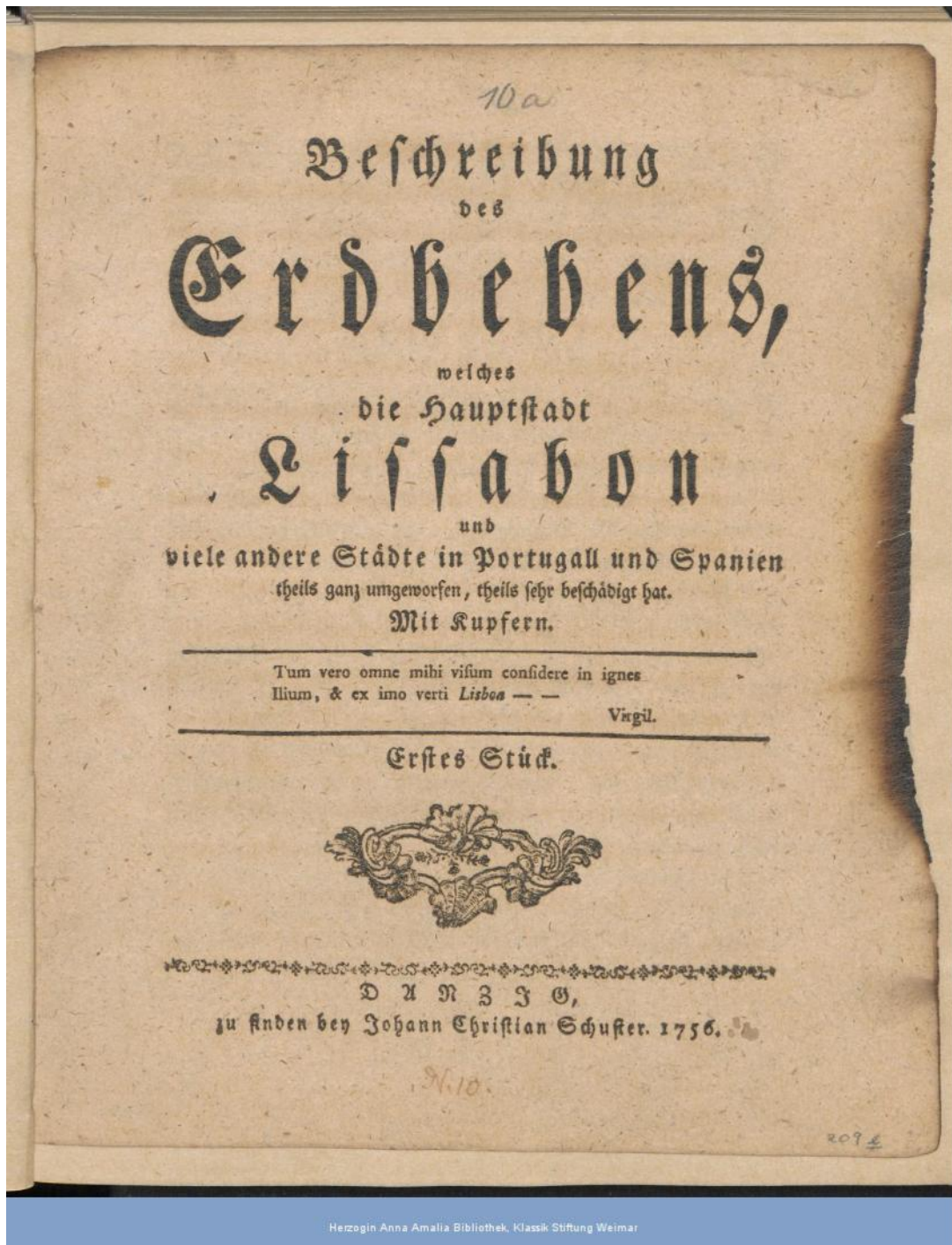


Photo and © Duchess Anna Amalia Library, Foundation of Weimar Classics.

⁹ The students can discover more interesting things on this title page, e.g. in the motto. There a citation from Old Roman poet Virgil was silently modified: Troja was changed to Lisboa.

When the Duchess Anna Amalia Library went on fire in 2004, ten thousands of items were destroyed or damaged. One of them was this booklet. One can see the traces of fire on the right side.

This is a sad, but fascinating story, suitable to sensitize students for disasters threatening documentary heritage: A booklet from 1756 on an earthquake that had damaged a region and destroyed a national library by fire in 1755 is used by a poet for writing his autobiography in 1811. About 200 years later exactly that copy is damaged by a fire damaging a world heritage site, a library - and the documents it kept. Luckily this copy was saved. The book is a reminder of a natural disaster of the past, and the traces of fire on it raise awareness for the need to care better for safeguarding heritage, in this case cultural heritage *and* documentary heritage in our times.

Dr. phil. Lothar Jordan is Professor of Modern German Literature and Comparative Literature. He worked in universities and in a literature museum. Now retired. – He was engaged in ICOM, and has been active in the UNESCO Memory of the World Programme since 2008, from 2013-2017 as Vice-Chair of its International Advisory Committee (IAC), and since 2013 as Chair of its Sub-Committee on Education and Research (SCEaR). Recently he published (co-ed.): The UNESCO Memory of the World Programme. Key Aspects and Recent Developments (Cham/Switzerland: Springer, 2020).

Session 4

Disaster Risk Reduction as a Strategy for Inter-Disciplinary Preservation Approaches towards Documentary Heritage

Flood Risk Identification for the Preservation of Documentary Heritage

by Naoko Nagumo

People around the world have been struggling with water-related disasters such as droughts, floods, landslides, debris flows, storm surges and tsunamis. Floods are particularly common and frequently occur in tropical or temperate regions. While rivers and water are essential resources for humanity, they also threaten their livelihoods in the form of flooding. In Japan, serious flood disasters occur almost every year with devastating damage to local communities not only because of deep inundation but also due to debris flows and sediment deposition induced by violent flood flows. The torrential rainfall in July 2018 was one of such hazardous events in recent years, claiming the lives of more than 200 people in the western part of Japan. Among the severely affected areas at that time was a part of Mabi Town, Okayama Prefecture (Fig. 1), where a levee breach resulted in a deep inundation of more than 5 m (over the 2nd floor level of the standard houses in Japan).



Fig. 1 Levee breach and inundation in Mabi Town (photo by ICHARM, July 2018).

At the time of a disaster, the top priority is saving human lives. As for documentary heritage, there is usually no time to protect it at the time of emergency; it is almost impossible even for those in charge of it to take any action for their protection. However, the characteristics of flood hazards and possible damage to the area can be specified to a certain degree before they actually occur. For example, the characteristics of the 2018 inundation in Mabi Town were very similar to those illustrated in the flood hazard map

and the land classification map previously issued and a damage report of a flood in the 19th century. In this respect, it is possible to identify the risks to which documentary heritage is possibly exposed, and it is crucial to do so because knowing the risks leads to planning what to do and what to improve to protect it from severe disasters.

