

International Preservation News

A Newsletter of the IFLA Core Activity
on Preservation and Conservation



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**Disasters Management:
Power of Collaboration**

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Typhoon Nargis in Myanmar, May 2008 – Copyright Olivier Laban-Mattei/AFP

A young girl from the village of Chaung Lin runs next to wet books drying, to receive food thrown from a boat on May 23, 2008 in the isolated area of Kanzeik in the Irrawaddy Delta region - an area only accessible by boat which has received neither government nor foreign aid.

This photo received an award in 2009: World Press Photo, 3rd prize stories in General News.

Olivier Laban-Mattei (born in 1977), self-taught photographer, has worked for AFP since 2000. He spends his time between Paris and countries hit by the war or by natural disasters (Iraq, Gaza strip, Georgia, Burma...), and works on personal projects.

<http://www.photoshelter.com/c/labnamattei>

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Typhoon Nargis in Myanmar, May 2008
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Disasters Management: Power of Collaboration

6

Emergency Preparedness and the Power of Partnerships

Jane S. Long

11

Vers un Centre national de conservation du patrimoine

Anne de Wallens

17

EURANED: An European Project for Disaster Prevention and Disaster Management

Dr Sebastian Barteleit

18

The Collapse of the Cologne City Archives

Georgia Iona and Dr Max Plassmann

23

The Earthquake in L'Aquila: the Intervention of ICPAL

Armida Batori

25

The Abruzzo Earthquake – The Rescuing of Cultural Heritage

Patrizia Miracola

26

Disaster Mitigation to Protect Cultural Heritage: the Case of Cuba

Sergio Jorge Pastrana, Beverley Lashley and Ana Maria Perez

31

Fire and Ice Revisited: A Comparison of Two Soot Removal Techniques for Book

Randy Silverman and Seth Irwin



© Stefanie Behrendt

EUROPE, usually shielded from natural disasters, underwent this year several catastrophic events: in Cologne, works made a recent building of archives collapse; Italy knew a devastating earthquake in L'Aquila, the "99 churches" city, which is today almost totally destroyed. Floods provoked dramas in Scotland and in Turkey too.

Beyond Europe, the ground trembled in China, Myanmar knew the Nargis cyclone and the Caribbean its usual hurricanes.

Considering all these dramas, it seemed to be well-time to propose in this last 2009 issue of *International Preservation News* some food for thought about risk management based on – unfortunate – concrete and very recent cases.

We asked Jane Long, from Heritage Preservation, to send us her reflections on the topic. The title of her article appeared to us summarizing brilliantly the message that we would like to convey in this end of year: the Power of Partnerships.

Whether it is in Cologne, L'Aquila, in Cuba, the conclusions are the same: to anticipate (when it is possible), to save, to rebuild, collaboration is the key word for effectiveness. Collaboration with the governmental emergency services, collaboration with the cultural heritage institutions affected by the disaster, international collaboration with experimented colleagues and volunteers full of energy.

The French project of a national Centre of Cultural Heritage Preservation, the European one of EURANED were born, among other reasons, from the will to prevent the damages that would cause a big flood. Both projects, in different ways, are answers to the cultural heritage curators' concern.

Finally, as regularly, our friend Randy Silverman proposes us an update of the soot removal techniques for smoke-damaged books.

Even if the world summit of United Nations, the COP 15, has opened in Copenhagen with its stream of fears about the major disaster which would be the climate change, I would like to wish all of you a very happy New Year. The next issues of IPN will concern Research, Tourism and the Special Collections preserved in our libraries. Of course all these topics will be handled in relation to our problems of conservation.

Enjoy the reading!

Christiane Baryla
IFLA-PAC Director



© Corpo dei Vigili del Fuoco, Italia

L'EUROPE, continent plutôt à l'abri des catastrophes naturelles, a subi cette année plusieurs désastres majeurs : à Cologne, des travaux ont entraîné l'effondrement d'un bâtiment d'archives pratiquement neuf. L'Italie a connu à L'Aquila, aujourd'hui presque totalement détruite, un tremblement de terre dévastateur pour la ville aux 99 églises et aux innombrables œuvres d'art. Des inondations ont provoqué des drames en Écosse et en Turquie.

Au-delà de l'Europe, la terre a tremblé en Chine, Myanmar a subi le terrible cyclone Nargis et la Caraïbe ses habituels ouragans.

À la suite de ces drames nous avons jugé opportun de proposer à nouveau dans *International Preservation News* quelques réflexions autour du thème de la gestion des risques, en nous appuyant, hélas, sur des cas très concrets et récents.

Nous avons demandé à Jane Long, de l'organisation *Heritage Preservation*, de nous adresser ses réflexions sur le sujet. Le titre de son article nous a paru résumer magnifiquement le message que nous souhaitons faire passer en cette fin d'année : *the Power of Partnerships*.

Que ce soit à Cologne, à L'Aquila, à Cuba les conclusions sont les mêmes : pour anticiper (quand cela est possible), pour sauver, pour reconstruire, les actions efficaces sont celles réalisées en collaboration. Collaboration avec les structures gouvernementales de sauvetage, collaboration avec les structures patrimoniales touchées par le fléau, collaboration internationale avec des collègues expérimentés et des volontaires pleins d'énergie.

Le projet français d'un Centre national de Conservation du Patrimoine, celui européen d'EURANED sont nés, entre autres raisons, de la volonté de se prémunir contre les dégâts que causerait une grande inondation. Tous deux, à leur manière, répondent aux inquiétudes des conservateurs du patrimoine.

Enfin, comme il le fait régulièrement, notre ami Randy Silverman nous propose des nouvelles données sur les techniques de nettoyage de la suie après un incendie.

Même si le sommet mondial des Nations Unies, le COP 15, s'est ouvert récemment à Copenhague avec son cortège d'angoisses sur le désastre majeur que constituerait le changement climatique, je voudrais vous souhaiter à tous une très bonne année 2010. Les prochaines livraisons d'IPN porteront sur la Recherche, le Tourisme et les Collections spécialisées conservées dans nos bibliothèques. Bien entendu tous ces thèmes seront traités en rapport avec nos problématiques de préservation.

Bonne lecture!

Christiane Baryla
Directeur d'IFLA-PAC

Emergency Preparedness and the Power of Partnerships

by Jane S. Long

Vice President, Emergency Programs, Heritage Preservation, Inc., Washington DC

In August 2009, a two-alarm fire swept through the attic of the historic Ropes Mansion in Salem, Massachusetts. The 19th Century Georgian Colonial, owned by the Peabody Essex Museum, is notable because its fine collection of furnishings and decorative art belonged to the Ropes family. Virtually all of the valuable artifacts, family papers, and furnishings survived the blaze. The museum staff counted themselves lucky, but planning and cooperation made the real difference.

The museum had a trained response team of conservation and curatorial staff who assembled quickly on the hot Saturday afternoon. The responding fire departments recognized the expertise of staff and the value of the historic structure and its contents. Firefighters not only allowed the staff to rescue the treasures on lower floors when it was safe, they also shifted and covered heavier objects that staff could not remove. They fought the fire with a minimum of water and did little damage to the top floor. A museum official described their response as “miraculous”¹.

Unfortunately, the many emergencies that strike cultural institutions rarely end so well. In the fall of 2005, an estimated 70 museums and historical societies and more than 250 libraries in five states on the Gulf Coast of the United States suffered damage from Hurricanes Katrina, Rita, and Wilma. Even months later, some collections remained in peril from mold and neglect.

Smaller incidents take their toll as well. A frozen waterline burst on the third floor of Montana State University’s Renne Library in Bozeman, Montana, in January 2008. Water flowed for nearly 30 minutes before emergency responders could shut off the fire suppression system, which released nearly 1,800 gallons of water. The water damaged hundreds of the library’s most prized collections, including original signed and manuscript copies of books about Montana, Yellowstone National Park, and the famed Lewis and Clark expedition².

National Partnership for Cultural Heritage

For fifteen years, Heritage Preservation, a national nonprofit in Washington, DC, has been working to bring about more frequent “happy endings” to the countless stories of fires, floods, and other disasters that threaten life and heritage. In late 1994, Heritage Preservation – along with the Federal Emergency Management Agency (FEMA), and the Getty

Conservation Institute (GCI) – convened the National Summit on Emergency Response.

More than 80 representatives of regional and national organizations came together out of concern for the safety of America’s collections and historic places. Participants recognized that American libraries, museums, and historic sites were ill equipped to respond to emergencies in their own institutions or come to the aid of their neighbors.

The gathering was significant for two reasons. First, it encouraged the library, archives, museum, and historic preservation communities to join forces around a single issue. Second, it marked a major public commitment by FEMA to help “reduce the future impact of natural disasters on our cultural and historic institutions across this nation”³. FEMA, now part of the U.S. Department of Homeland Security, coordinates the federal government’s role in preparation, prevention, mitigation, response, and recovery for domestic disasters.

The creation of the Heritage Emergency National Task Force followed a few months later. The Task Force is a partnership of 41 national service organizations and federal agencies. Together its members constitute a nationwide resource of information, expertise, and assistance. Its mission is to:

- Help cultural heritage institutions and sites prepare for emergencies and obtain needed resources when disaster strikes.
- Encourage the incorporation of cultural and historic assets into disaster planning and mitigation efforts at all levels of government.
- Facilitate a more effective and coordinated response to all kinds of emergencies, including catastrophic events.
- Assist the public in recovering treasured heirlooms damaged by disasters.



1. Heritage Preservation Logo.

Heritage Preservation serves as the secretariat for the Task Force and as a clearinghouse of information during major regional disasters affecting cultural property. Since Hurricane Katrina, Task Force members have agreed upon a protocol that facilitates the sharing of damage reports, disseminates information resources, and links institutions affected by the disaster with available assistance for response and recovery. In addition to its coordinating role, Heritage Preservation has worked with other Task Force members to create a number of information tools to help libraries, archives, and museums prepare for and respond to emergencies.

3. Former FEMA Administrator James L. Witt at the National Summit on Emergency Response in Washington, DC. December 1, 1994.

1. Tom Dalton, “Ropes Mansion: a treasure saved”, *The Salem News Online*, August 18, 2009, http://salemnews.com/punews/local_story_230002502.html (Accessed November 25, 2009).

2. Daniel Person, “Flood damages MSU library books”, *Bozeman Daily Chronicle*, January 23, 2008; Gail Schontzler, “MSU library leaks”, *Bozeman Daily Chronicle*, January 30, 2008; and Anne Pettinger, “Once damaged by flooding, dried books return to MSU library”, *MSU News*, March 19, 2008. www.montana.edu/cpa/news/nwview.php?article=5705 (accessed June 19, 2009).



2. National Task Force Logo.

One of the top priorities Task Force members recognized was the need for accurate yet simple information to help libraries and museums rescue collections damaged by incidents large and small. Heritage Preservation, working with many partners, developed the English- and Spanish-language versions of the *Emergency Response and Salvage Wheel*. The Wheel has now been translated from

English into six other languages, and a version in Arabic is expected in early 2010. The simple sliding chart is used by thousands of institutions around the world.



3. Field Guide and Wheel. The *Field Guide to Emergency Response and Salvage Wheel* are several resources made possible through Task Force partnerships.
© Heritage Preservation

Heritage Preservation also produced the award-winning *Field Guide to Emergency Response; Cataclysm and Challenge: Impact of September 11, 2001, on Our Nation's Cultural Heritage*; primers on federal disaster assistance for U.S. cultural institutions; guidelines for the public on salvaging family treasures; and a popular poster with tips on working with emergency responders. Another Task Force member, the American Institute for Conservation of Historic and Artistic Works, has taken a leading role in disaster training and developed a cadre of onsite assistance experts. Regional preservation centers in the U.S. also provide training and outreach services in emergency preparedness and response.

Together, the members of the Heritage Emergency National Task Force promote disaster preparedness through "MayDay", an annual event created by the Society of American Archivists in 2006, and expanded by the Task Force to include all kinds of collecting institutions. MayDay urges participants to take one simple step to prepare on May 1st, and the concept enjoys growing support around the country.



4. MayDay Logo.

Catastrophic events like the attacks of September 11, 2001, and Hurricane Katrina have taught Americans to think more broadly about what it means to be prepared. Certainly a sound emergency plan and staff training are essential. But there is another key element: a prior relationship with first responders and emergency managers who are critical to response and recovery.

The term "first responders" refers to public safety professionals like firefighters, law enforcement officials, and emergency medical technicians who may be dispatched to incidents involving life safety. "Emergency managers", on the other hand, are usually government officials at the local, state, tribal, and federal levels who play a coordinating role before, during, and after disasters. In this article, the two groups are referred to collectively as "emergency responders". Staff members at collecting institutions are likely to encounter them in almost any emergency situation.

In the United States, as in many other countries, there are official emergency policies, practices, and protocols already in place. Most emergencies in the U.S. are handled at the local, state, or tribal level and do not involve any federal assistance. A state plan goes into effect only when the local response is overwhelmed. The Federal Emergency Management Agency steps in only after a request by a governor and approval by the President. Unfortunately, few museums, libraries, or cultural

commissions are familiar with local planning and response procedures, but it is their responsibility to understand official

frameworks and seek ways to be included in local plans.

An established partnership with emergency responders can be critical during response. Despite their skills, preservation professionals who are not known to first responders may be denied access to damaged collections. The safety of responders is also an issue, and they need to know in advance of structural dangers like moveable exhibit walls or narrow stairwells. In addition, many collections contain materials that pose health hazards when they are broken or exposed to fire or water.

Priority collections of art, documents, and artifacts can be neglected, or even further damaged, when emergency personnel are not informed of their importance. When they do understand the significance of a cultural collection, they will make a special effort to protect it. In April 2007, a three-alarm fire at the Georgetown branch of the District of Columbia Public Library destroyed the roof and much of the 1935 building's second floor, including the Peabody Room. When the assistant fire chief learned from the librarian of the precious historic records and artifacts in the Peabody Collection, he sent in a team to cover items with protective tarps and bring out whatever paintings and artifacts they could carry⁴.

4. Nancy Davenport, District of Columbia Library Services Director, and Lisa Young, President, Washington Conservation Guild, personal communication and Michelle Boorstein, "Fire Claims Library, and Pieces of the Past", *Washington Post*, May 1, 2007.

Alliance for Response: Local Partnerships to Protect Cultural Heritage



5. Alliance for Response Logo.

The need for partnerships at the local level, where the official response begins for water main breaks and hurricanes alike, led to the creation of Heritage Preservation's Alliance for Response initiative. Launched in 2003, Alliance for Response begins with a one-day invitation-only Forum designed to link key cultural heritage and emergency response representatives.

By the end of 2009, the Alliance for Response initiative will have reached hundreds of individuals from more than 700 libraries, archives, museums, and other cultural and historic preservation organizations in 16 cities across the country. It has encouraged institutions to plan and train together for emergencies; it has raised awareness of the importance of cultural heritage in communities; and in several of America's major cities, it has led to changes in official policies.

While the content and structure of Alliance for Response Forum agendas may vary from site to site, the underlying goal of the meetings is the same: to help communities more effectively protect their cultural and historic resources. The immediate objectives are to:

- Initiate an ongoing dialogue between cultural institutions and emergency managers and first responders;
- Raise awareness of the need to protect cultural and historic resources within communities;
- Encourage disaster planning and mitigation at archives, historic sites, libraries, and museums; and
- Develop strong networks among these institutions to improve local response to emergencies.

Alliance for Response Forums average about 80-100 participants and include professionals from libraries, archives, museums, and historic sites, as well as neighborhood first responders, key state and local emergency managers, and civic leaders. In 2009, Forums at the Denver (Colorado) Public Library and the North Carolina Museum of Art (Raleigh, North Carolina) attracted 30 percent of the audience from the public safety, emergency management, and security fields.

The implementation of an Alliance for Response Forum is accomplished by a local planning committee, with support and guidance from Heritage Preservation. The Forum content provides a basic overview of cultural heritage needs to emergency responders and informs heritage professionals about the process of emergency management. All presentations and discussion sessions aim to enlighten participants on best practices in their respective fields and open lines of communication.