In Japan, local governments are responsible for producing hazard maps for different hazards such as floods, volcanic eruptions, and tsunamis. Hazard maps convey risk information, for example the expected inundation depths and extents of the inundation risk areas as well as the locations of the evacuation centres. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) operates a web portal site of hazard maps for easy search and access to hazard maps issued by each local government (<https://disaportal.gsi.go.jp/>). Since it allows the user to superimpose risk information onto various types of maps, the website is regarded as an efficient tool to help the user understand the risks around them. Though it is rather for professional use, a flood analysis system called the Rainfall-Runoff-Inundation (RRI) model is also available to understand flood risk better. Pioneered by the International Centre for Water Hazard and Risk Management (ICHARM), the RRI model is a two-dimensional model capable of simulating rainfall-runoff and flood inundation simultaneously. The model has already been well-known in the field of disaster management and disseminated and used in many countries through ICHARM's educational programmes. As Fig. 2 shows, many studies have been done to identify local inundation risks and prepare risk maps using the simulated results from the RRI model.

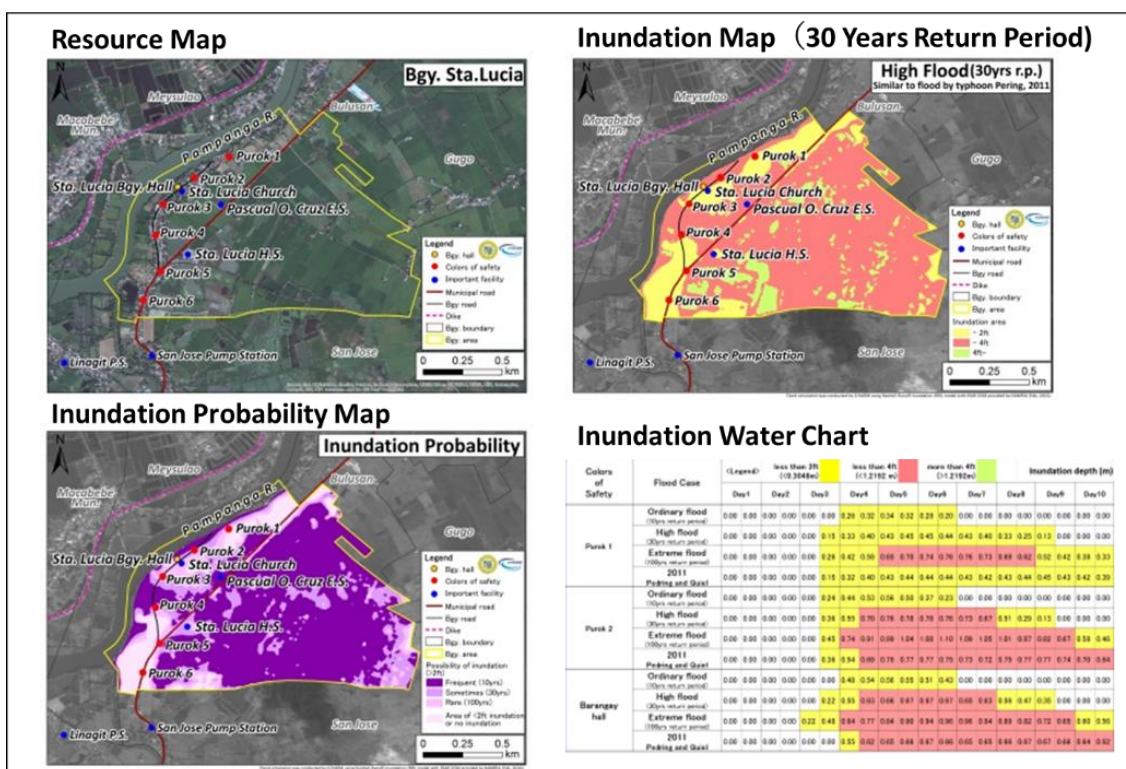


Fig. 2 Example of risk mapping by using RRI model (by ICHARM).

Risk identification is a critical issue for countries around the world in terms of protecting the world's documentary heritage from disasters. For developing effective, sustainable preservation strategies, it is essential to improve communication among international communities to further promote the sharing of knowledge and experience and encourage collaboration between experts in various research fields.

Dr Naoko Nagumo is a research specialist of the International Centre for Water Hazard and Risk Management (ICHARM), a Category 2 Centre under the auspices of UNESCO in Japan. She received her PhD in environmental studies from the University of Tokyo in 2011 and joined ICHARM in 2014. Her current work focuses on understanding the mechanism of sediment transport and topographic development of rivers in Cambodia and Myanmar. She also conducts surveys on recent sediment-related flood disasters in Japan from a geographic viewpoint.

Preserving, Learning and Transmitting the Experiences of the 2011 Tohoku Earthquake to Enhance Disaster Risk Reduction

by Sébastien Penmellen Boret, Akihiro Shibayama, Julia Gerster, Fumihiko Imamura

Disaster memories result from purposeful acts and desire to pass down experiences and lessons to future generations. In Yerushalmi's words (1982: xxxiv), "collective memory is not a metaphor but a social reality transmitted and sustained through the conscious effort of the group".¹⁰ In other words, the collective memory of a disaster is not something 'natural' but socially constructed by ideas and purposes. This collective memory, as Pierre Nora (1989)¹¹ argued, crystalizes itself around objects, events, real or imaginary, and places such as museums and archives, all which he refers to as 'places of memories.' The locations of disaster memories range from records, museums, memorial ceremonies, monuments, storytelling and formal education. It is from these 'places of memory' that societies actively preserve, learn and transmit our experience, information and knowledge of a catastrophe.

One of the most significant efforts for the building of collective disaster memory took place during the aftermath of the Great East Japan Earthquake (2011). On March 11, 2011, the people of northeastern Japan felt a tremor of 9.0M. Coastal communities began to evacuate following warnings of tsunami waves reaching up to 40 meters high in some areas. Unlike the victims of the 2004 Indian Ocean Tsunami, people in Japan had the technological capacity and desire to record the events as it unfolded. Mobile phones, mass media, and satellite technology provided the most detailed view of the events from the earthquake and tsunami themselves. They also recorded the tremendous human and material damages, including the 20,000 thousand people who lost their lives. Amidst this tragedy, survivors and other witnesses continuously shared their experiences on social media, personal blogs and other internet websites.

The vast amount of records prompted universities, governments, communities, and non-governmental organizations to start building dozens of archives of the disaster. Companies like Yahoo! JAPAN and Google were among the first creators (Fig. 1). Local efforts soon followed them in Tohoku and Tokyo. Among them, the International Research Institute of Disaster Science (IRIDeS) of Tohoku University established the Michinoku Shinrokuden Digital Archive.

From the outset, the mission of Michinoku Shinrokuden archive was to contribute to disaster risk reduction (DRR) by collecting, learning, and sharing the disaster records. Its initiatives for DRR range from support for recovery, contribution to disaster countermeasures, technology solutions as well as the transmitting of lessons and traditions. Today, this archive ambitions to establish standards that are necessary to build an active disaster archive network in Japan and overseas. The archive collaborates with survivors, local governments, non-profit organizations and members of the private sectors to totalized over 120 partners in Japan and overseas.

¹⁰ Yosef Hayim Yerushalmi, *Zakhor: Jewish History and Jewish Memory*. University of Washington Press, 1982, p. xxxiv.

¹¹ Pierre Nora, *Between Memory and History: Les Lieux de Mémoire*. *Representations* 26 (1989), pp. 7-24.