A Forum is only the first step in Alliance for Response. Heritage Preservation encourages local planners to structure programs that will lead to long-term benefits for cultural collections and communities. Local committees have been very creative in finding ways to foster collaboration among cultural institutions, improve local government policies, and enhance the protection of heritage resources. Some of the follow-up activities include:

Atlanta, GA. Following a Forum in 2007, the newly formed Heritage Emergency Response Alliance (HERA) established a local e-mail listserv that includes emergency responders. In March 2008, a tornado tore the roof from the *Atlanta Daily World*, the city's oldest continuously published black newspaper. Using the listserv, HERA mobilized 21 volunteers from nine organizations to pack and move historical records from the *World's* building; several institutions also donated supplies.

Boston, MA. The Cultural Emergency Management Team in Boston was formed in February 2004, and met regularly for five years. It has now become part of the Massachusetts Coordinated Statewide Emergency Preparedness (COSTEP) framework. The group, trained and deployed through the State Archives and the Board of Library Commissioners in partnership with the state emergency management agency, will have an official role in responding to emergencies throughout the state.

New York, NY. Alliance for Response NYC has strengthened ties to the city's Office of Emergency Management (OEM) and the Division of Cultural Affairs. OEM has helped libraries and museums adapt professional disaster training exercises to their needs.

Philadelphia, PA. Before its 2007 Forum, the city government's "Alert Philadelphia" emergency message service reached only 11 cultural institutions. Now more than 100 institutions receive incident advisories from the Office of Emergency Management. Under discussion with the city is a "seat" for cultural heritage at Philadelphia's Emergency Operations Center and official credentials to give museum and library professionals access to disaster sites.

Pittsburgh, PA. Since its Forum in 2008, Pittsburgh Alliance for Response Forum has conducted a series of educational programs covering such topics as disaster planning, risk management, mutual aid agreements, and fire protection.

The Alliance for Response Web site serves as a central information clearinghouse with news on local Alliance for Response activities. It also offers useful resources for anyone interested in working with emergency responders, identifying community allies, or learning about local disaster networks.

Since its inception, Alliance for Response has received generous support from Fidelity Investments through the Fidelity Foundation. Over the next two years, a new grant from the National Endowment for the Humanities (NEH) will enable Heritage Preservation to sponsor three additional Forums and conduct two national Leadership Institutes. One will help museums and libraries take a more strategic approach to partnerships with emergency officials; the other will tackle the nuts and bolts of sustaining local volunteer disaster networks. A third component of the project will be an outreach campaign to national and state associations of emergency professionals.

New State Cooperative Initiatives

A decade ago, the idea of museums and libraries working in partnership with emergency management agencies was a novel one. Thanks to Alliance for Response, the critical nature

of those relationships to protecting collections and historic sites is widely recognized. For example, Alliance for Response inspired the Coordinated Statewide Emergency Preparedness (COSTEP) initiative, now being implemented successfully in a pilot project in Massachusetts. COSTEP is a planning framework that guides states through the process of preparing for major disasters and fosters collaboration among a wide range of government agencies, including those with responsibility for historic and cultural resources.

Alliance for Response goals are reflected in the Intergovernmental Preparedness for Essential Records (IPER) project, led by the Council of State Archivists. The three-year project is developing training for state and local governments to help them protect records before, during, and after emergencies. Instructional teams include emergency management experts. Alliance for Response has also provided a model of cooperation for several statewide planning efforts under the auspices of the Institute of Museum and Library Services (IMLS) Connecting to Collections initiative.

At Heritage Preservation, the partnership theme is reflected in several projects. A poster entitled *Working with Emergency Responders: Tips for Cultural Institutions* offers practical advice on how to find and build relationships with local emergency responders. The poster, which also outlines what responders need to know about cultural institutions and collections, is available for download as a PDF document.

Another initiative, Preparing to Preserve, provides an action plan and recommendations for integrating historic preservation concerns into emergency management systems, primarily at the state and local level. The Preparing to Preserve project offers two one-page flyers: an *Emergency Planning Model Checklist for Historic Preservation*, and a *1-2-3 Guide to Building Relationships with Emergency Officials*.

Teamwork to Help Institutions Prepare

A Heritage Preservation pilot project has demonstrated great potential for encouraging preparedness and building relationships with emergency managers and first responders at the institutional level. The Risk Evaluation and Planning Program (REPP) integrates the tasks of risk assessment, mitigation, and emergency planning through a site visit and professional guidance.

Fifteen small museums in Mississippi, Ohio, and Texas participated in the 2008-2009 REPP pilot program, which culminated in the development of emergency plans to protect staff, visitors, and collections. Paid preservation experts teamed with fire chiefs and local emergency managers to conduct risk evalu-



6. LRMA Officers Brian Buxton and George Hill. At the Lauren Rogers Museum of Art, in Laurel, Mississippi, police and fire personnel are given regular tours of the museum. Courtesy Lauren Rogers Museum of Art.

ations and provide tips for planning and prevention at the museums.

For many emergency personnel, it was their first visit to a local cultural resource, and their expertise on safety issues proved invaluable. Museum staff, in addition to developing emergency plans, increased their knowledge of preparedness and response strategies, learned about potential risks to their institutions, forged new ties with local public safety officials, and implemented cost-effective prevention measures. The REPP pilot program has demonstrated that even in times of economic stress, museums with limited resources can increase their level of preparedness.

Heritage Preservation administered the Risk Evaluation and Planning Program with a grant from the U.S. Institute of Museum and Library Services. A full report on the outcomes and lessons of the project, as well as tools developed for the project, will be available online at the end of December 2009.

Partnerships Are Best Practice

Disaster preparedness equals sound collections care, and cooperation with neighboring institutions and local emergency responders should be regarded as best preservation practice. Hurricane Katrina, the Aquila earthquake, and other catastrophes remind us that in times of emergency, we need all the friends we can muster. How much better to build those key relationships in advance! In so doing, we gain new stakeholders for our collections and allies for preservation.

For Further Information

American Institute for Conservation of Historic and Artistic Works: www.conservation-us.org/
Alliance for Response: www.heritagepreservation.org/AfR/index.html
COSTEP: www.nedcc.org/services/disaster.costep.php
Emergency Response and Salvage Wheel and other publications: www.heritagepreservation.org/catalog/default.asp
Heritage Emergency National Task Force: www.heritagepreservation.org/programs/taskfer.htm
Heritage Preservation: www.heritagepreservation.org
IPER: www.statearchivists.org/iper/index.htm
MayDay: www.heritagepreservation.org/programs/tflessons/maydayinfo.html
Preparing to Preserve: www.heritagepreservation.org/PreparingtoPreserve.html
Risk Evaluation and Planning Program: www.heritagepreservation.org/REPP/index.html

La preparación ante emergencias y el poder de las alianzas

Durante quince años, **Heritage Preservation**, fundación sin fines de lucro nacional de Washington, D.C., ha venido trabajando para producir “finales felices” más frecuentes a las innumerables historias de incendios, inundaciones y otros desastres que amenazan la vida y el patrimonio, mediante la creación en 1994 del **Heritage Emergency National Task Force**. El Grupo de Trabajo es una alianza de 41 organizaciones nacionales de servicio y agencias federales. Juntos, sus miembros constituyen un recurso nacional de información, pericia y asistencia. Su misión es:

- Ayudar a las instituciones y sitios de patrimonio cultural a prepararse para enfrentar emergencias y obtener los recursos necesarios cuando ocurra un desastre.
- Fomentar la incorporación de bienes culturales e históricos al plan de desastres y a los esfuerzos de mitigación en todas las escalas de gobierno.
- Facilitar una respuesta más efectiva y coordinada ante todo tipo de emergencia, incluso eventos catastróficos.
- Asistir al público en la recuperación de reliquias familiares preciadas que resulten dañadas por desastres.

Heritage Preservation funciona como la secretaría del Grupo de Trabajo y como centro de información durante desastres regionales graves que afecten la propiedad cultural. Desde el Huracán Katrina, los miembros del Grupo de Trabajo aprobaron un protocolo que facilita la compartición de informes de daños, disemina recursos de información y enlaza a las instituciones afectadas por el desastre con la asistencia para la respuesta y la recuperación. Además de su papel de coordinador, Heritage Preservation, trabajando conjuntamente con muchos aliados, desarrolló herramientas como las versiones en inglés y español de la *Rueda de Salvamento y Respuesta ante Emergencias*. La *Rueda* ahora se encuentra traducida del inglés a otros seis idiomas, y se espera una versión en árabe para comienzos de 2010.

Los eventos catastróficos como los ataques del 11 de septiembre de 2001 y el Huracán Katrina les enseñaron a los estadounidenses a pensar más ampliamente acerca de lo que significa estar preparados. Indudablemente, un plan de emergencia sólido y un personal entrenado son esenciales. Sin embargo, existe otro elemento importante, como lo es la existencia de una relación previa con los primeros intervinientes y los administradores de emergencias quienes son decisivos en la respuesta y recuperación.

En los Estados Unidos, al igual que en muchos otros países, existen políticas, prácticas y protocolos oficiales en vigencia para atender emergencias. La mayor parte de las emergencias en los Estados Unidos se manejan a nivel local o estatal y no involucran a la asistencia federal. Desafortunadamente, pocos museos, bibliotecas o comisiones culturales están familiarizados con la planificación y los procedimientos de respuesta locales, pero es su responsabilidad conocer la normativa oficial y buscar la manera de que se les incluya en los planes locales.

Esta necesidad de alianzas a nivel local condujo a la creación de la **Heritage Preservation's Alliance for Response initiative**. Con su lanzamiento en 2003, la Alliance for Response comienza con un Foro de un solo día diseñado para establecer el enlace entre el patrimonio cultural clave y los representantes de la respuesta ante emergencias.

Para finales de 2009, la iniciativa Alliance for Response habrá llegado a cientos de individuos de más de 700 bibliotecas, archivos, museos y otras organizaciones de preservación cultural e histórica en 16 ciudades del país.

Los objetivos inmediatos son:

- Iniciar un diálogo permanente entre las instituciones culturales y los administradores de emergencias y los primeros intervinientes;
- Crear conciencia sobre la necesidad de proteger los recursos culturales e históricos dentro de las comunidades;
- Promover la planificación y mitigación de desastres en archivos, sitios históricos, bibliotecas y museos; y
- Desarrollar redes fuertes entre estas instituciones para mejorar la respuesta local ante emergencias.

Un foro es solo el primer paso en Alliance for Response. Heritage Preservation incentiva a los planificadores locales a estructurar programas que resulten en beneficios a largo plazo para las colecciones culturales y las comunidades.

El sitio web de Alliance for Response (www.heritagepreservation.org/AfR/index.html) es un centro de información con noticias sobre sus actividades locales. También ofrece recursos útiles para quienes estén interesados en trabajar con los primeros intervinientes, identificar aliados en la comunidad o aprender sobre las redes de desastre locales.

La alianza es la mejor práctica

En lo que respecta a la preparación ante desastres, debe considerarse la cooperación con las instituciones cercanas y los cuerpos de emergencia locales como la mejor práctica para la preservación. El Huracán Katrina, el terremoto Aquila y otras catástrofes nos recuerdan que en las emergencias necesitamos todos los amigos que podamos reunir. ¡Nada mejor que construir esas relaciones claves con anticipación! Al hacerlo, ganamos nuevos interesados en nuestras colecciones y aliados para su preservación.

Vers un Centre national de conservation du patrimoine

par Anne de Wallens

Déléguée à la conservation préventive et à la coordination des régions, Musée du Louvre, Paris

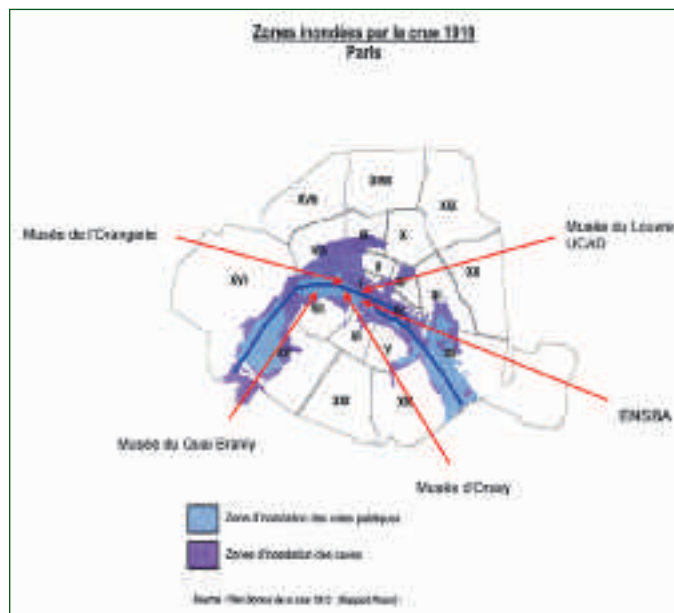
Plus d'un esprit reste marqué par la violence et l'ampleur des sinistres survenus à Prague puis Dresde, en août 2002, à la suite d'inondations exceptionnelles, dont le niveau excède, dans la première ville, d'un mètre celui de la crue de 1827.

Elles sont consécutives à deux très fortes vagues de précipitations (les 6 et 7, puis 11 et 12 août) qui s'abattent sur le bassin amont de la Vltava. Le fleuve se charge abondamment en eau. Les inondations progressent lentement vers Prague pour l'atteindre le 13 août. En dépit des dispositions prises par la ville, les édifices historiques et les collections patrimoniales sont touchés, au point que les murs du couvent Sainte Agnès commencent seulement à s'assécher en mai 2008.

Forte de cette expérience catastrophique, la Préfecture de Paris a, dès le mois de septembre 2002, prévenu les institutions patrimoniales parisiennes qu'aucun moyen particulier ne serait mis à leur disposition au cas où une crue de la Seine, de type centennale, surviendrait.

Les parisiens ont encore en mémoire la crue centennale de 1910, et il n'est pas invraisemblable, aux dires des autorités, que de tels événements se produisent à nouveau, malgré les aménagements réalisés en amont de la capitale, et compte tenu de la modification des infrastructures parisiennes depuis près d'un siècle (ill. 1). Ce ne sont pas tant les débordements qui sont craints que la remontée de la nappe phréatique et des égouts.

Il faut à ce titre préciser que la situation de certains établissements a évolué depuis la dernière crue centennale. Elle n'avait



1. Zones inondées en 1910. © J. Trmal/A. de Wallens (Louvre)

alors pas affecté les collections du Louvre, car les espaces qui leur étaient dévolus à l'époque n'étaient pas inondables.

Le musée s'est depuis étendu à la plus grande partie du Palais, et le projet du Grand Louvre a permis une extension des



2. Crue de 1910 : intérieur de la gare d'Orsay. Parisienne de photographie. © Maurice Branger/Roger-Viollet

espaces, en particulier dans les sous-sols. Si les inquiétudes des conservateurs du musée avaient dès le début de ce projet été soulignées, les architectes leur avaient assuré que les structures enterrées, et en particulier les réserves, seraient étanches.

Quant au musée d'Orsay, il était une gare à l'époque. Point de collections, donc, mais la nef avait les pieds dans l'eau (ill. 2).

Au tout début d'octobre 2002, le ministre Jean-Jacques Aillagon demande aux cinq institutions sises le long de la Seine¹ d'évacuer avant le printemps 2003, saison où culmine le risque de crue, l'ensemble des réserves enterrées pour mettre à l'abri les collections qui y sont conservées.

Si les délais ont pu être respectés, la situation des réserves externalisées actuelle ne peut être que transitoire. Il faut en tout état de cause envisager leur pérennisation, et pour ce faire, conduire une réflexion sur les institutions concernées, la forme que doivent revêtir ces espaces, les fonctionnalités associées, les formes juridiques et financières d'un tel projet, dans un contexte institutionnel et humain sensible.

Le projet de réserves externalisées n'est pas nouveau. Voilà près de vingt ans qu'il est périodiquement évoqué. Toutefois, la situation actuelle nécessite la mise en œuvre de moyens permettant, enfin, pourrait-on dire, la création d'un grand centre. Il est donc le fruit d'une longue réflexion, qui doit être rappelée.

Évacuation des collections menacées – Novembre 2002-Mars 2003

La Direction des musées de France² est chargée de donner à ces cinq établissements les moyens de mettre en œuvre cette directive.

Dès le 10 octobre sont dressées les listes des œuvres à évacuer, de telle sorte que la DMF puisse disposer des éléments et du temps suffisants pour lancer les appels d'offres de conditionnement, transport, et mise en réserve avant le mois de mars suivant.

Il s'agit, pour chacune des institutions, de se séparer d'objets qui font souvent l'objet d'études presque quotidiennes, sans pour autant savoir à quelle distance se trouveront les futures réserves. Si le musée des Arts décoratifs prévoit de sortir l'ensemble des collections conservées dans les réserves (qui sont toutes enterrées), le Louvre prend le parti de n'évacuer que ce qui ne peut l'être en 72 heures, c'est-à-dire pendant le laps de temps annoncé par la Préfecture avant le pic de la crue. De ce fait, les départements densifient la présentation des collections dans les salles, et la Délégation sécurité-sûreté du Louvre coordonne la mise en place d'un plan de prévention des risques d'inondation, avec l'ensemble des départements et directions concernés.

La DMF loue et aménage 10 000 m² dans d'anciens entrepôts industriels, à la périphérie nord de Paris. Toutefois, les collections restent emballées car les conditions de conservation sont moins satisfaisantes que dans leurs réserves d'origine.

Dès la fin du mois de mars 2003, l'ensemble des collections est transféré, et rangé.

1. Union Centrale des Arts décoratifs (UCAD), Ecole Nationale Supérieure des Beaux-Arts (ENSA), musées d'Orsay, de l'Orangerie, et du Louvre.
2. DMF.

Naissance d'un projet de centre de conservation – Études préliminaires et contours du projet

En tout état de cause, cette situation ne peut être que temporaire. D'une part, ces collections sont peu accessibles, en raison de leur éloignement des institutions elles-mêmes (3/4 d'heure par les transports en commun, une heure par camion, compte tenu des embouteillages parisiens) et du fait que la plupart sont emballées, donc difficilement consultables. D'autre part, les conditions environnementales ne sont pas conformes à celles requises par les institutions. En outre, il s'agit de locaux loués par la DMF, et il ne peut donc s'agir d'une situation pérenne, d'autant que les surfaces allouées ne permettent pas d'envisager une extension à moyen terme (ill. 3). Par ailleurs, les collections de certains musées sont très dispersées, et certaines des implantations sont encore inondables. C'est en particulier le cas du Louvre, tant à l'intérieur du palais qu'à l'extérieur. Leur étude et leur conservation sont de ce fait compliquées, voire même impossibles. Enfin, aucune infrastructure ou moyen humain n'accompagne cette mise en réserve.



3. Réserve externalisée du Louvre. Octobre 2009. © L. Cuquemelle (Louvre).

S'il faut en effet mettre les collections de réserve à l'abri des inondations, il s'agit aussi de constituer, autour des collections concernées, tout le réseau indispensable à leur conservation, à leur étude et à la diffusion des connaissances rassemblées autour d'elles : ateliers de conservation-restauration, laboratoire, quarantaine, lieux de traitement, personnel permanent...³ Une telle ambition ne peut naître d'une seule institution, pas plus qu'elle ne peut être isolée du contexte institutionnel et humain qui doit la servir.

Comme nous allons le voir, les réflexions conduites depuis près de trois ans de manière intense se situent dans le prolongement de projets déjà envisagés depuis plus de vingt ans.

Puisqu'il s'agit d'appréhender la conservation des collections pour les cinquante prochaines années, il semble donc légitime de conduire des études successives qui permettent de circonscrire le projet mais aussi d'appréhender l'évolution des différents établissements concernés, dont le personnel relève de directions différentes du ministère de la Culture et de la Communication, mais aussi parfois d'autres ministères.

Un premier projet est esquissé pour le Louvre entre 2005 et le début de l'année 2007 par la Délégation sécurité-sûreté du

3. Voir à ce sujet la norme XP-X- 80-001.

musée et Vincent Pomarède⁴, non sans quelques difficultés. En effet, aucun des départements du musée ne souhaite voir s'éloigner des collections qui, bien qu'exposées au risque de crue, constituent le cœur de la vie des départements, et sont l'objet d'études quotidiennes, par les conservateurs du musée et par les chercheurs extérieurs.

Un préprogramme et une estimation financière sont dressés, prenant en compte les surfaces, fonctionnalités, et moyens souhaités.

À la demande de Renaud Donnedieu de Vabres, alors ministre de la Culture et de la Communication, Alain Erlande-Brandenburg⁵ conduit une étude au printemps 2007 qui a pour objet de :

- mener une réflexion sur la pérennisation de la délocalisation d'urgence des réserves des cinq établissements situés le long de la Seine⁶, en un lieu plus approprié ;
- étendre cette réflexion à d'autres institutions patrimoniales qui exprimeraient des besoins analogues ;
- s'interroger sur l'opportunité et la possibilité fonctionnelles, spatiales, économiques, et le cas échéant, institutionnelles de préparer le regroupement, en tout ou partie, avec un site de réserves, de centres de restauration et de recherche en dehors de l'extrême centre de Paris⁷ ;
- réfléchir à l'utilisation qui pourrait être faite par le Louvre des espaces libérés par le Centre de Recherche et de Restauration des Musées de France⁸ au Pavillon de Flore et au Saut du Loup⁹ ;
- examiner quatre lieux possibles d'implantation du futur Centre de conservation ;
- dresser les grandes lignes budgétaires du projet.

Cette étude permet de mettre en lumière les enjeux de la réussite de ce projet, liée à sa localisation, à un rapprochement des activités du C2RMF, du Laboratoire de Recherche des Monuments Historiques¹⁰, et du Centre de Recherche sur la Conservation des Collections¹¹ dans les domaines de la recherche et de la restauration, au caractère dynamique de la gestion des collections en réserve, en proposant que d'autres établissements y implantent également une partie de leurs réserves externalisées, et enfin à la présence des deux institutions assurant la formation des restaurateurs¹². En préconisant la création d'un Centre national de conservation du patrimoine, l'auteur du rapport met en lumière l'intérêt, déjà évoqué il y a près de vingt ans, du rapprochement géographique et fonctionnel d'activités conduites autour de la conservation des collections.

Bruno Suzzarelli, Inspecteur général de l'Administration des Affaires culturelles, poursuit, à la demande du même ministre¹³, les réflexions, études et concertations nécessaires à l'élaboration de décisions pertinentes pour la constitution d'un Centre national de conservation du patrimoine.

Son premier rapport, daté de novembre 2007, a pour objet de définir ce que pourraient être les principales missions et caractéristiques d'un Centre national de conservation du patrimoine.

Il permet d'abord de dresser un état des lieux des réserves de qua-

torze institutions patrimoniales¹⁴ susceptibles d'être concernées par le regroupement de leurs réserves extérieures, dont la situation s'avère globalement très insatisfaisante. 42 % des réserves in situ sont en effet saturées, mal adaptées aux besoins de la conservation des collections, et parfois encore inondables. Les réserves externalisées sont implantées dans 21 lieux différents, dans des locaux impropres à l'usage qui en est fait, et dont la mise à disposition est tant précaire qu'onéreuse.

Ce rapport souligne d'autre part que l'implantation des ateliers de restauration du C2RMF en deux lieux ne permet pas de répondre à l'ensemble des demandes qui lui sont adressées, et propose de réfléchir à une évolution du statut des laboratoires. Il formule de même des hypothèses de destination des espaces libérés par les établissements parties au projet.

En outre, le rapporteur constate que la dispersion géographique et fonctionnelle des laboratoires dévolus à l'étude et à la conservation du patrimoine (CRCC au Muséum national d'histoire naturelle, C2RMF à Versailles et Paris, LRMH à Champs-sur-Marne) limite la synergie et l'appréhension globale des sujets traités.

Il ajoute aussi combien les établissements de formation des restaurateurs souffrent des conditions insatisfaisantes de leur actuelle installation.

Bruno Suzzarelli présente douze scénarii possibles d'implantation, dont la superficie varie de 65 000 m² à 158 000 m², et le coût de 157 à 356 millions d'euros.

Des hypothèses de maîtrise d'ouvrage, financement, et montages opérationnels sont également proposées.

Enfin, le rapport examine la question du processus de décisions et du calendrier de mise en œuvre du projet.

Son second rapport, demandé par Christine Albanel le 13 mars 2008, permet d'apporter les informations complémentaires de nature à éclairer les décisions préalables au lancement du projet dans quatre domaines distincts :

- affiner les éléments de pré-programmation rassemblés dans le premier rapport pour la dizaine d'établissements qui formeraient le cœur du projet ;
- analyser et apprécier les besoins de deux autres établissements (Fonds national d'art contemporain et Centre Pompidou) qui pourraient se joindre au cœur du projet ;
- élargir les propositions initiales de lieux d'implantation du futur Centre ;
- approfondir les hypothèses et modalités de montages financiers.

Il apparaît que le cœur du projet pourrait regrouper les réserves de six établissements (musées d'Orsay, de l'Orangerie, Picasso, du Louvre, ENSBA, et UCAD), les ateliers de conservation-restauration dépendant du C2RMF, le LRMH, la majeure partie du CRCC, et le laboratoire de recherche du C2RMF. S'y ajouteraient des espaces de médiation à destination du public avec l'atelier des moulages et la chalcographie de la Réunion des musées nationaux.

Quatre pôles seraient constitués :

- conservation, constitué par les réserves ;
- restauration – recherche ;
- accueil – médiation – valorisation ;
- fonctions support.

De ce fait, une surface de 66 700 m² utiles serait nécessaire, dont près de 70 % dévolus au pôle conservation. Inférieure à celle identifiée dans le premier rapport, elle s'explique par la mutualisation possible de certains équipements.

14. Dix musées : Louvre, Orsay, Arts décoratifs, Orangerie, Cluny, Quai Branly, Picasso, Musée national d'Art moderne, Monuments français, Plans et reliefs ; quatre institutions non muséales : ENSBA, Centre des monuments nationaux, et Fonds national d'art contemporain.

4. Conservateur général du patrimoine, directeur du Département des Peintures.

5. Conservateur général du Patrimoine honoraire.

6. Cf. supra note 1.

7. Lettre de mission du 15 février 2007.

8. C2RMF.

9. Le Pavillon de Flore abrite les ateliers de restauration, le Saut du Loup le laboratoire lui-même.

10. LRMH.

11. CRCC.

12. L'université de Paris I et le département des restaurateurs de l'Institut national du patrimoine.

13. Lettre de mission du 4 mai 2007.

Des propositions d'extension sont également évoquées, qui font passer la surface utile, dans l'hypothèse la plus haute, à 118 300 m². Outre le Centre Pompidou et le Fonds national d'art contemporain, il est suggéré d'associer, dans le pôle *accueil – médiation – valorisation* la formation des restaurateurs de l'Institut national du patrimoine¹⁵, et/ou les masters de conservation-restauration et conservation préventive de l'Université Paris I. Les coûts et montages financiers sont affinés pour chacune des hypothèses.

Le rapporteur propose d'utiliser les fonds recueillis grâce au partenariat avec Abou Dabi et la création d'un fonds de dotation pour financer le projet.

Un calendrier est proposé pour que l'ouvrage soit livré fin 2014, ce qui suppose de lancer les études préopérationnelles à l'automne 2008. Ces délais très contraints s'expliquent par la volonté de limiter l'exposition des collections concernées au risque de crue centennale, dont elles sont menacées tous les printemps. L'auteur souligne enfin la nécessité de conduire des discussions interministérielles, mais aussi de réaliser des arbitrages au sein même du ministère de la Culture et de la Communication.

Un projet novateur et collégial

Comme nous venons de le voir, les études préliminaires ont permis de faire évoluer le projet initial de simple réserve à un centre de conservation offrant autour des œuvres tous les éléments et réseaux permettant leur conservation, leur étude, la formation des restaurateurs qui interviendront sur les collections nationales une fois sortis de leur école, mais aussi la médiation et valorisation voulues en particulier par les laboratoires, pour répondre à l'intérêt porté par le public aux moyens mis en œuvre pour l'étude des objets et leur conservation. Ce dernier aspect permet de rendre ce projet plus attractif pour les collectivités susceptibles de l'accueillir. Un simple *blockhaus* refermé sur lui-même ne peut en séduire aucune, et l'absence de versement de taxe professionnelle, puisqu'il s'agit d'un établissement public, constitue un handicap pour l'implantation d'une telle structure.

Le 3 juillet 2008 est lancé par le ministère de la Culture et de la Communication un appel à propositions pour que l'implantation du Centre, dont Madame Albanet¹⁶ a décidé la création, s'effectue dans la plus grande transparence. Les éléments de programme y sont présentés.

Dix-sept lieux sont proposés : Caen, Châtillon-sur-Seine, Jouars-Ponchartrain, Saclay, Bagneux, Saint-Quentin en Yvelines, Versailles (deux lieux), Cergy-Pontoise (à Neuville-Université), Nanterre, La Défense, Garonor, La Courneuve, Bondy, Marne-la-Vallée, Neuilly-sur-Marne, Roissy. Ces candidatures sont portées par des collectivités locales, des regroupements de collectivités au sein de communautés d'agglomérations, des sociétés privées, promoteurs, agents immobiliers ou sociétés foncières, et enfin des architectes urbanistes mandatés par un établissement aménageur.

Un comité technique, présidé par Hervé Barbaret, alors administrateur général adjoint du Louvre, est composé d'un représentant de chaque établissement prenant part au projet. Il examine les candidatures, les étudie, les apprécie, puis soumet des propositions au comité de pilotage, constitué des directeurs de chacun des établissements concernés.

Les trois premières candidatures sont écartées, le critère d'accessibilité ne pouvant être satisfait. Le suivant se désiste de lui-même. Les autres candidats sont auditionnés par le comité technique, et les candidatures appréciées selon une grille d'analyse comportant dix-huit critères répartis en quatre chapitres distincts :

- présentation de la proposition des partenaires ;
- présentation du site envisagé et de son environnement ;
- proposition fonctionnelle et culturelle ;
- estimation financière et montages contractuels.

Elles sont notées de 1 à 5, et une pondération est appliquée en fonction de l'importance accordée par chacun des membres du comité technique à chacun des critères.

Cette étape achevée, les candidatures de Cergy, Nanterre, la Défense, Bondy, Neuilly-sur-Marne et Marne-la-Vallée sont sélectionnées. Le comité technique revoit sa notation après une visite des sites.

Ces appréciations sont incluses dans une analyse fine remise au ministre, qui demande d'approfondir les trois candidatures les plus conformes aux besoins du projet¹⁷, pour lui permettre de retenir, à l'issue de ces travaux, le lieu offrant les plus grandes qualités attendues par les participants.

Des études très poussées, nourries par deux assistants à maîtrise d'ouvrage dans les domaines technico-économique et géotechnique, sont poursuivies. Cette qualité dans les études techniques dès ce stade préalable est assez rare dans la conduite de grands projets. Elle permet d'éviter les surcoûts éventuels dus à des questions techniques et de disposer d'éléments de comparaison les plus impartiaux possibles entre les trois sites.

La candidature de Neuilly-sur-Marne est placée en tête par le comité technique, suivie par Cergy puis Nanterre.

C'est toutefois celle de Cergy que retient le ministre Frédéric Mitterrand le 6 octobre.

Conclusions

Envisagé depuis plus de vingt ans, le projet de Centre national de conservation du patrimoine a pour objet de transformer la contrainte liée aux risques de crues en opportunité pour les établissements concernés, leur permettant d'envisager pour les cinquante prochaines années des conditions de conservation, d'étude et de diffusion des collections adaptées à leurs besoins. Compte tenu des surfaces nécessaires, seule une construction peut-être envisagée.

Les obstacles sont nombreux dans ce type de projet. La diversité des participants, de leur statut et de celui de leur personnel, l'ampleur du projet lui-même constituent des difficultés de taille. Certes, toutes ne sont pas à ce jour aplanies, et les échanges au sein du ministère de la Culture et de la Communication ou interministériels ne sont pas achevés.

Toutefois, les moyens financiers offerts par le partenariat avec Abou Dabi, la ferme volonté d'aboutir, en partie liée aux contraintes auxquelles doivent actuellement faire face les établissements, et la qualité des études conduites pour retenir un lieu d'implantation adapté aux besoins montrent que le projet de Centre n'a jamais été aussi avancé.

La phase de préprogrammation vient de commencer. En poursuivant le remarquable travail d'équipe conduit jusqu'à présent, les délais fixés en juillet 2008 devraient permettre de respecter l'objectif prévu d'une ouverture du centre en 2014.

¹⁵. INP.

¹⁶. Ministre de la Culture et de la Communication.