Figure 1: Scenes of the Great East Japan Earthquake, Michinoku Shinrokuden Archives, Tohoku University (credit: Michinoku Shinrokuden Digital Archives, Akihiro Shibayama).

Preserving the records

A specificity of Michinoku Shinrokuden has been its method for data collection. Its teams of surveyors included survivors and inhabitants of the affected areas. Their contribution brought a different look onto the situations from the usual gaze of researchers. They provided better access to a more intimate understanding of the conditions of the population affected by the catastrophe. They witnessed the daily and micro-changes underwent by the population. Through its network of researchers, Michinoku Shinrokuden also generates technologically advanced data such as street views, laser imaging and drone filming in many areas.

In almost ten years of activity, the archives gathered and made available over one hundred thousand items. This broad range of digital data includes photographs, audio recordings, videos, documents, and reports. In addition to storing raw data, the archive also contributes to the 3D digitalization of disaster remains such as a building, boats and other constructions that seem essential for the history, reconstruction and protection of the affected communities. The archive is also the repository of computer modelling and simulation. This comprehensive data collection aims at providing the opportunity to learn and share the lessons from the reconstruction of the coastline.

Learning with disaster archives

Michinoku Shinrokuden has been engaging with the process of learning and building knowledge from disaster records. One of its earlier activities consisted of the monitoring the recovery and the reconstruction in collaboration with researchers, private companies and local governments. It shared the information regarding new technology and solution that emerged from these processes.

The archive also learns from its experience of archiving with its partners at home and overseas. It converges their effort with another repository, local newspapers, and the Japan National Diet Library with whom they have built a network of digital archives. They co-organize an annual symposium during which leaders of disaster archives share their progress and challenges.

Michinoku Shinrokuden extended commitment to learning from disaster digital archives in both higher and primary education. It established a partnership with the Japan Disaster Archive (<https://jdarchive.org>) of the Reischauer Institute of Japanese Studies, Harvard University. Together they broadened their access to data and established symposiums during which students from Harvard and Tohoku report on their research and experience of using disaster archives. Since 2019, Michinoku Shinrokuden and JDA have also been working together to bring disaster archives in the classrooms of schools. They organize symposium and training for both teachers and students. These activities promote their usage among the general public, which remains key to their sustainability.



Figure 2: Losses and Recovery, Michinoku Shinrokuden Exposition, UN-World Conference on Disaster Risk Reduction, March 15, 2015, Sendai Mediathèque, Japan (credit: Michinoku Shinrokuden Digital Archives, Akihiro Shibayama).

Transmitting lessons of disasters

The third fold of this archiving project consists of the transmission of the information, knowledge and, possibly, the lessons that one may draw from digital archives. Michinoku Shinrokuden has been contributing to the development of public facilities for public disaster education and prevention. For instance, it contributed to the development of memorial facilities and disaster museums located in the affected areas of Tohoku. These places of memory and transmission (*densho*) are part of the “3.11 Densho Road” (www.311densho.or.jp). They tell about the memories of the communities and areas that were washed away by the tsunami. The facilities developed in collaboration with Michinoku Shinrokuden provide a unique understanding of Tohoku’s disaster mitigation and science. They tell about the experience of the local authorities and those responsible for saving and evacuating people caught in the disaster. In doing so, the archive attempts to preserve an accurate representation of the sequence of events to provide information and lessons applicable within and outside Japan.

In addition to disaster mitigation and science, the archive has been organizing a storytelling symposium “Kataritsugi” since 2013. Each year, the staff collect stories from survivors of a particular area. The stories are then rewritten into a cohesive narrative read during a public reading accompanied by a musical performance. For example, one of the stories of the 2013 edition was entitled “Rubble is no garbage.” It tells about the early phase of the aftermath when volunteers and professional came to clear the tsunami areas of its debris. The author infers that local inhabitants do not consider debris as waste. They represent their lives, their memories, and their loss. In this fashion, these events attempt to bridge the gap between the audience and the survivors and bring new perspectives on the nature of disaster experience.

The visions of Michinoku Shinrokuden goes beyond Japan to reach all stakeholders of disaster prevention and management. Most notably, the archive participated in the organization of the UN World Conference on Disaster Risk Reduction together with the members of IRIDeS and Tohoku University at large. An exposition designed by Michinoku Shinrokuden reported on the damages and the reconstruction of all the prefectures affected by the 2011 disaster. The installation was located in the Mediatèque and attracted thousands of visitors. Michinoku Shinrokude also organized on an international workshop on ‘Archiving and Memorializing Disasters’. This session brought together expert of anthropology, history, and engineering from North America, Europe and Southeast Asia. Its participants reflected on the potential role of disaster archives and memorialization as it relates to the third priority for action – Investing in disaster risk reduction for resilience – of the UN-endorsed Sendai Framework for Disaster Risk Reduction (2015-2030).

This effort continues during the World Bosai Forum organized every two years in Sendai (worldbosaiforum.com) where thousands of stakeholders from governments, the private sector, academia and the general public continue to imagine new ways to reduce the global risk of disaster.

かたりつぎ

katari-tsunagu



Figure 3: Storytelling performance, Kataritsugi symposium, Tohoku University, March 1, 2013 (credit: Michinoku Shinrokuden Digital Archives, Akihiro Shibayama).

After the Great East Japan Earthquake

Since 2011, disaster digital records have become an integral part of Japan's collective memory. The activities surrounding their safeguard play an essential part in the social and cultural reconstruction of communities affected or annihilated by the tsunami. Their exploitations contribute toward social reconstruction, disaster mitigation, risk reduction and education within lay, professional and academic communities.

Michinoku currently focuses on using its knowledge accumulated over the years to support the development of international standards and projects such as the Disaster Archive of Tsunami in Aceh (DATA) of the 2004 Tsunami in collaboration with Syiah Kuala University, the 2016 Kumamoto Earthquake and other occurring disasters in Japan. Besides, it turns its effort towards learning from other experts in collective memories such museums, digital repositories and institutions, all of which share the common goal of preserving a living memory of human tragedies in the hope of alleviating the suffering of future generations.

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Early Twenty-first Century: Authority, Innovation and Mortuary Rites. *His current research (2019-22) investigates the management of mass death and public health in post-disaster communities. He examines the policy and practices of burials and funerals during the 3.11 Disaster in Japan, the 2004 Tsunami in Aceh, and the 2003 Heatwave in Europe.* -

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Disaster Risks Associated with Audiovisual Collections

by Dietrich Schüller

This contribution intends to briefly summarise the risks documents are exposed to by disasters, with a specific concentration on audiovisual documents. The conventional carrier based AV documents are more sensitive to mechanical, physical, and chemical influences than traditional text documents.¹² Moreover, they are – with the exception of classical photographs – machine-readable documents, which brings an additional dimension of preservation problems into the scene. In order to cover all audiovisual documents, it must be born in mind, however, that the greater and ever growing part is now available in digital form and hence part of the IT world.

In order to delineate a more complete picture of the problems, the discussion also includes, in addition to “classical disasters” and their prevention, unnoticed, hidden insidious disasters, which generally have not the quantitative dimension of the “classical” ones, but which are equally disastrous for the affected documents, specifically as they often happen unnoticed.