¹⁷. Cergy, Nanterre et Neuilly-sur-Marne.

Towards a French National Centre for Cultural Heritage Preservation

The violence and scale of the disasters in Prague, then Dresden, in August, 2002, with their exceptional floods, left their mark on people's minds. Also, the 1910 centennial floods are still vivid into the Parisians' memory, and it is not unthinkable, according to the city authorities, that such events occur again. It is necessary to precise that the situation of some institutions has evolved since the last centennial floods. They did not affect the Louvre collections because at that time the stocks were not liable to flooding. The museum since then extended into the largest part of the Palace, and the project of Grand Louvre allowed an extension, in particular into the basements. If museum curators had expressed from the beginning their worries, the architects had assured them that the buried structures, and in particular the storerooms, would be waterproof. Regarding the Musée d'Orsay situation, it was still only a railway station at that time but the nave had its feet in the water.

At the very beginning of October 2002, the Minister of Culture and Communication Jean-Jacques Aillagon asked five institutions located along the Seine to evacuate before Spring 2003, season where the risk of floods is the highest, all the buried storerooms to protect the collections which were preserved there.

If the deadline was met, the current situation of the off-site storage site cannot last. On one hand, these collections are little accessible, because they are far from their institutions and that most are packed, thus not easily available for consultation. On the other hand, the environmental conditions don't meet the institutions' requirements. Moreover, these premises are rented by the Direction des Musées de France: it cannot be a long-lasting situation, as far as the assigned areas do not allow any medium-term extension. Besides, the collections of some museums are very scattered, and some of the museum sites are still liable to flooding. It is in particular the Louvre's case, both inside the palace and outside. So the collections study and preservation are difficult, even impossible. Finally, no infrastructure or staff has been dedicated to this storeroom facility.

It is indeed necessary to protect collections from floods, but also to constitute around them all the network needed for their preservation, study and knowledge diffusion: workshops of preservation-restoration, laboratory, quarantine, treatment sites, permanent staff... Such project cannot be a single institution's ambition, or cut from the institutional and human context which has to serve it.

Several studies were led between 2005 and 2007. One of the conclusions was that the heart of the project could include the stocks of six institutions (Musée d'Orsay, Orangerie, Picasso, Louvre, Ecole nationale supérieure des Beaux-Arts and Union Centrale des Arts décoratifs). Some laboratories facilities, dispersed from the moment through Paris and its suburbs, could

be brought together too: the workshops of preservation-restoration linked to the Centre de Recherche et de Restauration des Musées de France (C2RMF), the Laboratoire de Recherche des Monuments Historiques (LRMH), the main part of the Centre de Recherche sur la Conservation des Collections (CRCC), and the C2RMF research laboratory. To which would be added spaces of mediation for the public with the casting workshop and the chalcography of the Réunion des musées nationaux.

Four units would be established:

- Preservation, constituted by the storerooms;
- Restoration -Research;
- Reception - mediation - promotion;
- Support functions.

Therefore, 66 700 m² of net area would be needed, among which about 70 % would be devoted to the preservation unit. Propositions of extension are also evoked, which would extend the net area to 118 300 m², according to the highest hypothesis. Besides the Centre Pompidou and the Fonds National d'Art Contemporain, it is suggested to associate, in the reception – mediation – promotion unit, the training in restoration of the Institut National du Patrimoine, and/or the Master's degrees in preservation-restoration and preventive preservation of the University Paris I.

The reports suggest to use the funds collected thanks to the partnership with Abu Dhabi to finance the project. A timeline has been proposed so that the building may be finished at the end of 2014, which supposes to launch the preoperational studies in Autumn 2008. This deadline is indeed very short in order to limit the collections exposure to flooding risk, by which they are threatened every spring.

An innovative and collective project

The preliminary studies allowed to transform the initial project of simple storeroom into a centre of preservation offering all the elements and networks needed for the works of art preservation and study, as well as the training of the restorers who will intervene on the national collections. The mediation and promotion wanted in particular by laboratories will be also a key part of the project in order to meet the public interest about the means for studying and preserving the objects. This last aspect allows to make the project more attractive for local authorities likely to welcome it.

On July 3rd, 2008, the Ministry of Culture and Communication launched a call for proposals so that the centre, which Madam Christine Albanel decided to create, be established with the

biggest transparency. Seventeen locations have been proposed: Caen, Châtillon-sur-Seine, Jouars-Ponchartrain, Saclay, Bagneux, Saint-Quentin en Yvelines, Versailles (two sites), Cergy-Pontoise (at the Neuville-Université station), Nanterre, La Défense, Garonor, La Courneuve, Bondy, Marne-la-Vallée, Neuilly-sur-Marne, Roissy.

A technical committee, chaired by Hervé Barbaret, as Louvre Deputy Administrator at that time, gathering a representative from each establishment taking part to the project, examines the candidacies, according to an analytical grid with eighteen criteria divided into four different categories:

- Presentation of the partners' proposal;
- Presentation of the envisaged site and its environment;
- Functional and cultural proposal;
- Cost estimation and contractual arrangements.

Once this stage ended, the candidacies of Cergy, Nanterre, La Défense, Bondy, Neuilly-sur-Marne and Marne-la-Vallée were selected. The technical committee revised its notation after visiting the sites. The Minister asked then to investigate deeper the three best candidacies.

Advanced studies led by two assistant project managers specialized in technico-economic and geotechnical fields were

pursued. At the end, Neuilly-sur-Marne came at the top of the list, followed by Cergy and Nanterre. It is however Cergy which has been chosen on October 6th by the new Minister Frédéric Mitterrand.

Envisaged for more than twenty years, the project of a National Centre for Cultural Heritage Preservation aims at converting the obligation of facing the flooding risk into an opportunity for the concerned institutions to ensure for the next fifty years the best conditions of preservation, study and access to collections. Considering the large area required, only a single building can be envisaged.

There are undoubtedly many problems to overcome in this type of project: the variety of participants, institutions' status, staff's status, the scale of the project itself... Certainly, all these issues are not settled today, and the exchanges within the Ministry of Culture and Communication or with other ministries are far from being closed. However, the project of centre has never made so much progress.

The pre-programming phase has just begun. According to the deadlines fixed in July 2008, the objective of a centre opening in 2014 should be met by pursuing the remarkable teamwork led till now.

Hacia la creación de un Centro Nacional Francés para la Preservación del Patrimonio Cultural

Después de la violencia de las inundaciones de Praga, y luego Dresde, en agosto de 2002, se pidió a cinco instituciones ubicadas al lado del río Sena la evacuación antes de la primavera de 2003 de todos los depósitos subterráneos a fin de proteger las colecciones allí preservadas. Aunque se cumplió con el plazo, la situación actual de almacenamiento fuera de las sedes de las instituciones no puede mantenerse. Por una parte, el poco acceso a las colecciones, debido a que se encuentran lejos de sus instituciones y la mayor parte está empacada, por lo cual su consulta no está disponible fácilmente. Por otra parte, las condiciones ambientales no cumplen con los requisitos de las instituciones. Finalmente, no se ha asignado infraestructura ni personal a estos depósitos.

Ciertamente, es necesario proteger las colecciones de las inundaciones, pero también constituir entorno a ellas toda la red necesaria para su preservación y estudio: talleres de preservación-restauración, laboratorio, área de cuarentena, sitios de tratamiento y personal permanente. Un proyecto de tal magnitud no puede ser la ambición de una sola institución.

Entre 2005 y 2007 se condujeron varios estudios para transformar el proyecto inicial de un simple depósito en un centro de preservación. El mismo podría abarcar los fondos de seis instituciones (Musée d'Orsay, Orangerie, Picasso, Louvre, Ecole nationale supérieure des Beaux-Arts and Union Centrale des Arts décoratifs). Algunos laboratorios, dispersos en el momento en París y sus suburbios, podrían reunirse también y agregarse espacios para la atención del público.

Se establecerían cuatro unidades:

- Preservación, constituida por los depósitos;
- Restauración – Investigación;
- Recepción - mediación - promoción;
- Funciones de apoyo

Los informes sugieren emplear los fondos recolectados gracias a la alianza con Abu Dhabi para financiar el proyecto.

Se han propuesto 17 ubicaciones, que han sido evaluadas por un comité técnico. Finalmente, el 6 de octubre, el nuevo Ministro de Cultura y Comunicación Frédéric Mitterrand escogió Cergy.

Indudablemente, no todos los problemas están aún resueltos, pero el proyecto del centro nunca había progresado tanto. La fase de pre-programación apenas se ha iniciado. De acuerdo con el cronograma establecido en julio de 2008, el objetivo de la inauguración de un centro en 2014 se lograría manteniendo el destacado trabajo en equipo que se ha llevado a cabo hasta ahora.

EURANED: An European Project for Disaster Prevention and Disaster Management

by Dr Sebastian Barteleit

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The 2005 published *Report on archives in the enlarged European Union*, and the subsequent Council recommendation of the same year laid a special emphasis on the topics of preservation and disaster prevention¹. In chapter 4 the report claims “to reinforce coordination measures and the exchange of expertise in order to establish a European Protection and Rescue Programme on damage prevention and restoration of damaged documents and archives in Europe”².

Before that there was a certain lack of formal exchange between archivists on a multinational level on the topics of preservation and disaster prevention. Certainly, for example, the International Council on Archives tries to connect professionals all over the world, but archivists and other experts often met only on a national or regional basis. Only in special cases, such as for example while planning a new archives building, was this exchange extended to a bi- or even multinational level but even then no formal networks were established.

Therefore in 2007 a tri-national working group consisting of members from Germany, Poland and the Czech Republic has been established. This working group is going to tackle the problem of disaster prevention mainly, since this seems to be the most urgent problem in the realm of preservation regarding the disastrous events in the last few years especially in these countries. The other aspects of preservation and conservation mentioned in the Council recommendation will be touched only slightly even if the constant contact between experts of these three countries might be used for the purpose of advice and further engagement.

The main aim of this working group is the creation of an Internet based network called EURANED. This stands for “European Archival Network in Disaster Management” and will be a multilingual Internet-platform for the presentation of information regarding disaster prevention and disaster management that will soon be found under www.euraned.eu.

This platform should present detailed information on disaster prevention and disaster management, focusing mainly on the

aspects of prevention and recovery. The scope of information will range from detailed text on different aspects of disaster prevention and management to short guidelines, how to react in certain typical situations of emergency and how to treat certain types of damaged archival material. Furthermore there will be a section with reports about new scientific research in the field of preservation and disaster management to enable colleagues getting information formally not accessible in different languages. The other important function of the Internet platform is to give hints where to find appropriate resources and capacity either in other archives or public institutions or by consulting commercial companies providing such services. Thus one main part of it will be the enlargement of the German based Internet database NORA – Notfall Register Archive (register of archives for cases of emergency) to an European level. This database should be the main tool to structure and to enable networking between the European archives. All registered users should have access to the information provided in the database enabling them thereby to establish contact with colleagues and experts in this field.

This Internet platform should first be operated in English but might be enlarged by the languages of the participating countries in due time. The information on the platform should be always presented in one local language and in English. Over the time the information gathered and presented on the website should reach all archivists from participating countries without any language barriers. This is certainly necessary since we cannot expect all archives and especially smaller ones to have enough staff at hands who are able to read and understand English or other foreign languages.

At the moment the members of the working group are collecting and generating information and text for the Internet platform and starting a more detailed layout of the website. The next steps are the creation of the Internet platform and its first public appearance, and then its subsequent enhancement.

These are certainly only first steps in enabling the archives to prepare themselves properly for all possible cases of disasters and to form new archival networks. Of course more steps are to be taken to face the problems of the continuing disaster of the deterioration of archival material. For example the acidity of modern paper and the fragility of audio-visual material need special efforts of all archive. There is still a lot to do in the realm of Europe-wide preservation.

1. *Report on Archives in the enlarged European Union. Increased archival cooperation in Europe: action plan*, Luxemburg 2005, http://ec.europa.eu/transparency/archival_policy/docs/arch/reportarchives_en.pdf (last accessed 12.11.2009); Council recommendation of 14 November 2005 on priority actions to increase cooperation in the field of archives in Europe http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_312/l_31220051129en00550056.pdf (last accessed 12.11.2009).

2. Report p. 150.



1. "Höhenretter" (high-up rescuers) of the Cologne professional fire brigade during the salvaging work on the ruins.
Photo: Stefanie Behrendt.

The Collapse of the Cologne City Archives

by Georgia Iona and Dr Max Plassmann, City Archives of Cologne

Introduction

The City Archives of Cologne are of significant historic and cultural importance not only for the German nation as well as for the entire Western Europe¹. It is considered as one of the largest communal archives in Europe. In total, the Cologne City Archives keep 30 linear kilometres of official and private records, including 65,000 charters and other special collections of major historic value. Some of the oldest documents date back to the early Middle Ages. The oldest dateable charter dates back to 922. In addition, the archive housed a vast amount of library material of historic significance, such as nearly 2.000 medieval manuscripts – more than those of the neighbouring three state libraries together.

The Cologne City Archives kept as well about 800 historic modern collections mainly of private origin that involve for example personal documents of prominent German politicians and well-known artists, 500.000 photos and about 150.000 original architectural plans.

The archive was built at the beginning of 1970s and it was located on the Severinstraße, in the southern part of Cologne's city centre. The main six-storey storage building was designed in such a way to protect archival material from climate fluctuations, creating a structural-physical balanced room climate.

3rd March 2009 – an overview of the collapse

The main storage unit of the City Archives of Cologne collapsed within minutes on 3rd March 2009, along with two neighbouring residential houses. Thanks to the immediate warning from the archive personnel, all staff and visitors evacuated the building within a few minutes. Unfortunately, two young residents of the adjacent residential buildings that also collapsed were fatally injured. A still on-going investigation as to which was the cause of the collapse primarily focused on the construction of a new subway tunnel at the site, but until now there is no certain conclusion.

Considering now the condition of the archival material, most of the historic collections of the building were buried within minutes in a huge pile of debris that was extended from the level of the ground and down to semi-completed underground tunnels of the subway and inside the crater that

opened beneath the building. Soon it became evident that at least considerable amounts of the collections could be rescued, starting from the undamaged cellars and moving forwards to the ruined building. The first rescue mission was then organised within hours.

The very first voluntary offers to assist came shortly after the incident and until the end of the 1st phase of the recovery operations (August 2009) several thousand offers for help have been officially registered, from institutions, organisations and private citizens that reached the city of Cologne within hours and days. Until September 2009, about 4.000 people helped in one way or another: members of the fire brigade and rescue teams as well as archivists, conservators, librarians, scientists, students and civil citizens from all over Europe, from North America and even from Australia. Taking into consideration that less help would have led to more loss of archival material, the effort of all these volunteers was significant for rescuing about 85% of the collections within the restricted time limit of six months.

However, it was not an easy task to organize such a vast mass of volunteers, taking as a fact that at the beginning no time was available for preparation, as well as that offices and communication facilities such as computers and telephones were simply not existing. It took therefore some days to organise an administrative plan on how to deal with such a demanding situation, and it took rather longer to optimize it. In that case, the administrative preparation for a disaster is an aspect that is missing from most of our current emergency plans, although it must be an essential focusing point for any future planning.

First rescue operations

The rescue of the archival material started only several hours following the incident. Priority was given to cover the entire ruined building with a gigantic plastic waterproof cover in order to prevent further inflow of rainwater into the site. At a later stage the entire area of the incident was housed under a metal umbrella roof. The entire rescue operation in situ of the archival material was undertaken by the fire brigade and THW². Further recovery procedures of the excavated archival material were undertaken by authorised personnel both from the archive as also from volunteer rescue teams.

In the first days an evacuation operation was performed targeting parts of the building that remained intact. During this procedure archival material, office and conservation studio

¹. Schmidt-Czaia, Bettina, Ulrich Fisher, Max Plassmann, "Zum Einsturz des Historischen Archivs der Stadt Köln", *Archivar* 62, V. 2, Mai 2009, p. 148-152; Fisher, Ulrich, Max Plassmann, Nadine Thiel, "Die Katastrophe von Köln: Bergung, Erstversorgung, Zwischenbilanz", *Journal of paper conservation*, IADA Reports 10, V. 2, 2009, p. 8-14; Kistenich, Johannes, "Phasen der Bergung und Erstversorgung des Archivguts aus dem Historischen Archiv der Stadt Köln", *Archivar* 62, V. 3, Juli 2009, p. 305-313.

². THW: Technisches Hilfswerk = German Federal Agency for Technical Relief.

equipment were removed from the intact annex building and from the cellars. The very first intact files and books that came out from the undamaged cellars of the archive were packaged into paperboard boxes. Intact parchment documents and rare books dating from the Middle Ages were enclosed into metal containers and sent immediately for packing and safe storage. Other wet and damp archival materials were packed inside waterproof film and dispatched for freezing.



2. First Aid Treatment. Photo: RBA

Recovery procedures

The acquisition of a deposition area where the rescued objects could be temporarily placed and treated accordingly was sought. This would allow material to be packed accordingly and then to be sent for long term storage into the depots of other archives. Within two weeks following the collapse, all rescued materials were transported into an open hall in order to be roughly separated from debris and building rubble, identified and categorised as dry, moist or wet, thus allowing for proper treatment and packaging. Establishing of a temporary workshop unit (EVZ³) dealing with recovery and packaging of the rescued archival material was initiated in the first week following the collapse of the archive.

The recovering process of the archival material was organised in steps, as explained below, within the following days:

3. EVZ: Erstversorgungszentrum = central unit for First Aid Treatment of the rescued archival material.

1. Archival material was collected and transported out from the ruins in commercial cardboard boxes and inside metal or plastic containers.
2. Full boxes and containers were collected at the yard of a nearby school, opposite to the site. Steps 1 and 2 were undertaken strictly by the Fire Brigade and THV.
3. In the schoolyard, archival material was separated and classified as wet, mold-infected, damp or dry.
4. As a principle, wet and mold-contaminated objects were wrapped with transparent cling film, shortly listed and placed into lattice pallet containers in order to be sent for immediate freezing. Archival materials contaminated with mold were treated separately, avoiding any contact with the rest of the documents.
5. Damp and dry objects were packed into cardboard boxes and sent for further treatment in the new first aid treatment unit (EVZ). Steps 3, 4 and 5 were undertaken from authorised personnel of the archive. First aid treatment of rescued archival material involved the following procedures respectively:
6. Rescued archival material was briefly identified, listed and numbered.
7. Any remaining dirt, dust, small stones and debris were removed with mechanical means (e.g. brushes and latex sponges).
8. Items that were still wet or possibly infected with mold were wrapped with cling film, packed separately into lattice pallet containers and dispatched for immediate freezing.
9. Heavily damaged and disordered items or books with a broken binding were wrapped also with elastic viscose cloth, similar to bandages.
10. Treated items were placed into large blue plastic trays. Each tray was numbered according to the number of its list (see step 6).
11. Archival materials were then prepared for drying: Items from the blue trays were placed on mobile storey trolleys, taking care that contents from one container were placed strictly onto one trolley.
12. Trolleys with archival material were placed into drying chambers with uninterrupted air circulation. Temperature varied between 25 and 30°C and 25-33% of relative humidity. Drying time varied from 6 to 24 hours, depending on the condition of the moist documents.
13. Dry archival material was then packed inside acid free paperboard boxes or folders.
14. As a last step, paperboard boxes were numbered accordingly and sent for storage in archive depots, mostly outside Cologne. Steps from 6 and up to 14 were undertaken mainly from volunteers under instructions and supervision from authorised personnel of the archive.

In addition to all recovery procedures of archival material that have been taken place in the first aid treatment unit (EVZ), a great proportion of rescued items have been treated in situ, immediately after their excavation. The following working procedures refer only to decayed paper objects that have been remained for more than 2 months into the building pit and

they were therefore thoroughly wet, heavily soiled and possibly mold infested.

1. Affected items were excavated from the soil, collected and transported into plastic baskets.
2. Soiled files, books and other archival material were placed when possibly in blocks and not in separate sheets, onto Reemay® Polyester mesh and rinsed thoroughly with running water, without being removed from their mesh.
3. Subsequently, cleaned objects were wrapped with transparent cling film, listed when possible, placed into lattice pallet containers and dispatched for immediate freezing.

Although the above described cleaning procedure seems to be rather rough and inappropriate for most archival documents it proved to be in fact the only effective way to remove great proportions of soil from the freshly excavated wet files. Cleaning of the soiled and decayed blocks of paper under running water before the dirt was completely dried out and solidified was essential for the further preservation of these items.

For the time being, excavation of buried archival material is not going any further. At a later stage, it is planned to create in situ an ancillary construction in order to stabilise the ground and to facilitate any further attempts to retrieve the still buried files. As of the beginning till this date all recovered archival materials are deposited into storage rooms of 19 archives, libraries, museums and warehouses. At a later stage, all wet archival materials that are kept frozen should be freeze-dried and cleaned. The freeze-drying process has already started and it is undertaken by two of the most important public conservation laboratories in the region of NRW.

Structure and organisation of the recovery project

Due to the importance of the archival material, time constraints as well as the difficult working conditions involved, the work in EVZ was organised in such a way allowing vast masses of archival material to be treated promptly, while at the same time trying to mitigate the possibility of any errors in treatment. Right from the beginning, the entire unit of first aid treatment



3. The constitution of Cologne from 1396 ("Verbundbrief") with damaged seals. Photo: Stefanie Behrendt.

had been divided into several sectors, where archival material could receive treatment according to its apparent needs. For example, in EVZ there were stations for listing, dry cleaning and packaging of standard books and documents, as well as for treating big-sized posters, architectural plans and charters with wax seals.

The personnel of the archive positioned at the EVZ undertook many different tasks and responsibilities in order to fulfil the requirements of the project and to provide effective solutions when problems manifested. A work day was divided into two shifts. One archivist and two conservators undertook leading positions in every shift and the rest of the archive personnel were placed into the various working sectors in order to supervise and assist the volunteers. A very important aspect for optimum working conditions in EVZ was the proper management of volunteers. These people were grouped according to the requirements of the objects that needed to be treated. It was very important to place people with relevant working experience (e.g. conservators) to the appropriate positions in order to achieve the desired results.

Following health and safety regulations was also an important aspect. Anyone assigned to duty was obliged to wear protective clothing, latex gloves and dust-mask in order to protect him/herself from harmful substances such as mold spores, debris and fine alkaline dust.

Overview of the damages and suggested preservation procedures

The exact degree of damage is still not known. However, it is believed that a substantial part of the records, counting to 85%, has been recovered, 10% is still buried in situ and 5% is permanently lost. These rates seem however to be optimistic. Even though most of the archival material is now rescued, it does not mean that every item is in an adequate condition. At least 35% of the rescued items are in very bad condition; about 50% suffer moderate damage, and only 15% are lightly affected.

The majority of documents suffer from extended mechanical damages such as tearing, creasing and deformations that obstruct readability of the text, as well as from complete loss of some parts. The main reason of the above mentioned damages was the strong mechanical force that had been generated from the collapse of the building. However, significant mechanical damages to the archival material also occurred during the excavation, due to the use of heavy machinery which as a matter of fact could not be avoided considering the enormous masses of the debris. Alkaline dust (pH 11-12,5) is deposited on every single page and most of the archival material is also soiled with dirt from the burial ground or even stained with rust from corroded metal parts. Many items suffer even from severe water damage and mold infestation that occurred during their long time deposition under very humid conditions into the damp ruins.

Except of the severe damage to their material, most files suffer extend disordering. Files, books, single documents, photos and

audio visual material have been extensively disarranged due to the collapse of the building. Further disarrangement of the files occurred also because, all documents have been classified separately as mold-infested, wet and dry, and hence each category of objects has been treated and stored separately. In that case parts from the same file could have been stored in more than one storage units. Consequently numerous files seem to be completely scattered. In many cases, pages from one file could have been stored not only in a single box but in several, as well as in more than one archive depots. In addition to the damaged and disordered items, about 3,5 million fragments must be also identified and treated.

Considerations for future planning of preservation and re-arrangement projects

Conservation and re-ordering of the affected files and documents appear to be a difficult and extremely long lasting process. Archival material should be in that case classified, according to its needs, in relation to conservation as well as in order to facilitate its effective identification and preservation treatment. A custom-designed software has been created in order to enhance registration of every single item. Future plans for the recovery and the rejoining of the disordered archival stock involve the foundation of a Conservation and Digitalisation Centre, where the damaged objects could be housed, re-ordered, identified, digitised and receive all appropriate conservation treatments. This scenario implies that conservation for the majority of the documents will involve preventive and interceptive treatments, aiming to prevent any further loss of original material.

Digitalisation is also an important step for the preservation of records. Until now, there are about 10.000.000 records of documents saved on microfilms. Most of these documents date before 1815. Within the next months all these microfilms will be digitized and uploaded to the internet, together with all available finding aids. This will help to restore the order and to prepare them for conservation. In addition, scholars will have access to information, even though that access to the original documents will remain restricted for years.

Following the disaster, there is a great need of funding as also of experienced personnel. It has been calculated that a single conservator would need about 6.500 years of work to deal with every damaged item and it is also clear that this project is far beyond the capabilities of a single workshop. Hence, large-scale cooperation with other institutions and with free-lance conservators is required.

Planning of a new and modern building for the City Archives of Cologne is proceeding, however it will take several years until the new building will be functional. Consequently, for the time being it seems to be a great demand for a temporary preservation and digitalisation unit that would house all offices, workshops, depots as well as a reading room open to the public. Without these facilities, digitalisation and preservation efforts cannot proceed on a large scale.

“Experience gained from this disaster appears similar to the two sides of the same coin.”

The entire recovery operation of the archival material was a unique experience that outcome from such a large-scale disaster. However it should be taken into consideration that prevention of similar difficult situations starts from daily work. For instance, adequate protective packing and storage are essential factors in order to minimize damage to archival material, not only in case of a disaster, but also for incidents of smaller extent such as a water inrush, or careless handling. Furthermore, regular inspection of the condition of the building as well as of its foundations, would provide a safe storage environment for our cultural property and a secure working environment for the personnel.

Experience gained from this disaster appears similar to the two sides of the same coin. The fact that more than 25 km of all types of the archival material have been rescued and safely stored within 6 month is a great achievement. On the other hand, it became apparent that most archives and libraries have got rather deficient emergency plans, similar to the pre-disaster emergency plan of the Cologne City Archives. Analogous plans deal mainly with technical aspects and communication is limited to chains of phone calls. Such a disaster planning is considered as insufficient as it does not take into consideration further administrative, communication and managerial problems of a real-life emergency situation, for instance the

aspect of bringing thousands of volunteers orderly to work. Theoretically, this may appear as an easy task, but in real life nothing is as easy as it seems to be.

In an emergency situation it is impossi-

ble to predict accurately how things could possibly work out and who would be then willing to take responsibilities for certain tasks. Project-structures and personnel have to be flexible, creative and well prepared to deal with a sudden occur of a disaster. The preparation of a disaster plan is not really a matter of recording all possible emergency situations that happened in the past without adapting theory to practice. Personnel of cultural institutions such as curators, conservators, archivists and librarians should be always prepared to deal with an emergency situation, working at all times in cooperation with the police, fire brigade, rescue teams and other groups of civil servants that are in charge to protect people and property.

The collapse of the City Archives of Cologne as well as the experience gained from the rescue operation is a bitter but unforgettable lesson, for investing more time and effort on preparation for an emergency situation that hopefully never occurs; but if it comes, many problems of improvisation could be avoided.

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The Earthquake in L'Aquila: the Intervention of ICPAL

by **Armida Batori**

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The history of document restoration in Italy shows significant surges in correspondence with natural disasters, to the extent that it could be said that the development of the awareness and practice of conserving books and documents have been boosted by the emergencies that have had to be dealt with.

The fire at the Turin National Library in 1904, the Second World War and the Florence flood of 1966 actually provided moments for opportune reflection that launched a study of the causes and consequences of disasters, which has involved and continues to involve several countries in prevention activities inspired by international collaboration.

The flooding of the River Arno in Florence was a crucial moment in the history of library material restoration as it dramatically showed the international community the urgency of recovering a type of material that was different from works of art. It also provided a unique opportunity for experts who rushed to Florence with the “mud angels”. These experts had the chance to evaluate the reactions of materials and the quality of binding techniques by observing these on graphical documents that had been subjected to extreme conditions, extensively represented by the hundreds of thousands of damaged volumes. These brought up questions and reflections that went on to form the bases of a prolific debate on the issues of conservation and restoration of books, as it has increased awareness over the last forty years.

The most recent disaster, which struck central Italy, was the earthquake of 6th April this year. The earthquake, the epicentre of which was in the area of the city of L'Aquila, caused buildings to collapse and be damaged throughout the whole area, leaving many people trapped under the rubble. Amongst the buildings damaged in the city, we should remember the university that was destroyed, a part of the hospital that collapsed, and the ruins of the Palace of the Prefecture that had housed the State Archive. Two buildings of the Provincial Library were also severely damaged, as were the majority of public and private buildings.

It is common knowledge that the Civil Protection Department promptly activated operations for the rescue of the population and for the monitoring and securing of dangerous structures. ICPAL also rallied for the recovery of the library and archive heritage that had been affected. However, in the majority of cases, it has been impossible to get access to books and documents for a long time due to the danger of further collapses, resulting in buildings – or what was left of them – being unusable.

In May I was contacted by Dr. Maurizio Fallace, the director general for library materials and cultural institutes at the Ministry for Cultural Heritage and Activities, with regard to volumes from the library of the Convent of Santa Chiara of L'Aquila, home to the local community of Capuchin friars.

Following the collapse of a wing of the convent library a few days after the earthquake, *Lega Ambiente*¹ volunteers moved the entire collection. Once they had been catalogued and photographed, the volumes that had been salvaged from the rubble were put into plastic boxes and the majority were then transported to other Capuchin convents in Abruzzo and Lazio.



1. Volunteers' intervention at the Convent of Santa Chiara of L'Aquila.
© ICPAL

The fact that the whole area was affected by heavy rainfall in the few days immediately after the earthquake obviously worsened the overall conditions of these volumes, which had already been compromised by the earthquake.

During recovery operations, volunteers had found 52 volumes from the 17th and 18th centuries with parchment bindings that were soaking wet. An expert in document restoration, who was part of the group of volunteers, suggested using a procedure singled out for cases such as these: the freezing of the documents. This operation is used for large quantities of materials in order to prevent microorganisms from developing on damp surfaces when prompt intervention for restoration is

1. *Lega Ambiente* (Environment League), founded in 1980, is the most important ecologist movement in Italy with now more than 11500 members and support (see www.legambiente.com).

problematic. In this particular case, the general situation did not allow intervention within the first 48 hours, as would have been desired.

A few days after the earthquake, the 52 volumes were photographed, put in bags and in a freezer in the kitchens of the Financial Police School for Inspectors and Superintendents in Coppito, near L'Aquila. After an initial inspection, ICPAL got in touch with "Bo Frost", a company that specialises in producing and distributing frozen food. A few days later, an official from ICPAL visited the school in Coppito with the head of the Roman branch of "Bo Frost", using a van with a refrigeration system for transporting frozen foods.



2. Dr Batori in Coppito. © ICPAL

With the assistance of volunteers from the Civil Protection Department, the volumes were transferred from the kitchens of the Financial Police School to the mobile freezer and transported to the company's headquarters in Rome. On arrival, the two crates containing the material were put into the depot at a temperature of approximately -20° . The volumes are still being stored there, pending the next stage of treatment, which will be the subject of research promoted by ICPAL.



3. The volumes are transferred to Rome. © ICPAL

Treatment involving rapid drying is planned for the frozen volumes. Freeze drying is often used when dealing with modern material. Water contained in the book passes from the solid state (ice) directly to an aeroform state (vapour), skipping the middle state (liquid), which presents the greatest risks for the material. In the case of the 52 printed volumes from the library of the Santa Chiara Convent, this type of treatment was not possible due to the characteristics of the material of the covers. Just like leather, parchment cannot undergo forced dehydration as it causes permanent structural damage, producing distortions, cracks and extreme overall fragility.

ICPAL sent two experts to the Capuchin Convent of Avezzano where thirteen crates containing a further 200 volumes from the L'Aquila library had been received and were being stored in a special area. As these volumes (which were mainly from the modern collection) showed signs of excessive dampness, the water content was monitored on samples, in order to decide which operations to use to impede the effects of the onset of moulds.