Fire is certainly the disaster which, because of its frequency and devastating effect to all sectors of civilisation, has created the highest level of awareness. A bundle of measures for its prevention has been developed over centuries, including general rules as well as specific measures to safeguard cultural objects held by libraries, archives and museums. Measures for the protection of audiovisual carriers are mainly determined by their physical properties, their flammability, and their tolerance to heat, which is generally lower than that for paper documents. Prolonged exposure to temperatures above 35° C must be avoided, as these would swiftly lead to deformation of carriers of all kinds, thus endangering the reproduction of the sounds and images that they hold. Consequently, storage areas should be well insulated to provide sufficient protection should a fire occur in their vicinity. Careful insulation will also help support tight climatic conditions for the benefit of the chemical stability and, consequently the life expectancy of most carriers.

Unlike paper documents, most audiovisual carriers will produce highly toxic fumes when burning. This is another reason for effective measures to prevent the outbreak of fires. These should include a fire detection system monitoring the entire building, not only the storage areas, and ideally an automated fire extinguishing system for the storage vaults. For studios and laboratories hand held fire extinguishers should operate with carbon dioxide or foam, not with powder, which cannot be easily removed from carriers, once applied.

Of specific concern is the storage of nitrate cellulose (“celluloid”) films, produced until the mid-1950s. Chemically deteriorated nitrate films have a very low ignition point, which has often led to self ignition. Such fires cannot be extinguished and special vaults constructions must be in place to avoid building collapse should film stocks explode.

¹² For detailed advises for handling and storage see IASA-TC 05.

Because of these extraordinary risks, nitrate film storage is generally regulated by national laws.

Water flooding is the other frequent risk that must be considered when choosing storage areas for audiovisual collections. Although most of audiovisual carriers tolerate short and controlled exposure to water – mechanical records are generally cleaned with distilled water – flooding of collections create situations that cannot be managed quickly. Water is often dirty, and must be removed within days, in order to prevent fungus growth. Discs and paper sleeves and notes have to be separated, and magnetic tape cassettes have to be cleaned and dried quickly, work which is normally beyond an institution's logistic capacities, even if “only” several hundred carriers are affected. Consequently, underground storage areas should be avoided. This will also lower the costs for air conditioning, as several audiovisual carriers should be kept at lower humidity levels than paper. Wherever storage areas are located, they must be free from water pipes and central heating water, and must not have any connection to the sewerage system.

In painting a complete picture of susceptibility of audiovisual documents to specific disasters it should be taken into account, however, that the above mentioned “classical” audiovisual carriers form an ever shrinking part of the audiovisual documentary heritage. All carriers ultimately degrade beyond retrievability, but also replay equipment becomes obsolete, due to continuous development of data storage technology. Consequently, adherence to the classical preservation paradigm of museums and archives, to preserve the objects placed in their care, would ultimately be in vain. In the long-term, audiovisual documents can only be safeguarded by shifting their contents from one preservation platform to the next. This migration must be lossless, and therefore in the digital domain (cf. IASA-TC 03).

Audiovisual preservation started pioneering **digital preservation** over thirty years ago, and many audiovisual collections have already been digitised. Audio and video production went digital in the 1980s, and even cinema film production and preservation have more recently followed the trend to the digital domain. Consequently, for an ever growing number of audiovisual documents, their production, storage and dissemination has become part of the IT world. The above discussed “classical” disasters of fire and flooding, are, of course, also relevant for digital repositories. However, digital preservation has additional specific disaster scenarios which need discussion.

The central concern of digital preservation is data security, or, to define it another way, the need to avoid uncontrolled loss of digital data. Digital data can be lost for a number of reasons, particularly as data densities have increased immensely over the past decades. The ever shrinking physical size of the basic digital information element is associated with stability and retrieval problems that are mastered by a bundle of measures. They can be summarised as technical and strategic measures to minimise the risk of accidental loss. “One copy is no copy” is an early mantra of digital preservation, and various provisions are in place to enhance **data security by multiple copies**. A classical recommendation is to store at least three copies of each digital object using two different storage technologies at two different places.

In addition to fire and water, **power supply blackouts** are macro risks that will specifically affect digital repositories. Generally there are measures in place that arrange a controlled and safe shutdown of servers. Such routines are standard for local blackouts of short durations. Recently, however, there is increased concern devoted to problems arising from national or regional blackouts of longer duration as part of military and civil protection. Document preservation will profit from the resulting recommendations.

To complete the picture of disaster risk prevention for document preservation, it is wise not to restrict our look to disasters in the classical sense. Audiovisual document preservation is a highly complex task in need of a strict observation of daily routines. Sloppy conduct of business leads to problems that may not immediately become apparent. Such situations lead to a slow, unnoticed development of situations which, when they accumulate, can only be called **hidden insidious disasters**.

Consequently, intensive and continuing training of staff to keep precisely to daily routines is essential to prevent unpleasant, perhaps even catastrophic surprises. Permanent control of the strict observance of established rules and instructions is an indispensable management measure to minimise risks and enforce professional success.

Additionally, it is important to critically review and further develop preservation procedures. In assessing potential risks and preventing unbelievable situations from become reality, “paranoiac” fantasy should not be discouraged. **ISO DIS 21110** *Information and documentation – Emergency preparedness and response*,¹³ will assist as a structural guideline for planning and revising disaster preparedness.

The Memory of the World Sub-Committee on Technology (SCoT),¹⁴ welcomes the establishment of the Global Policy Forum with its concentration on risk reduction. It reminds us of less apparent threats which tend to be overlooked when dealing with the daily routine problems of document preservation. SCoT specifically welcomes the awareness and readiness of sponsors and the secretariat to respond to these new challenges. It is ready to support and cooperate in further activities towards risk reduction and management and is prepared to include outcomes and strategies of the Global Policy Forum in its capacity building and training activities.

References

IASA Technical Committee (2017). *The Safeguarding of the Audiovisual Heritage: Ethics, Principles and Preservation Strategy*, Co-Edited by Will Prentice and Lars Gaustad. Version 4, 2017 (= Standards, Recommended Practices and Strategies, IASA-TC 03). International Association of Sound and Audiovisual Archives. www.iasa-web.org/tc03/ethics-principles-preservation-strategy

¹³ISO DIS 21110 was prepared by the Technical Committee ISO/TC 46, Information and Preservation, Subcommittee 10, Requirements for document storage and conditions for preservation. Jonas Palm, Chair of SCoT, is member of TC 46).

¹⁴Since the presentation of this paper at the 1st Global Policy Forum Meeting in Paris, the former Memory of the World Sub-Committee on Technology (SCoT) has been amalgamated with the PERSIST Initiative and renamed Preservation Sub-Committee (PSC).

IASA Technical Committee (2014): *Handling and Storage of Audio and Video Carriers*, edited by Dietrich Schüller and Albrecht Häfner. (= Standards, Recommended Practices and Strategies, IASA-TC 05). www.iasa-web.org/tc05/handling-storage-audio-video-carriers

ISO 21110:2019 *Information and documentation — Emergency preparedness and response*

Dietrich Schüller, former Director of the Vienna Phonogrammarchiv, is an international consultant. He has been engaged in the development of audiovisual preservation for several decades. He was variously a member and chair of international technical working groups focused on audiovisual preservation. He has been involved with Memory of the World since its beginnings, and is presently a member of its IAC. Author of numerous publications and editor/co-author of three IASA Standards on audiovisual preservation, he also holds training seminars in Europe and abroad.