Technical-scientific staff from ICPAL also participates alongside the *Istituto Superiore per la Conservazione e il Restauro* and the *Opificio delle Pietre Dure* in a special office established in L'Aquila by a decree from the Ministry for Cultural Heritage and Activities. The aim is to operate in collaboration with the University of Studies and the Academy of Fine Arts to take care of conservation and restoration of the historical and artistic heritage of Abruzzo.

Finally, it should be pointed out that approximately a year ago a working group entitled *PREM – Prevenzione e Risposta alle Emergenze* (Prevention and Response to Emergencies) was set up at ICPAL with the aim of creating an information support that is able to guide archives and libraries in drawing up a tailor-made emergency plan in line with the requirements of the particular establishment and the resources available. The intention is to urge institutions to take positive action to preserve their graphical collections so that they provide a method that, if it provides effective prevention in the case of foreseeable disasters, can play a fundamental role in preparing for emergencies caused by natural disasters. *PREM* will be available in 2010 free of charge.

The Abruzzo Earthquake – The Rescuing of Cultural Heritage

by **Patrizia Miracola**

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The earthquake that struck the city and province of L'Aquila on 6th April 2009 not only destroyed homes but also historical palaces, castles, churches, monasteries, ancient dwellings, museums and monuments. These buildings had served as guardians of the immense historical and artistic legacy that had been accumulated over centuries.

Straight after the rescue of all survivors had been completed, the area's cultural heritage wealth was the subject of a prompt recovery operation by digging amongst the rubble.

Rapid intervention by the Civil Protection Department enabled the recovery and safe storage of the works of art that survived. Like the people affected by the earthquake, the salvaged works were taken to shelter in buildings that were more resistant than those that had previously housed them.

Most monuments in the city suffered damage and for this reason they were put on an emergency list drawn up on the basis of various criteria: the extent of the damage, the monument's historical, architectural and religious significance, and its critical value, in relation to the speedy recovery of the life of the city.

The most damaged religious sites include the cathedral complex with its old market square and the later Basilica of San Bernardino da Siena, built to house the remains of the preacher who died in L'Aquila in 1444.

The city's churches are spread around this nucleus and form the distinctive element of the image of L'Aquila, starting with the Basilica of Collemaggio with its unmistakable facade made of pink and white stone.

The National Museum of Abruzzo, housed in the Spanish castle that dates back to the middle of the sixteenth century, also suffered significant and extensive damage, and thus the recovery of its works was set about very quickly. This recovery operation also involved lowering the works using a platform attached to a long, extendable arm.

The works that were recovered belong to a vast collection made up of diverse typologies and objects, ranging from prehistoric artefacts to archaeological ones, from collections of medieval art to more recent examples of 19th-century Abruzzian and modern art. These works were "hospitalised" in the

"laboratory of Celano" at the town's Museum of Prehistoric Archaeology.

Time-consuming, extensive work to examine the state of conservation of the works was carried out in the restoration laboratory. This was followed by prompt intervention and their safe storage, performed by restorers from the *Istituto superiore per la conservazione ed il restauro* (ISCR) in collaboration with the *Opificio delle Pietre Dure* (OPD).

With the exception of the terracotta Madonna from the Basilica of Collemaggio, interventions were performed on works from the Spanish castle with the aim of safely storing the damaged works. These urgent operations were carried out in order to avoid, limit or primarily contain the deterioration progress that was underway, pending subsequent, systematic restoration.

A data logger was also installed in order to monitor the microclimatic parameters of temperature and relative humidity and light intensity, both in the areas appointed for storage, as well as in the area used for interventions.

Interventions performed on the various works (paintings on wood, canvas, terracottas, etc.) include:

- the cataloguing of the work;
- photographic documentation;
- first intervention;
- packaging of the work.

Relevant essential data was set out in an electronic chart: the identification of the work (measurements, museum inventory number if present, *Lega Ambiente* number, etc.), type of work (painting on wood, painting on canvas, polychrome wood sculpture, etc.), type of damage caused by the earthquake (present on the support, preliminary layers, pictorial layers, etc.), the operations carried out to contain the advance of decay and the products used during the intervention. In addition, the chart also contains an overall assessment of the state of conservation, indicating intervention that will be necessary over time.

Each chart is also supplied with photographs of the damage, of the interventions carried out both on the front and on the back, and the image from the *Lega Ambiente* form. If there

was no identification number assigned by the *Lega Ambiente*, a new progressive number would be created with a progressive alphanumeric code of two letters and three numbers: SA (*sisma abruzzo* – Abruzzo earthquake), 001, 002, etc. (e.g. SA 007). Works that have undergone monitoring are tagged on the outside with a red label to enable quick identification of works that have already been inspected and safely stored, as opposed to the numerous other works still awaiting observation and inspection.



1-2. Works recovered in the lab of Celano. © ISCR

Disaster Mitigation to Protect Cultural Heritage: the Case of Cuba

by **Sergio Jorge Pastrana**, Foreign Secretary, Academia de Ciencias de Cuba

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Abstract

The Social Science Research Council/American Council of Learned Societies Working Group on Cuba in collaboration with the Academy of Sciences of Cuba have engaged in joint efforts since 1997, with funds granted by several American foundations and Cuban scientific institutions, to provide a way for Cuban and North-American scientists and scholars to engage in joint activities of research and scientific debate.

The funding was used to conduct workshop sessions that covered preservation of maps, photographs, paper, books and specialized techniques for treatment of archive materials and books. The presenters came from Chile, Costa Rica, Cuba, France, Jamaica, Mexico and the USA, who provided their expertise and knowledge. These collaborative initiatives with their Cuban counterparts, improved the understanding and practical expertise of Cuban practitioners in these areas.

The paper will highlight the role that the following bodies have played in the preservation of Cuba's cultural heritage – the Social Science Research Council/American Council of Learned Societies Working Group on Cuba in collaboration with the Academy of Sciences of Cuba, the Cuban Blue Shield and the most recent development of an Advisory Council against Disasters and Emergencies in the Heritage (CADEP) in 2007. The goals and objectives of CADEP will be presented and a possible course of action for the future.

Disaster Management in Cuba

It is widely known that Cuba has one of the best organized disaster management infrastructure. It is controlled by the Defense National Council and the Civil Defense with their information system linked to the Institute of Meteorology. The region can learn from the Cuban's approach to disaster management. As Ward stressed "at the national level, Cuba's disaster legislation, public education on disasters, meteorological research, early warning systems, effective communication system for disaster, comprehensive emergency plan and Civil Defense structure are important resources in avoiding disasters". Their mandate focuses firstly in protecting public lives, domestic livestock, plantation fields and lastly harvested crops. But like other national Caribbean disaster plans, little provision has been taken regarding the preservation of cultural heritage.

Disaster Management and Cultural Collections

The cultural heritage of Cuba has always been a very high priority for the government as the responsibility of cultural heritage lies with the Ministry of Culture and the Ministry for Science, Technology and Environment (CITMA). The Heritage National Council established Law 1 to protect national heritage. The Board of the National Heritage Council governs the activities for the protection of cultural property. Its responsibilities include the overseeing of museums, sites and monuments, National Conservation, Restoration and Museology Center, and the Cuban Register of Cultural Property. Institutions that hold heritage material have to register them with the Cuban Register of Cultural Property. This law regulates guides and directs actions to protect the nation's cultural heritage. All works of art, artifacts of museums, repositories of the cultural heritage of Cuba, like film archives, records and books in libraries, and materials in archive collections are within their portfolio. Between 1980 and 1991 an extensive program of restructuring old libraries and constructing new ones was undertaken. Like Nimitz, Chepesiuk was also impressed with the number of libraries in Cuba "it seemed that wherever I looked I would find a library".

Although there are many libraries in Cuba, presently the collections in these institutions require, among other things, considerable upgrades in their infrastructure, and technological support for maintenance and continuous care. Before the embargo, the materials and equipment for restoration could be easily acquired. Today the situation is quite different. Not only it is extremely difficult to acquire materials for restoration under the present limitations, but Cuban collections and their curators have been prevented as well of having access to technological developments occurring in those areas in recent years.

Ward reported in her paper on the findings of the state of libraries in Cuba in 1998. These revealed that 75% of libraries needed better conditions for storage, 66% needed better shelving conditions and that 54% of the information in libraries was in poor condition. This situation was exacerbated by the fact that Cuban libraries, like their Caribbean counterparts, have had their fair share of disaster experiences. Disasters in Cuba have been well documented in the *National Atlas of Cuba* and the records of the Institute of Meteorology that can be consulted at www.insmet.cu.

Since the early 1990's a series of very severe hurricanes have affected the island. On March 13, 1993 the City of Havana was affected by the "Storm of the Century". This extra tropical storm surge damaged severely both collections at the library of the "Casa de las Américas" and those in the archives of the Ministry of Foreign Affairs. Though measures were taken to safeguard collections in both institutions and recover damages, both were flooded again by the storm surge of Hurricane Wilma twelve years later, and even if the worst was avoided by better preparations, those collections suffered again some kind of damage. These are just some of the unforeseen emergency situations experienced by cultural collections in Cuba. It is against this background that the Cuban managerial experience in general disaster management is now being extended to libraries, archives, museums and cultural institutions, to equally minimize the loss of the cultural heritage brought about by disasters.

Information professionals have also devised strategies to alleviate this situation. These include stockpiling of supplies, sharing supplies across institutions, closed stack control, digitization of material, and the development of a new breed of preservation librarians. The present cadre of Preservation Librarians was chosen from varied backgrounds such as biology, chemistry and microbiology, giving a scientific character to the profession. The focus is now on specialized training on preservation and restoration of documents. This has been achieved through scholarships abroad, nationals attending international conferences and seminars, or visits of specialist in disaster management to Cuba.

The work of the Social Science Research Council

The recent impact of climate change and the current state of the institutions in Cuba is one reason for the series of workshops that has been organized by the Social Science Research Council/American Council of Learned Societies Working Group on Cuba in collaboration with the Academy of Sciences of Cuba. These organizations started collaborative efforts in 1997, with funds granted by several American foundations

and Cuban scientific institutions, to provide a way for Cuban and North-American scientists and scholars to engage in joint activities of research and scientific debate. Over ten years numerous projects have been funded. Although the funding has been minimal (the projects have not been extremely ambitious), results achieved have been significant in several cases. They have showcased the opportunities for increased scientific exchange, and results achieved have been important to document and compare research that had been done by groups who formerly would have been working in isolation.

With funds granted by the Ford Foundation since 2000, the Working Group launched an initiative on Archives and Libraries directed at supporting the preservation of important collections that constitute a basic resource for future research in Cuba. The National Archives, the National Library and networks of other libraries and archives in the country were involved in different activities, the most significant of which were devoted to the training of trainers. These trainers could then replicate the experiences and lessons learned at those workshops throughout the Cuban provinces.

By 2006, the Initiative gained momentum and the major players began to focus on the importance of the disaster preparedness to protect the cultural heritage in Cuba, focusing less on documents and more on collections. As a result, a series of workshops was designed that incorporated the knowledge of archivists, librarians, the authorities of civil defense, academia, technical personnel and experts. The main objective was to discuss current disaster preparedness issues and proposed activities to enhance the response to increased natural hazards in the preservation of cultural materials. The workshop sessions covered preservation of maps, photographs, paper, books and specialized techniques for treatment of archival materials and books. The presenters, who provided their expertise and knowledge, came from Chile, Costa Rica, Cuba, France, Jamaica, Mexico and the USA. These collaborative initiatives with their Cuban counterparts have greatly improved the understanding and practical expertise of Cuban practitioners in those areas. To date workshops have been held in Havana, Matanzas, Ciego de Avila and the final one will be held in Santiago de Cuba in early 2010.



1-2. Participants salvaging material at a workshop held in Cuba.



The way forward

Cuba is now poised to be the leader in the region for developing national plans for cultural heritage. CADEP has now developed short, medium and long term activities to ensure sustainability. It is hoped that eventually the committee will be able to achieve some, if not all, of its objectives. The main aim will be to include input from all the entities to develop some common methodology to alleviate risks. The first task will be to identify the risk and common vulnerabilities, and then to go on to provide possible solutions.

A national survey on the training needs for persons working in cultural heritage was undertaken to ascertain the focus of the proposed workshops. Training will be given the highest priority through the development of a training of trainers programme for persons in the provinces. The trainers will be selected from a team of specialists in chemistry, microbiology, art, restoration and conservation, fires, computer science and meteorology. Curriculum for the workshops will be developed stressing practical exercises.

Out of those training activities a database will be developed that will document the human resources available in Cuba for restoration, preservation, book binding, and conservation of all cultural collections. This tool will be a useful resource before, during and after any disastrous event.

Visibility of the goals and objectives of the committee will be widely publicized through the media and the Red Cross. Other

avenues for publicity will be through the web pages of the national networks, CLAMED, BINANET (this is a website, that was made by the National Library of Cuba to publish up to date information on the public library system), the Network of Sciences, the Cuban Academy of Sciences and the web page of the Heritage National Council, and other regional and international networks such as the Social Sciences Research Council, the Association of Caribbean University Research and Institutional Libraries (ACURIL), the Caribbean Disaster Information Network (CARDIN), the Caribbean Disaster Emergency Response Agency (CDERA), the Caribbean Regional Branch of the International Council on Archives (CARBICA) and the International Federation of Library Associations and Institutions (IFLA).

Another important activity will be to organize groups of volunteers in local communities to assist in emergency situations. These persons will be trained in handling of cultural collections, and be willing to assist whenever the need arises.

The creation and further strengthening of CADEP with the guidance of the International Committee of the Blue Shield will guarantee a sound approach to the preservation of Cuba's cultural heritage. We thank our funding agencies and we sincerely hope that with their continued financial support we can proceed to achieve our goals. Secured funding will ensure that collaborative efforts at the national level will materialize into a model that can be introduced and replicated throughout Central America and the wider Caribbean, to highlight problems within the region and to provide possible solutions to preserve our historical memory.

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Mitigación de desastres para proteger el patrimonio cultural: el caso cubano

El Social Science Research Council/American Council of Learned Societies Working Group on Cuba en colaboración con la Academia de Ciencias de Cuba han aunado esfuerzos desde 1997, con el financiamiento de varias fundaciones estadounidenses e instituciones científicas cubanas, a fin de brindar una medio para que los científicos y académicos cubanos y estadounidenses lleven a cabo actividades de investigación y debates científicos conjuntos.

El financiamiento se empleó en realizar sesiones de taller para discutir el tema de la preparación actual para atender desastres y proponer actividades para mejorar la respuesta ante el aumento de los riesgos naturales en la preservación de los materiales culturales. Las sesiones del taller abarcaron la preservación de mapas, fotografías, papel, libros y técnicas especializadas para el tratamiento de materiales de archivo y libros. Los presentadores, quienes aportaron su experticia y conocimiento, provenían de Chile, Costa Rica, Cuba, Francia, Jamaica, México y los Estados Unidos. A la fecha se han realizado en La Habana, Matanzas, Ciego de Ávila y el último tendrá lugar en Santiago de Cuba a comienzos de 2010.

Uno de los resultados de estos talleres fue instituir un comité local del Escudo Azul en Cuba en 2005. La Biblioteca Nacional de Cuba – Biblioteca Nacional José Martí (BNJM) fue seleccionada como el punto focal.

La idea de mayores esfuerzos de colaboración dio lugar al desarrollo de un Consejo Asesor contra Desastres y Emergencias en el Patrimonio (CADEP) en 2007. Este grupo incluyó representantes de la Biblioteca Nacional José Martí, los Archivos Nacionales de Cuba, el Consejo de Patrimonio Nacional, el Instituto de Historia de Cuba, el Instituto de Literatura y Lingüística, el Centro Nacional de Conservación, Restauración y Museología, la Oficina de Asuntos Históricos del Consejo de Estado, la Oficina del Historiador de la Ciudad de La Habana, la Defensa Civil Nacional, el Instituto de Meteorología, el Departamento de Bomberos, el Centro Latinoamericano para la Medicina de Desastres (CLAMED) con sede en Cuba, pero que también tiene una membresía en la Red de Información de Desastres del Caribe (CARNIN), así como otras instituciones que poseen colecciones culturales. El enfoque coordinado para el manejo de desastres es un objetivo común de todos los participantes, a través de la creación de una red nacional de profesionales de la información sobre la mitigación de riesgos para aliviar cualquier situación catastrófica sobre el patrimonio cultural de la nación. Los objetivos específicos son los siguientes:

- Integrar los enfoques de la preservación con las políticas de patrimonio cultural desarrolladas por la Defensa Civil;
- Establecer una estrategia nacional sobre el manejo de riesgos aplicable especialmente al patrimonio cultural;
- Establecer un equipo nacional de expertos en preservación y salvamento del patrimonio cultural;
- Crear un canal informativo asesor sobre la identificación de los riesgos y vulnerabilidades, prevención, respuesta y recuperación del Patrimonio Documental ante situaciones de desastre;
- Asegurar que se le dé prioridad nacional y local al manejo de riesgos entre las instituciones culturales usando la metodología establecida;
- Colaborar con las redes regionales e internacionales afines.