Session 5

Towards Developing Policies and Strategies on Disaster Risk Reduction for Documentary Heritage and Memory Institutions

The Current Situation and Challenges in the Asia-Pacific Region

by Kwibae Kim

Introduction

60% of the seven billion people in the world reside in the Asia-Pacific Region, which is home to abundant and diverse cultural heritage, including oral traditions, performing arts, festivals, costumes, handicrafts, and food culture. With more than 70 ethnicities and 260 languages, the region is the birthplace of many ancient civilizations, and also retains a wide variety of documentary heritage, produced over the course of the development of its diverse cultures and traditions.

There are a number of challenges for documentary heritage in the Asia-Pacific region. Many countries in the region face difficulties in preserving their heritage as a result of a lack of budget and technological capabilities. Technological and financial difficulties also make it harder for many countries in the region to provide access to their collections, with the digitization of documentary heritage and adoption of new technologies being costly and requiring extensive training and equipment.

The situation is further worsened by the tropical climate in much of the region, which poses preservation challenges to many types of documentary heritage, particularly our audiovisual records. Due to its geographical location, the Asia-Pacific region is prone to a variety of natural disasters, including typhoons, earthquakes, and tsunamis. In addition, climate change is a serious threat to small islands in the Pacific region.

Therefore, the establishment of a systematic national disaster management scheme is urgently required to allow us to respond effectively to new threats. Such a scheme must cover prevention, mitigation, preparedness, response and recovery, and development, and must also consider the key factors in preserving documentary heritage.

The UNESCO recommendation on documentary heritage and the Memory of the World (MoW) Programme have a crucial role to play in establishing this framework, especially in facilitating national and regional cooperation.

The ASEAN+3 and Pacific Consultation Meetings

In May 2017, the ASEAN+3 Consultation Meeting was held in Kuala Lumpur, Malaysia. The consultation resulted in a five-point UNESCO-ASEAN Member States Action Plan. During this meeting, participants raised disaster risk reduction as a key issue. One particular challenge that was identified was the safeguarding of documentary heritage located in conflict and disaster areas. The meeting recommended that governments arrange safe passage and alternative storage in the event of collections being impacted by

conflict or natural disaster and to offer the option of temporary safe havens for documentary heritage at immediate risk, if required. Participants also recommended that memory institutes identify impacted collections and take appropriate actions to preserve and accommodate affected collections where appropriate. Finally, participants recommended that UNESCO, MOWCAP, and other organizations promote the work of the International Committee of the Blue Shield and the IFLA Risk Registers, and also recommended that UNESCO, professional associations and international organizations provide expertise for the assessment of damage and safeguarding of affected collections.

In September 2017, a regional workshop held in Fiji in conjunction with the biennial meeting of the Pacific Regional Branch of the International Council of Archives resulted in the development of the Pacific Member States Action Plan for the Implementation of the UNESCO Recommendation on Documentary Heritage. Delegates from Australia, the Federated States of Micronesia, Fiji, Kiribati, New Zealand, Papua New Guinea, Solomon Islands, Tonga, Tuvalu and Vanuatu attended the workshop and helped to develop the plan of action. One of the key issues the delegates raised was the vulnerability of the Pacific region to international disasters such as earthquakes, rising sea levels, floods, and tsunamis. They recommended that Governments require public institutions to develop disaster preparedness plans, and that memory institutions should implement existing tools such as the PARBICA recordkeeping toolkit module on disaster preparedness, while UNESCO and MOWCAP should provide support for implementing the module on disaster preparedness.

The Memory of the World Programme in the Region

The Asia-Pacific region has engaged actively with the UNESCO Memory of the World Programme, with many items of documentary heritage from the region being inscribed on the programme's International, Regional and National Registers. Of the 426 inscriptions on the International Register, 99 are from Asia-Pacific, while the Memory of the World Committee for Asia and the Pacific (MOWCAP) Regional Register now has 56 inscriptions. Although not an exact figure, there are more than 200 inscriptions on National Registers in our region.¹⁵ Nonetheless, despite these achievements, among the 45 countries in the Asia-Pacific region, only 24 countries have documentary heritage inscribed on the Regional Register. This means that just under half of the countries in the region have not yet been able to register any of their documentary heritage, which attests to the fact that in addition to the imbalance between regions, the imbalance between countries should be considered in the course of implementing the MoW Programme.

Recent Achievements and Conclusion

International cooperation in the Asia-Pacific region has been strengthened through the activities of the Memory of the World Committee for Asia and the Pacific (MOWCAP). MOWCAP, founded in 1998 in Beijing, China, currently operates in 45 member states in

¹⁵ Ray Edmondson, *Characteristics of documentary heritage in Asia Pacific: preservation and application*, presentation shown on the occasion of the MOWCAP Office Opening & Seminar, 7 September 2016.

the Asia-Pacific region. Its main activities include facilitating applications for the inscription of heritage on the MOW's Regional and International Registers, advising countries that do not have MOW national committees, and supporting the establishment of national MOW committees. It also promotes cooperation programs among member states, provides education and training programs for heritage preservation and utilization, and promotes the importance of documentary heritage through public awareness-raising projects.

MOWCAP also develops innovative projects and partnerships to support our members in preserving documentary heritage in the region. As one example, MOWCAP developed a cooperation agreement with the Asia Culture Center in the Republic of Korea which led to the establishment of a MOWCAP office in the Asia Culture Center in 2015. The most recent project was a small grants programme for the preservation of, and access to, documentary heritage in the region. In 2018 we supported eight projects under this grants programme, and we aim to expand it in 2019.

As one example of the work the grants are supporting, MOWCAP has been engaged in establishing the National Memory of the World Committee of Tuvalu, a small island at risk from climate change in the Pacific. We supported training workshops in the country and provided funds for a delegate from Tuvalu to join the MOWCAP General meeting. In 2018 the foundation documents of Tuvalu were inscribed on the Regional MoW Register, a huge milestone for the country.

Another example of progress is the establishment of the UNESCO World Documentary Heritage Center as a UNESCO Category II center in the Republic of Korea. The center will be the first of the kind in the field of documentary heritage and will contribute to the systematic building and digitization of a MoW Register Database. It will also share research results with member states through research on management policy and content development, publication of sourcebooks, and hosting of international symposiums. Once the center is fully established in 2020, it is expected to contribute greatly to the preservation of documentary heritage in the Asia-Pacific region.

Mr Kwibae KIM is Chair of the Memory of the World Committee for Asia and the Pacific (MOWCAP). Mr KIM is an expert in cultural heritage, in particular documentary heritage. For more than 20 years he has promoted Memory of the World (MoW) activities while working at the Korean National Commission for UNESCO. He is also an Adjunct professor at Sungkyunkwan University.

Regional Approaches to Disaster Recovery and Heritage Preservation for the Caribbean Region¹⁶

by Rita Tjien Foooh

The Caribbean Branch of the International Council on Archives (CARBICA) is responsible for carrying out the policy and programmes of International Council on Archives (ICA) in its region, where these are relevant to CARBICA. The main objectives of CARBICA are to promote access to archives in the region, emergency preparedness and capacity to recover from major hazards, the long-term preservation of archives and last but not least to respond to these challenges in a spirit of sustainability.

In September 2017, hurricanes Irma, Jose and Maria left a trail of destruction in the Caribbean region. Particularly on St. Martin (French part), St. Maarten (Dutch part), Dominica and the British Virgin Islands (BVI), the category 5 hurricanes, Irma and Maria caused serious damage not only to the lives of people and their properties, but also on the (documentary) heritage.



Temporary Records Management center of the government of British Virgin Islands (photo by Chr. Varlack).

Considering the impact of the hurricanes, CARBICA recognized that ‘business as usual’ was not an option and reached out for news of its colleagues. Using social media and e-mail, every effort was made to gather information about the safety of their members and to determine how best CARBICA could support recovery. News filtered in from colleagues in the French and Dutch islands as well as from Dominica, British Virgin Islands, Antigua and Barbuda, Anguilla. On these islands many of the archival facilities were left in ruins.

¹⁶ Part of this article was previously published in *Flash - News from ICA*, No. 36 (September 2018) and No. 37 (January 2019).

Dominica



The Land Registry Office of the Government of Dominica (photo by V. Martens-Monier).

By the end of September 30 a survey to assess the damage to archives was circulated to the affected archival organizations and it was decided that any repository holding archival records affected by hurricane Irma and/or Maria were eligible to apply for a small grant for the direct recovery of at-risk archival materials: including services as freeze drying, storage, transportation of materials and rental facilities; supplies including acid-free boxes and folders, storage cartons, cleaning materials, plastic milk crates and protective gear and to defray the costs for volunteers or other laborers who assist with the recovery.

In consultation with the ICA Secretariat, CARBICA set up a first aid relief fund by redirecting its existing project funding from its “Archives at Risk” programme to establish a first aid recovery fund to assist repositories directly affected by Irma and Maria. Three out of four applications for grants for direct aid as approved. Early in 2016 CARBICA already embarked on a three year programme called, “Archives at Risk,” which was launched in Grenada.¹⁷

Following the damage assessment and first aid relief grant to affected members, CARBICA decided to undertake a fact-finding mission to Dominica and British Virgin Island with the remaining funds (April 2018). This mission was led by a conservator from the National Archives of Curacao who was also engaged earlier (October 2017) in a fact-finding mission in Sint Maarten.¹⁸

Meanwhile the CARBICA board held intense discussions about long term planning and the way members could be best equipped to face challenges caused by natural disasters. CARBICA decided to shift its priorities because they recognize that the Caribbean documentary heritage were (are) severely compromised because of the effects of natural disasters and neglect of governments. In a way the natural disasters in September 2017 that affected cultural properties across the Northern Caribbean region was an urgent

¹⁷ This project was funded by the ICA and can be considered as a strategy to meet CARBICA’s objectives through capacity building, advocacy, building professional solidarity towards its members.

¹⁸ See the web link for the reports of the fact finding mission (Curacao, Dominica and the British Virgin Islands) <https://www.carbica.org/Resources/2017-Hurricanes.aspx>

wakeup call for the CARBICA board that improved impact could best be achieved through liaison with other emergency response groups and heritage institutions/professionals in the region rather than through isolated activities since heritage institution such as archives, museums share limited resources.

CARBICA had long discussed establishing partnerships with other regional entities as well as international professional networks supporting cultural heritage preservation. At its first meeting in 2014, the new CARBICA Executive Committee proposed affiliating with the International Council of the Blue Shield through national committees. This initiative came from the National Archives of Curacao, which in conjunction with their libraries and museums established its own national Blue Shield Committee. In this context CARBICA recognized that there was much work to be done, as it is likely that the small island nations of the Caribbean will continue to be vulnerable to extreme weather. Within the context of the Archives at Risk project, CARBICA organized a working conference “Regional Approaches to Disaster Recovery and Heritage Preservation” from 28 July - 2 August 2018 in Sint Maarten. The objectives of the working conference were to strengthen the ties between civil authorities responsible for response and recovery AND cultural institutions responsible for the preservation of both intangible and tangible heritage.

Furthermore CARBICA’s goals and objectives of the working conference were:¹⁹

- to bring together civil representatives and cultural heritage representatives to dialogue and advocate about supporting a regional recovery plan that includes heritage elements;
- to form a regional preservation team to support local response in event of future disasters;
- to develop a regional disaster preparedness & response plan, plan and a regional recovery unit;
- to train those members/participants who need to draft institutional disaster preparedness and recovery plans.

CARBICA managed to secured funding from the International Council on Archives (ICA), the UNESCO Cluster office in Kingston/Jamaica, the Ministry of Education, Culture & Science of the Dutch Caribbean, the Gerda Henkel Stiftung (Germany) and last but not least the Government of Sint Maarten to organize the working conference in July 2018. Representatives of the heritage sector and disaster management agencies were from Aruba, Bonaire, Saba, Saint Martin (French), Saint Maarten(Dutch), Curacao, Dominica, St. Kitts & Nevis, St. Lucia, Antigua & Barbuda, Jamaica, Barbados, Grenada, Trinidad & Tobago, Suriname, Guadeloupe, Martinique, Nicaragua, France).

The conference began with opening remarks by Ms. Rita Tjien Foooh President of CARBICA, Ms. Anthea Seles, Secretary-General ICA (via audio address), Mr. Yuri Peshko Culture Programme Specialist, UNESCO Cluster Office for the Caribbean and

¹⁹ Project proposal working conference “Regional Approaches to Disaster recovery and Heritage Preservation, May 2018.

Ms. Leona Romeo-Marlin, Prime Minister of Sint Maarten. The plenary sessions started with presentations from Regional Civil Authority (CDEMA, Caribbean Disaster Emergency Management Agency and Blue Shield- Curacao) and the Cultural Organizations (UNESCO and ICOM). Representatives of the various Caribbean countries (Christopher Varlack - Case study British Virgin Islands [BVI], Carmen Marla Lopez – Puerto Rico, Alfonso Blijden – Sint Maarten, Stephanie Dargaud – Saint Martin and Vernanda Raymond – Dominica) shared their challenges and responses during and after the hurricanes with the participants. At the end of the plenary session CARBICA presented their report on the conservation Case Study held in April 2018; CARBICA’s First Aid Programme in St. Maarten, BVI and Dominica.

The workshop aspect of the conference was facilitated by Dr. Emelie G. Leumas, Chair of ICA Expert Group on Emergency Management and Disaster Preparedness and Ms. Margaret Crockett, ICA Training Officer who provided participants with the draft of a workbook they compiled entitled “Emergency Management and Disaster Preparedness Workbook”. The draft workbook provides definitions, guidelines, checklists and resources that participants can utilize subsequent to the conference within their individual organizations. Mr. Samuel Franco Arce (ICOM Nicaragua) facilitated the hands-on practical session on ‘Post-disaster first aid to cultural heritage custodians: mitigation/stabilization measure’.

Some of the key challenges that were addressed by the participants was the absence of repositories, inadequate storage spaces, limited climate control, improper storage equipment, limited priority of archives by officials and administration, little policy guidance on disaster risk management and heritage and the fact that few heritage and cultural facilities have disaster plans. After the interactive discussions, recommendations were made to look for committed leadership/guidance; to integrate disaster risk components in existing heritage courses; develop public-private partnerships; integrate heritage sectors; create networks, work together to manage risks and create funding possibilities; develop structural communication at all times and test means of communications (for example radio).