Cuba es actualmente el líder de la región en el desarrollo de planes nacionales para el patrimonio cultural. El CADEP ha desarrollado actividades de corto, mediano y largo plazo para asegurar la sostenibilidad. La capacitación constituye la principal prioridad mediante el desarrollo de un programa de capacitación para capacitadores para las provincias. Además, se desarrollará una base de datos que documentará los recursos humanos disponibles en Cuba en las áreas de la restauración, preservación, encuadernación y conservación de todas las colecciones culturales. Esta herramienta constituirá un recurso de utilidad antes, durante y después de que se produzca un desastre. Otra actividad importante será la organización de grupos de voluntarios en las comunidades locales que presten asistencia en situaciones de emergencia. Estas personas recibirán entrenamiento en la manipulación de colecciones culturales y estarán a la disposición de ayudar siempre que sea necesario.

La creación y posterior fortalecimiento del CADEP con la orientación del Comité Internacional del Escudo Azul garantizará un abordaje sólido de la preservación del patrimonio cultura de Cuba. El financiamiento garantizado asegurará que los esfuerzos de cooperación a escala nacional se materialicen en un modelo que pueda llevarse y replicarse en Centroamérica y el resto del Caribe, a fin de detectar los problemas de la región y ofrecer posibles soluciones para preservar nuestra memoria histórica.

Fire and Ice Revisited: A Comparison of Two Soot Removal Techniques for Book

by **Randy Silverman**, Preservation Librarian at the University of Utah's Marriott Library in Salt Lake City,
and
Seth Irwin, Helen Ohrenschaal Intern at John's Hopkins University's paper conservation laboratory

*"What more miraculous thing may be told
that fire, which all thing melts, should harden ice:
and ice which is congealed with senseless cold,
should kindle fire by wonderful device?"*

— *From Sonnet 30 (Fire And Ice)*
by *Edmund Spenser*

Introduction

As described previously in this journal¹, one of the authors (Randy Silverman) employed an experimental cleaning technique called "dry ice dusting" to remove residual soot from the surface of unique and irreplaceable smoke-damaged ledger books in 2006 following a fire in the Sevier County Records Office in Richfield, Utah, USA. Visual observation suggested the technique was extremely effective at removing the soot and minimizing residual smoke odor, but immediate action was needed and scientific analysis of the process was impossible to undertake at that time due to the exigency of the situation.

To address the concern that surface abrasion may occur when dry ice dusting is used to remove soot from bound library material, Seth Irwin began a collaboration with Mr. Silverman in 2008 to revisit the issue. A research project was designed to compare dry ice dusting with conventional dry rubber sponge cleaning in fulfillment of Mr. Irwin's master's thesis in the art conservation program at Queen's University in Kingston (Ontario, Canada)². The study measured post-cleaning alterations in surface color to quantify the effectiveness of both approaches, as well as documented the degree of physical damage caused by either approach.

The Problem with Soot

Soot is a black particulate byproduct created by the incomplete combustion of hydrocarbons. Because structural fires contain a wide range of fuel sources, such as wood, synthetic construction materials, carpet, plastics, and fabrics, the resultant tars, carbon, gases, and ash can differ widely in their chemical makeup from fire to fire. Soot's powdery, greasy, residue perniciously penetrates the interstices of organic materials because of its extremely fine size – generally one micron in diameter – making it difficult to thoroughly remove from all

but the smoothest, planar surfaces. Further complicating its removal, soot deposits become more intractable over time as the compounds chemically cross-link with surrounding materials. Significant delays can make the task all but impossible, causing post fire soot removal from collections a time-sensitive recovery process³.

While the percentage of North American collecting institutions that have installed fire suppression systems during the past thirty years has dramatically increased, this situation may also increase the potential risk of smoke damage to collections. When a building fire occurs in a sprinklered library or archive, no more than three sprinkler heads are generally required to extinguish the blaze. However, even minor, uncontrolled, indoor combustion will invariably distribute smoke throughout a building that is not equipped with dedicated smoke exhaust fans, suggesting that reductions in building-level losses may inadvertently step up the number of collection related soot removal incidents to come.

Research related to the recovery options for soot-damaged library collections is sparse⁴. Technical options currently include laser cleaning, rubber sponge wiping, and dry ice misting. When dealing with library or archives collections, only the latter two techniques are viable as laser cleaning is far too expensive and time-consuming to be considered for large quantities of material. Further, the post-fire cleaning process is frequently sublet to a commercial vendor because of the labor intensive nature of the work. An outcome of our research was to characterize standard procedures for thorough, non-damaging soot removal using rubber sponges so these could be communicated to non-conservators in contractual terms.

Soot Removal Options for Libraries

Natural Rubber Sponge

Currently, the typical approach for commercial disaster recovery firms in the U.S. is to instruct their employees to remove soot from library materials by wiping the book's surface with a natural rubber sponge⁵. Tar-like soot particles adhere to the sponge's rubbery exterior as it moves across the soot-covered material. As the sponge's surface becomes dirty, it tends to smear rather than attract fresh soot, so the sponge is rotated or split to expose a clean, unused surface.

Some uncertainty about the true chemical makeup of soot removal sponges has always accompanied their use. Consequently, in 1992, Elizabeth Moffatt of the Canadian Conservation Institute conducted an analysis of two vulcanized natural rubber sponges to determine their constituent makeup. She concluded their composition was very similar to other rubber eraser products. At this time, Ms. Moffatt suggested the abrasive nature of rubber sponges could pose a concern when applied to fragile materials⁶. Further, it has long been observed that these sponges have difficulty conforming to compact, non-linear book surfaces such as headcaps, turn-ins, and gaps between pages.

Dry Ice Dusting

Dry ice dusting is a newer technology that has been successfully used in a variety of applications for more than a decade but, to the best of our knowledge, was not applied to soot removal for book material before 2006. In an industrial setting the technique has proven extremely effective for cleaning electrical equipment and high-tech machinery – the action is rapid, thorough, nonaqueous and produces no secondary waste. It has been applied to mold remediation in buildings because the mist can be directed into narrow, difficult-to-reach spaces such as the crevasses in attic or inner-walls. Dry ice misting has been used to non-abrasively remove lead-based over-paint from decorative cast iron railings⁷ or graffiti from outdoor sculptures. However, it can also be aggressively applied to striping soft wood from between harder grain to ‘antique’ wooden paneling, demonstrating its known capacity to abrade surfaces.

The dry ice dusting process involves grinding blocks of dry ice (frozen carbon dioxide [CO₂]) into tiny granules ranging in size from approximately the dimension of rice to the size of sugar crystals. The extremely cold, dry ice particles are gently sprayed through a nozzle at low force (30 pounds per square inch [psi]) causing the surface soot to freeze upon contact. At atmospheric pressure, dry ice sublimates (converts directly to a gas) at -78.5° C (-109.3° F), such that the sublimation process combined with low-velocity air pressure causes the frozen, shrunken, brittle soot particles to be preferentially dislodged from the book’s surface and fall to the floor, while the CO₂ crystals simply dissipate as gas. An advantage of operating between a solid and a gas state is the dry ice mist easily penetrates non-linear contours.

Experimental

Sample Set

Actual books were used as subjects for this testing to ensure the research results are relevant to practitioners facing actual soot remediation problems in library book collections. The sample set included four categories of nineteenth and twentieth century bookbindings chosen to represent typical library

holdings. These included five leather bindings (sheep and calf), five books covered in open-weave book cloth, five books covered in tight-weave book cloth, and five paper bindings (both limp wrappers and paper cases).

Sample Preparation

Each book was photographed and coded with an identification label to ensure accurate visual recognition throughout the process. For comparison, each book was cut in half (spine-to-fore-edge) yielding forty half-books. Half of each book was cleaned by dry ice misting while the other half was cleaned by sponge. To clearly characterize each cleaning system’s abrasiveness, three controls (one-centimeter square) were removed from each book’s back cover. These controls were not exposed to soot but were instead glued to one of three cardstock mounts. One set of controls was cleaned with dry ice misting, a second set by rubber sponge, and the third set remained untouched for reference.

Test Protocol

All analytical work was generously contributed to the project by two laboratories. Colorimetry – which measures changes in surface color and was used to define the amount of soot deposited on the book’s surface to characterize the efficiency of each cleaning system – was carried out by Nancy Binnie at the Canadian Conservation Institute (CCI) using a Minolta colorimeter⁸. Topographic scanning – used to quantify abrasion – was conducted by Chris Pelow at Novelis Global Technology Centre using a Solarius laser profilometer⁹.

Design of a soot deposition process that replicated authentic fire conditions was masterminded by Canada’s National Research Council Nation Fire Laboratory, the facility responsible for all fire testing in Canada¹⁰. Two consecutive fires were set – one fueled with a burning sofa, the second, a blazing mattress – within a room specifically fabricated for the test. Smoke was sucked through a massive fume hood and pulled through approximately 100 feet (30 meters) of duct work to a room where books could be exposed to soot but not heat. The subjects were suspended above the floor in Ethafoam end-caps to ensure equal air passage – and therefore soot dispersion – on both covers. The aerodynamics of a building undergoing combustion were simulated with exhaust fans in the soot evacuation room so the sample books were covered with open mesh chicken wire to prevent movement as a result of ventilation.



1. Two consecutive fires maximized smoke exposure to the samples; pictured here, a blazing mattress.
© Alex Bwalya for NRC National Fire Laboratory

Following the fire, the subjects and their end-caps were bagged to prevent soot compaction or subsequent contamination of the surface during handling. Samples were transported back to CCI for post-fire colorimetry to document surface color change caused by soot deposition. The identical half-books were then divided into two groups for cleaning.

Twenty half-books remained at Queen's University (Kingston, Ontario, Canada) where Mr. Irwin employed a cleaning protocol approximating what might be used by a commercial disaster recovery company. Applying even pressure, each bookbinding was sponge-wiped (as opposed to patted) until the soot residue was no longer observable but before the cleaning caused surface abrasion. Samples of open-weave and tight-weave book cloth received 40 wipes; paper-covered bindings underwent 20 wipes; and leather bindings received 10 wipes. One set of control cards was also cleaned by wiping.

The other group of 20 half-books and its set of control cards was carefully packed and shipped to the University of Utah's Marriot Library where Mr. Silverman worked with Randell Heath, owner of Coldsweep, Inc., the firm that cleaned the record books following the Sevier County Records Office fire in 2006¹¹. The dry ice machine used for this project was an Alpheus model T-2¹². Because of the fragility of the material being cleaned, dry ice misting was delivered to the book's surface at 30 psi. Each book required only a matter of seconds of dusting to clean. The machine consumed approximately one-quarter pound (one-half kilogram) of dry ice per minute, necessitating reloading approximately every forty-five minutes.

Once the second set of samples was cleaned, they were mailed back to the Novelis Global Technology Centre for a final round of surface topographic imaging. Using polyester



2. Soot removal using a bit of rubber sponge, pulling the sponge evenly across the tight-weave book cloth surface until no further soot was observed on the sponge.
© Seth Irwin



3. Block of dry ice loaded into an Alpheus Precision Series TM Model T-2 manufactured by Cold Jet, Inc.
© Randy Silverman

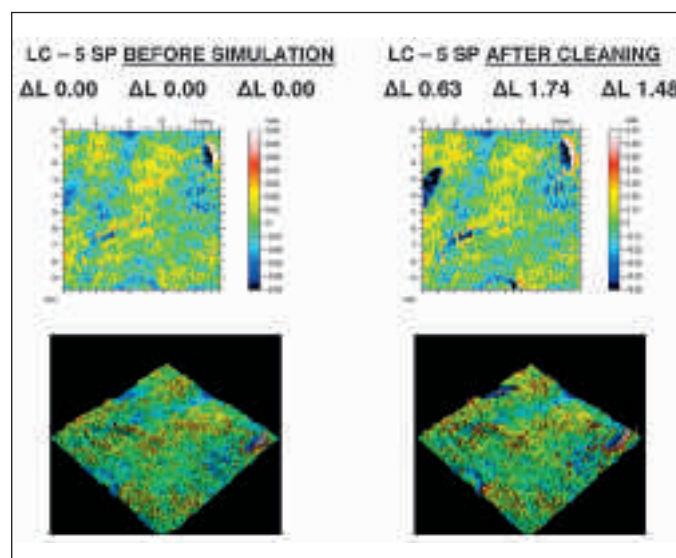


4. Randell Heath, owner of Coldsweep, Inc., cleaning a test book with dry ice misting in Mountain Green, Utah, USA.
© Randy Silverman

templates, Chris Pelow (Supervisor of Surface Metrology Lab) re-scanned each sample at the original location of the first topographic scan, followed by a final colorimetric reading at CCI conducted by Nancy Binnie (Conservation Scientist).

Criteria for Measuring Cleaning vs. Abrasion

As mentioned above, colorimetry was used to measure the amount of soot deposited on the surface of the books after the controlled fire, as well as the amount of soot removed by each cleaning system. In order to quantify the specification of colors, the CIE 1976 (L^* a^* b^*) color space system was used which organizes color perceptions in terms of a three-dimensional space¹³. The L^* -axis is known as the lightness and extends from 0 (black) to 100 (white). The other two coordinates, a^* and b^* , represent redness-greenness and yellowness-blueness



5. Surface topographic scans before a leather covered book was exposed to soot deposition (left) after the surface was cleaned with a rubber sponge (right). Top images are the raw output of the Solaris Profilometer; bottom images are the data run through 'mountains map' software. Note increased pitting and decrease peak height following cleaning, indicating surface disruption.
© Chris Pelow

respectively, allowing the user to take a numerical reading and plot it in a three dimensional color space. In this color space system, the a^* and b^* readings correspond to changes in color and are placed on the horizontal axis of the graph, with the L^* values correspond to changes in light and dark and falling on the vertical axis. Using the formulas, $L = L_{\text{post-fire}} - L_{\text{pre-fire}}$ and $L = L_{\text{post-cleaning}} - L_{\text{pre-fire}}$, the colorimetric data was evaluated using the standard methodology that says that changes in colorimetric values greater than 1.00 are generally considered visible to the human eye.

For this project, the a^* and b^* values were disregarded due to the inherent nature of soot which is primary composed of carbon black. This allowed all recorded values to be plotted only on the vertical L^* -axis of the graph. When the values of each sample were placed alongside the topographic scans of the same sample, a connection was observed between changes in surface topography and changes in the lightness and darkness of each sample. As the changes in the surface topography became greater so did changes in the L^* values. The greater the change in L^* value, the greater the change in the surface texture. Samples that had changes in L^* values that were greater than 1.00 exhibited 'visible' changes in surface texture that could be seen without magnification.

Using topographic scans and colorimetric values, it was possible to use changes in L^* values alone to measure the difference between adequate soot removal and abrasion. Values below 0.00 indicated that residual soot remained on the surface of the sample but that no change in surface texture had occurred. Values between 0.00 and 0.60 denoted all soot had been removed from the sample and there was little or no visible change in surface texture. Values from 0.60 to 1.00 suggested complete soot removal but with a possible change in surface texture visible under magnification. And finally, values above 1.00 signified the complete removal of all soot residue accompanied by a change in surface texture likely visible to the human eye.

Findings

Data from the 20 books tested indicate that dry ice dusting was less abrasive than rubber sponge cleaning. In four of the 20 books examined, cleaning with a rubber sponge caused significant abrasion, while an additional six books exhibited minor surface damage. Conversely, dry ice dusting resulted in minimal abrasion to only two books.