Team Building Session: Participants held hands before starting the discussion on the regional approach on disaster recovery and Heritage Preservation (August 2018).

The participants concluded that a structural approach was needed to address the challenges of (natural) disasters and heritage preservation and that a heritage network was therefore necessary. They commended CARBICA with their initiative to bring together heritage professionals from the various fields of cultural heritage in the region and start the discussion on the coordinated approach. The working conference ended with the adoption of the Resolutions of the working conference on Regional Approaches on Disaster Recovery and Heritage Preservation, calling for the establishment of a Caribbean Heritage Preservation Network.²⁰

There appeared to be a great need for a more permanent network of professionals who could help the affected areas. The network of professionals should also be able to prepare the islands with Disaster Preparedness training. To this end, CARBICA has taken the initiative to establish a Caribbean Heritage Emergency Network (CHEN). The Network will fall under the responsibility of CARBICA and will consist of a database of professionals who are willing to provide training and carry out response missions in affected areas. In this context the President of CARBICA installed a working group with representatives of each field of cultural heritage to prepare the launch of the Caribbean Heritage Emergency Network (CHEN) to carry out preparatory work to actually launch the CHEN. Since then the Working Group carried out preparatory work to actually launch the CHEN in March 2019 at the General Assembly of CARBICA (“CARBICA XI”). The CHEN working group developed the draft by-laws, the Mutual Aid Agreement (MAA) for the committed members and last but not least a Communication plan for CHEN. The Mutual Aid Agreement serves as a framework in which to share expertise, experience and mutual assistance efforts with the goal of mitigating damages that could occur in the face of a disaster, and thereby impact the operations of the Parties or a specific Party in the Caribbean region.

The draft mission statement of the Caribbean Heritage Emergency Network (CHEN) is as follows:

CHEN is the Caribbean Expert Organization on safeguarding Cultural Heritage in case of a natural disaster. CHEN’s experts will provide training in Preparedness, Response, Recovery and Mitigation in the Caribbean region. They do so at the expense of the requesting party or will help look for funding agencies. The mission of all involved with CHEN is to work for the protection of the cultural heritage in the Caribbean Region.

The draft objectives are to:

- facilitate regional and international responses to emergencies threatening cultural property
- encourage safeguarding and respect for cultural property especially by promoting risk preparedness, recovery, response and mitigation measures

²⁰ Resolutions of the working conference on Regional Approaches on Disaster Recovery and Heritage Preservation adopted on August 2, 2018 on Saint Maarten.

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- train experts at national and regional level to prevent, respond and recover from disasters
 - act in an advisory capacity for the protection of endangered heritage
 - consult and co-operate with other bodies including UNESCO, ICCROM, ICOM (International Council of Museums), Smithsonian Cultural Rescue Initiative, Prince Claus Fund Cultural Emergency Response Program and the International Council on Archives (ICA).

The objectives of this Caribbean Heritage Emergency Network will be reached by collecting and sharing information on threats to cultural property in the region, promoting good standards of risk management among those responsible for cultural heritage at all levels, from institutions to national governments, advocate and raise awareness amongst decision makers and professional staff on the importance to develop preparedness, recovery, response and mitigation measures, provide professional expertise to help meet emergencies (Database consisting of name of experts in the region, communication plan and installing movable conservation lab in the region) and to identify resources for disaster prevention and for rapid intervention in emergencies.

Conclusion

Two years after the First Global Policy Forum “Towards developing policies and strategies on disaster risk reduction for documentary heritage and memory institutions” the Caribbean Heritage Emergency Network (CHEN) already was established on March 2019 in Suriname. CHEN board members were appointed for 2 years and consists of representatives from the museums, libraries, museums, archives and intangible heritage sector. After the 2-year term, an election will be held to elect the CHEN board members. Already CHEN has a database of regional professionals who are willing to provide training and carry out response missions in areas affected by manmade- and natural disasters. Further collaboration with the UNESCO Regional Cluster Office in Jamaica and the Caribbean Disaster Emergency Management Agency (CDEMA) have been developed as well as with other heritage organisations in the region. As of March 2020 the plans of CHEN to organize a training for heritage professionals in the region has been postponed due to the Covid-19 outbreak. To be more visible for the region, CHEN is working hard to secure funding to launch their own website to share information about disaster risk reduction, disaster preparedness and management, training and workshop opportunities. The database of regional professionals will be accessible also through this website. Since the documentary heritage is constantly at risk, CARBICA/CHEN will also list the most valuable documents of the Caribbean region and share the inventory with the members. The ultimate objective for CHEN is to develop a regional disaster preparedness and management plan for the documentary heritage in the Caribbean region.

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Initiatives on Disaster Risk Reduction on Libraries

by Soledad Abarca

The present article will address an overview of disaster risk reduction focused mostly in the Latin American region, as well as the initiatives that IFLA PAC (Photographic and Audiovisual Collections) has been developing in the last decade, in order to provide protection and to strengthen preventive actions to reduce the risks of damage and loss of the documentary heritage throughout the world.

Throughout its history, many countries of Latin America have suffered important and constant natural disasters: earthquakes, tsunamis, floods, volcanic eruptions, hurricanes, and major disasters from other causes such as fires.



National Library of Chile storage area affected by the 2010 earthquake (photo in National Library archive).

The fire in Rio de Janeiro in 2018 affected the National Museum of Brazil, destroying a large percentage of valuable and irreplaceable objects, artefacts, books and documents, once again raising international awareness of the fragility of this heritage: the world is still grieving over that loss.

These catastrophic events have in common that they are unexpected and cause big losses to the cultural heritage again and again. Climate change can create new problems for preservation, reinforcing the overall lack of resources to afford appropriate preventive measures, specialized equipment and overall maintenance of the facilities and buildings.

According to the FAO recent studies, one third of the population of Latin America and the Caribbean lives in high risk regions for natural disasters. Nearly 70 extreme weather

events occur in the region each year, and 70 percent of all emergencies in the region are climate-related.

Libraries as guardians of documentary heritage have to be included in relevant policy discussions – documentary heritage is too often seen as less important than buildings, monuments and artefacts. Mario Omar Fernández stated: “the damages suffered by the documentary heritage (in Latin America) are generally unknown, the priorities after the emergency are directed to the dead, and wounded, then the resources are not enough and time is leaving aside the effects of these catastrophes. What we should be aware of is that a large number of Latin American cities are exposed to this terrible threat that constitutes a significant risk of deterioration for the historic heritage of the continent.”²¹ In this context, preventive actions and programmes are extremely relevant to prepare institutions to face new disaster events.

Strategic Programme on Preservation and Conservation (PAC)

Established in 1984, the IFLA Strategic Programme on Preservation and Conservation (PAC)²² has one major goal: to ensure that library and archive materials, published and unpublished, in all formats, will be preserved in accessible form for as long as possible, according to the following principles:

- preservation is essential to the survival and development of culture and scholarship;
- international cooperation is a key principle;
- each country must accept responsibility for the preservation of its own publications.

IFLA coordinates the following projects to support libraries in preserving and conserving cultural heritage: the IFLA Strategic Direction on Cultural Heritage supports the library and information services sector and works closely with the network of cultural heritage partners to safeguard cultural heritage in its diverse forms, including traditional, historical, indigenous and contemporary expression, and to achieve optimal coordination of our cultural heritage activities. One of the key initiatives is Safeguard Documentary Cultural Heritage through Disaster Risk Reduction, which created the IFLA Risk Register in 2015, to identify documentary heritage collections at risk of destruction, through either natural or man-made disasters. The Register lists collections of documentary heritage or artefacts in all regions/countries worldwide.

The information can be recorded by the institutions, organizations or individuals online (<http://risk-register.ifla.org/node/add/heritage-collections>). The data provided are

²¹ M. Fernández, “Los Riesgos de deterioro del patrimonio documental en América Latina”, In *Biblioteca*, vol. XXVI, No. 2. Enero-Junio 2008. <https://www.revistas.una.ac.cr/index.php/bibliotecas/article/view/406>

²² Visit: <https://www.ifla.org/pac>

evaluated by an independent committee and are not accessible or shared with the general public. This information might be used by UNESCO and the Blue Shield in case of need.

IFLA continues developing the Risk Register with members and partners, including Blue Shield (ICBS) and UNESCO, to document library collections at risk or potential risk from natural and man-made crises, conflict or disaster.

IFLA actively raises awareness of members and partners about risk mitigation and disaster planning for documentary cultural heritage, particularly through advocating for the importance of incorporating Target 11.4 (“Strengthen efforts to protect and safeguard the world’s cultural and natural heritage”) of the United Nations’ *Transforming our World: the 2030 Agenda for Sustainable Development* into national legislation and Development Plans.

Another important strategy is the IFLA PAC network which works with specialized areas of preservation and conservation centres in different regions, in order to meet emerging needs and specific cultural and language requirements. The fourteen PAC Centres around the world are specialized in disaster response, digital preservation, conservation etc.

In Latin America and the Caribbean there are four PAC Centres, located in the National Libraries of Trinidad and Tobago, Venezuela, Brazil, and Chile. Chile develops its expertise in disaster preparedness and response and low-cost housing solutions, due to its well-known history of earthquakes and other catastrophes.

The goal of Chile’s specialized PAC Centre is to promote training opportunities for Spanish speaking countries, and sharing important tools and methods to prevent damage and loss of collections in case of natural or man-made disaster, as well as recover different support materials from fire, water or other factors.

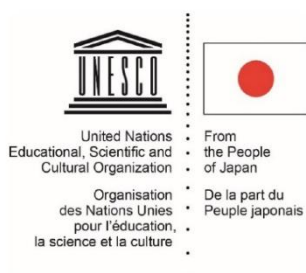
Finally, a relevant area of work is the digital documentary heritage as a source of preservation, content creation and dissemination, through the UNESCO Platform to Enhance the Sustainability of the Information Society Transglobally (PERSIST).

The project is a cooperative initiative within the UNESCO Memory of the World Programme, based on the UNESCO *Recommendation concerning the preservation of, and access to, documentary heritage, including in digital form* (adopted in November 2015).

PERSIST is a collaborative framework for the world’s memory institutions, which addresses challenges of long-term digital preservation and the risk of losing access to part of our digital heritage. The platform includes various aspects such as training programmes at national and regional levels, useful tools and resources to share and develop knowledge to enhance the sustainability of the information society by establishing continuity of preservation of and access to information.

Currently there are three PERSIST Working Groups, Technology & Research, Policy and Content & Best Practices (visit: <https://unescopersist.org/about/>).

Soledad Abarca is a Conservator of photographs. Since 2008 she has worked at the National Library of Chile as the Head of the Photographic and Audiovisual Collections, leading different projects as well as organizing exhibitions and publishing works about Chilean photography. Since 2010 she is a Member of the Memory of the World National Committee of Chile and since 2017 coordinates the IFLA PAC Centre in Chile.



PROGRAMME

Global Policy Forum on Disaster Risk Reduction and Management for Sustainable Preservation of Documentary Heritage

11 December 2018

Room IV

UNESCO Headquarters (Fontenoy), Paris

Time (Paris)	(min)	Item	Speaker	Session Chair
08:30 - 09:00	30	<i>Registration</i>		-
09:00 - 09:15	5	Welcoming Remarks	Mr Moez CHAKCHOUK (UNESCO, ADG, CI)	Mr Fackson BANDA (UNESCO, Memory of the World Programme)
	10	Opening Remarks	Mr Takeo KATO (National Archives of Japan)	
09:15 - 09:45	30	Keynote Speech	Ms Kirsi MADI (UNISDR)	
09:45 - 10:45	10	Session 1: Overall status of documentary heritage under situations of disaster	Mr Patrick TARDIEU (Bibliothèque haïtienne des Pères du Saint-Esprit)	Prof Yuhu LI (Shaanxi Institute of Historical and Cultural Heritage Conservation)
	10		Dr Daisuke SATO (Tohoku University)	
	10		Dr Abdel Kader HAIDARA (SAVAMA-DCI)	
	30		Questions and Answers	
10:45 - 11:55	10	Session 2: Safeguarding/ rescuing/ restoring damaged documentary heritage	Dr Andy CORRIGAN (Howard-Tilton Memorial Library)	Mr Ieng SRONG (UNESCO, Culture Sector)
	10		Dr Mutsumi AOKI (National Institute of Japanese Literature)	
	10		Dr Eugenio VECA (Istituto Centrale per il Restauro e la Conservazione del Patrimonio Archivistico e Librario)	
	30		Questions and Answers	
11:55 - 13:00	65	<i>Lunch</i>		-
13:00 - 14:00	10	Session 3: Documenting disaster: research perspectives, awareness raising and community engagement	Dr Saroja WETTASINGHE (Sri Lanka)	Dr Akira MATSUDA (University of Tokyo)
	10		Dr Hidenori WATANAVE (University of Tokyo) and Ms Anju NIWATA (Hiroshima Jogakuin Senior High School)	
	10		Dr Lothar JORDAN (Sub-Committee on Education and Research of Memory of the World Programme)	
	30		Questions and Answers	
14:00 - 15:10	10	Session 4: Disaster risk reduction as a strategy for interdisciplinary preservation approaches towards documentary heritage	Dr Naoko NAGUMO (International Centre for Water Hazard and Risk Management, UNESCO Category 2 Center)	Mr Soichiro YASUKAWA (UNESCO, Natural Sciences Sector)
	10		Prof Stefano GRIMAZ (University of Udine, UNESCO Chair on Intersectoral Safety for Disaster Risk Reduction and Resilience SPRINT-Lab)	
	10		Dr Sébastien Penmellen BORET (Tohoku University)	
	30		Dr Dietrich SCHÜLLER (International Advisory Committee of Memory of the World Programme)	
15:10 - 15:30	20	<i>Coffee Break</i>		-
15:30 - 16:20	10	Session 5: Towards developing policies and strategies on disaster risk reduction for documentary heritage and memory institutions	Mr Kwilbae KIM (MOWCAP)	Mr Fackson BANDA (UNESCO, Memory of the World Programme)
	10		Dr Rita TJIEN FOOH (MOWLAC)	
	10		Dr Flexon MIZINGA (ARCMOW)	
	10		Dr Anthea SELES (ICA)	
16:20 - 17:20	60	General Discussion		
17:20 - 17:35	10	Closing Remarks	Dr Rita TJIEN FOOH (Rapporteur, IAC Bureau, MoW Programme)	
	5		Mr Boyan RADOYKOV (UNESCO, Chief, UAP)	