Discussion

As with any cleaning procedure, the skill and experience of the practitioners involved played a key role in the study's outcome, as either technique could prove damaging if carelessly applied. While both sponge cleaning and dry ice dusting were shown to be capable of removing surface soot, the diverse

condition of the aged bookbinding materials variously affected the success of the operation. Nineteenth and twentieth century leather bindings proving the most friable covering material to clean, followed by paper bindings, with all types of book cloth proving the most durable substrate and, therefore, the least likely to suffer abrasion when cleaned.

The question as to which technique should be employed following an actual library fire may require further consideration on a case by case basis. It should also be recognized that for the sake of uniform data collection for this study only flat book cover surfaces were sampled, a condition for which rubber sponge cleaning is well suited. No sampling occurred in non-linear, three-dimensional book components (e.g., joints, head-caps, turn-ins, or page edges) that exist in real books where dry ice misting proves a superior technique because of its amorphous nature. Another criterion unaddressed in this study includes cost variability which could be impacted, for example, by cleaning book edges in large batches with dry ice while the volumes are held firmly in a vice.

Smoke damage occurring in large libraries, archives, or record centers tends to involve vast numbers of books. Accordingly, post-fire collection cleanup may, in the end, be delegated to a contractor unfamiliar with conservation concerns. If this is the case, it is recommended the institution set out contractual criteria to define what constitutes an acceptable level of cleanliness as well as surface abrasion, and that independent inspections be employed to spot check the work in progress. Benchmarks for thorough sponge cleaning as developed for this study (e.g., 40 wipes for all types of book cloth, 20 wipes for paper bindings, and 10 wipes for leather bindings) may prove useful. It may also help to stipulate that practitioners replace dirty sponges frequently as the black color change in the sponge, rather than a color shift in the book's surface, should be the indicator used for defining adequate cleaning.

While avoiding having outer layers of the binding scoured away through overly vigorous scouring, the opposite extreme, where practitioners 'play it safe' by limiting sponge cleaning to four broad swipes of each board surfaces before racing on to the next book, will leave behind a significant amount of soot residue. While likely non-damaging, this approach will result in the collection indefinitely smelling of smoke. As a consequence of this outcome a commercial recovery firm is likely to recommend a followup course of deodorization that will add to the total costs. Most critically, exposure to ozone or industrial deodorizers is not recommended for permanent retention collections¹⁴. Thorough soot removal must include painstaking attention to cleaning every component of the book's structure – joints, head-caps, turn-ins, and page edges.

Finally, a word of caution seems justified. Dry ice misting represents a straightforward technique best handled by experienced professionals. The process holds exceptional promise for quick, effective cleaning as it conforms to non-linear surfaces as readily as to flat ones and can be non-damaging. The

caveat to dry ice misting is that an inexperienced operator can easily remove microscopic layers of binding media undetected so, as with rubber sponge cleaning, use of this technique should be carefully monitored.

Randy Silverman is the Preservation Librarian at the University of Utah's Marriott Library in Salt Lake City, Utah, USA. He has worked in the field of book conservation for 30 years and holds a Masters degree in Library Science. He teaches Preservation as adjunct faculty for Emporia State University and the University of Arizona. He was a consultant on the Colorado State University Library flood in 1997 that damaged 425,000 books, and was with one of the first conservation teams to reach Mississippi following Hurricane Katrina in 2005. In 2007 he received the Utah Humanities Council's "Humanities Award".

Seth Irwin received a Bachelors of Fine Art Degree in Photography from Pratt Institute in Brooklyn, New York in 2001. Since then he has conducted internships at the American Museum of Natural History, the Brooklyn Museum of Art, and the Paul Strand Archive. In 2009 he received a Master's Degree in Art Conservation from Queen's University, Ontario. This project comprises his master's thesis. He is currently the Helen Ohrenschall Intern at John's Hopkins University's paper conservation lab. His primary interest and background is in the conservation of photographic materials and books.

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<http://archive.ifla.org/VI/4/news/ipnn39.pdf>

2. Mr. Irwin would like to thank his academic adviser throughout the entire project, John O'Neill, Professor of Paper Conservation and Acting Dept. Chair, and his science advisers for the project Marilyn Laver, Robert Waller, and H. F. Gus Shervell, Master's Program in Art Conservation, Queen's University, Kingston, Ontario, Canada.

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5. Conversation with Kirk Lively, Director of Technical Services, Belfor USA, 2425 Blue Smoke Court South, Fort Worth, TX 76105, USA; tel. 817- 535-6793; email kirk@us.belfor.com; website < <http://www.belforusa.com> >. Vulcanized natural rubber sponges are produced by Absorene Manufacturing Company (St Louis Missouri, USA) <<http://www.absorene.com/index.html>>, and Gonzo Corporation (the Gonzo Wonder Sponge) <<http://www.gonzocorp.com/contact.aspx>>.

6. Moffatt, Elizabeth, "Analysis of 'chemical sponges' used by the commercial fire cleanup industry to remove soot from various surfaces", *IIC-CG Bulletin* 17 (3) (1992): 9-10. Fourier transform infrared spectroscopy – FTIR – analysis conducted within the current research confirmed that the Gonzo Wonder Sponge has the same chemical makeup as a common rubber band.

7. Lead-based paint removal from the decorative railing of the Senate Chambers, Utah State Capitol, Salt Lake City, Utah, USA, is described in the following website, recovered from the World Wide Web 28 October 2009: <http://www.coldsweep.com/projects/historic-disaster/>

8. Grateful appreciation is extended to Nancy Binnie, Conservation Scientist at the Canadian Conservation Institute (Ottawa, Canada) for assisting in conducting approximately 1,800 colorimetry readings on a Minolta colorimeter and analyzing the data.

9. Grateful appreciation is offered to Chris Pelow, Supervisor of the Surface Metrology Lab, Novelis Global Technology Centre (Kingston, Ontario Canada) who conducted surface topographic scanning of the books.

10. Sincere thanks to facilities scientists Eric Gibbs and Alex Belaya, Ph.D., of the National Research Council Fire Research Program, National Fire Laboratory (Almonte, Ontario, Canada), for conducting the controlled fire to smoke damage sample books for this study.

11. Heartfelt gratitude to Randell Heath, Coldsweep, Inc. (Mountain Green, Utah, USA; <http://coldsweep.com/>) for providing dry ice misting and technical insights about CO2 cleaning throughout this project.

12. The dry ice blasting machine used was the Alpheus Precision Series TM Model T-2 manufactured by Cold Jet, Inc. <http://www.coldjet.com/en/information/>. This machine is quite mobile, measuring 14 in. × 22 in. × 20 in. (35.56 cm. × 55.88 cm. × 50.80; W × L × H) and weighing 110 lbs. (50 kg). It stores 12 lbs. (5.4 kg) of block dry ice, and produces a blast pressure range of 30 psi - 120 psi (2.1 bar - 8.3 bar).

13. A useful explanation of Lab color space can be found in Wikipedia, retrieved from the World Wide Web 28 October 2009: http://en.wikipedia.org/wiki/Lab_color_space.

14. The potential for ozone to damage cultural property is well documented in the conservation literature. See for example: Cass, Glen R., W. W. Nazaroff, C. Tiller, and Paul M. Whitmore, "Protection of works of art from damage due to atmospheric ozone", *Atmospheric Environment* 25 (1991): 441-51; Drisko, K., Glen R. Cass, Paul M. Whitmore, and James R. Druzik, "Fading of artists' pigments due to atmospheric ozone", in *Wiener berichte über naturwissenschaft in der kunst*, vol. 2-3, Eds. A. Vendl, B. Pichler, and J. Weber, Vienna: Verlag ORAC (1986): 66-87; Grosjean, D., Paul M. Whitmore, C. P. De Moor, Glen R. Cass, and James R. Druzik, "Fading of alizarin and related artists' pigments by atmospheric ozone: reaction products and mechanisms", *Environmental Science and Technology* 21 (1987): 635-43; Grosjean, D., Paul M. Whitmore, and Glen R. Cass, "Ozone fading of natural organic colorants: mechanisms and products of reaction of ozone with indigos", *Environmental Science and Technology* 22 (1988): 292-98; Grosjean, D., Paul M. Whitmore, C. P. De Moor, Glen R. Cass, and James R. Druzik, "Ozone fading of organic colorants: products and mechanism of the reaction of ozone with curcumin", *Environmental Science and Technology* 22 (1988): 1357-61; Salvin, V. S., "Ozone fading of dyes", *Textile Chemist and Colorist* 1 (1969): 245-51; Whitmore, Paul M., Glen R. Cass, and James R. Druzik, "Ozone fading of traditional natural organic colorants on paper", *Journal of the American Institute for Conservation* 26 (1) (1987): 45-58; Whitmore, Paul M., and Glen R. Cass, "The ozone fading of traditional Japanese colorants", *Studies in Conservation* 33 (1988): 29-40; and, Ye, Yun, Lynn G. Salmon, and Glen R. Cass, "The ozone fading of traditional Chinese plant dyes", *Journal of the American Institute for Conservation* 39 (2) (2000): 245-257. A new technology, hydroxyl generation, may provide a non-damaging alternative to exposure to ozone or industrial deodorizers, but independent testing on this technology is currently unavailable.

News

British Library Preservation Advisory Centre

The British Library Preservation Advisory Centre is the new name for the National Preservation Office (NPO). Created in 2009 as a result of the integration of the NPO with the British Library Collection Care department, the Preservation Advisory Centre will build on the preservation services offered by the NPO including the popular training programme, free information booklets and the Preservation Assessment Survey. It will continue to support libraries and archives of all sizes and types and raise awareness of preservation issues. **Caroline Peach** has been appointed to lead the organisation in its new form.

News from LIBER

The LIBER association has been restructured (see at: <http://www.libereurope.eu>). **The new LIBER Working Group for Preservation** has been constituted. We are pleased to note that several members of the group are also working in IFLA Sections.

Christiane Baryla (BnF, Paris), IFLA PAC
Frédéric Blin (BNUS, Strasbourg),
IFLA P&C Section
Majlis Bremer-Laamanen (NL Finland),
IFLA Newspapers Section

Other members are: Dennis Schouten (Project Manager World War 2 Heritage Programme), Chair; Eva Wuyts (Coordinator Vlaamse Erfgoedbibliotheek), Secretary; Els van Eijck van Heslinga (KB, The Hague); Mari Siiner (NL Estonia); Stefan Strathmann (SUB Göttingen); Dr Giuseppina Vullo (HATII, Glasgow). And our friend Ingeborg Verheul (IFLA Headquarters) will work as Advisory for the group.



World Library and Information Congress: 76th IFLA General Conference and Assembly

"Open access to knowledge -
promoting sustainable progress"
10-15 August 2010, Gothenburg, Sweden

Publications

L'Archivage numérique à long terme. Les débuts de la maturité ?

par Françoise Banat-Berger,
Laurent Duploux et Claude Huc

Paris, Direction des Archives de France/
la Documentation française, 2009, 288 p.
ISBN : 978-2-11-006942-9
Prix de vente : 25 euros

Cet ouvrage est le premier en France à être consacré à cet enjeu crucial qu'est la conservation durable de l'information numérique. Désormais omniprésente, l'information numérique est infiniment plus fragile que le papier. Si nous ne voulons pas la voir disparaître sous nos yeux, nous devons impérativement mettre en œuvre des solutions adaptées à sa pérennisation. C'est en ce sens que milite ce manuel destiné à un large lectorat, dans le secteur public comme dans le secteur privé.



Translations

The Regional PAC centre for Korea translated IPI no. 1, *IFLA Principles for the Care and Handling of Library Material*. Compiled and edited by Edward P. Adcock with the assistance of Marie-Thérèse Varlamoff and Virginie Kremp. Paris: IFLA PAC, Washington DR: CLIR, 1998.

The Regional PAC centre for China translated eleven papers from IPN no. 42, 44 and 45 into Chinese.

Events and Training

Announcements

ECA 2010, 8th European Conference on Digital Archiving, 28-30 April 2010, Geneva, Switzerland

The 8th European Conference on Digital Archiving will be held in Geneva from 28-30 April 2010. It will follow in the footsteps of the European Conferences on Archives of recent decades. By emphasizing digital elements and archiving as a function instead of the archive as an institution, however, it aims to take a new approach. The future will be digital, but we want to preserve the analogue tradition: the archive of the future must be a safe place for the analogue and digital traces of the past – this is our responsibility.

All the information related
to the registration and programme
is available on line at:

<http://www.bar.admin.ch/eca2010/index.html?lang=en>

IFLA International Newspaper Conference 2010, 25-28 February 2010, New Delhi, India

Indira Gandhi National Centre for the Arts (IGNCA) in collaboration with IFLA Newspaper Section is organizing the IFLA International Newspaper Conference 2010 at IGNCA, New Delhi, India from 26th February to 28th February, 2010.

Theme: Digital Preservation and Access to
news and views

Libraries over the world are facing the dual challenges of preserving the printed newspapers as part of the culture of countries, and responding to the changes that new technologies bring on to managing both printed and online (born digital) newspapers. Rapid advancements of digital technologies affect the various aspects relating to newspapers in libraries and archives such as acquisition, collection development, access, storage, preservation of newspapers and their contents, and interlibrary lending. The purpose of this conference aims not only at the sharing of collective knowledge about how libraries can tackle these challenges but also to open up opportunities for libraries, librarians and associated industry players to interact with one another and work out suitable partnerships

that will help to improve the provision of newspaper services at libraries.

More details regarding the conference can be obtained from the conference web site: <http://www.ignca.nic.in/ifla2010/ifla2010.htm>

Registration fees before the 15th February 2010: 50 euros

Reports

IFLA Preservation and Conservation Satellite meeting, Istituto Centrale per il Restauro e la Conservazione del Patrimonio Archivistico e Librario (ICPAL), 30 August-2 September 2009, Rome, Italy

Cosponsored by IFLA-PAC and P&C Section

Extremely well organized by **ICPAL** in its beautiful premises and gardens, the meeting offered the opportunity to visit some wonderful libraries in Rome: the Library of the Accademia Nazionale dei Lincei e Corsiniana and the Insula Sapiientiae with 3 libraries: Biblioteca Casanatense, Biblioteca del Senato della Repubblica e Biblioteca della Camera dei Deputati.

The conference was a success with more than 110 attendees. I would like to thank warmly 2 companies for their financial sponsoring: Zeutschel and Treventus Mechatronics.

The first day, dedicated to **traditional preservation**, gave the floor to the **Vatican Library**. We were very honored with the presence of its Prefect, Monsignore Pasini and Vice Prefect Ambroggio Piazzoni. His Eminence Cardinal Rafeale Farina attended the conference. It was great to be informed of the huge works in progress in the Vatican Library and of the outcome scheduled in 2010. The presentations of the Reproduction and Photographic laboratories with many pictures were appreciated.

The same day, Armida Batori, Head of **ICPAL**, and her staff showed the numerous activities and projects of the Institute.

The second day, dedicated to **Robot digitization and preservation in museums and libraries** was followed with enthusiasm by the attendees. A big success also for the presentation of several machines from Zeutschel, Treventus and Kirtas. The communications made by Librarians (Philippe Vallas and Irmhild Schäfer) and Engineers (Joerg Vögler, Stephan Tratter and Nicola Rossi) mixed usefully different points of view. One of my conclusions is that this special issue needs to be followed up by other seminars and we hope to be able to organize one in Paris.

The full program and the presentations are online at:

<http://www.ifla.org/en/news/preservation-and-conservation-satellite-conference-rome-2009-proceedings-now-on-line>

If necessary, more questions or information may be asked to the PAC programme or directly to the speakers.

IFLA-PAC Cycle "Preservation and the four elements", 2nd conference: "Water Impact on Library, Archival and Museum Materials", 29-31 October 2009, Prague, Czech Republic

The National library of the Czech Republic, the National Archives of the Czech Republic, in cooperation with IFLA-PAC, organized a conference on water damages to museum, archives and library collections in Prague on 29-31 October 2009. This was the second conference of the Cycle "Preservation and the four elements" launched by the PAC programme. About 120 participants attended this event.



Jurek Stankiewicz, Head of preservation department, National Library of Czech Republic, conference organizer. Photo: Eva Hodíková

The conference was brilliantly introduced by Gerhard Banik, Chief Editor of *Restaurator*, who presented the global water problems met in conservation. M. Banik proposed that the conference proceedings would be published in his Journal *Restaurator*.

What was interesting in those two days was first the lessons from past flooding in Poland



Adolf Knoll, Director of the National Library of Czech Republic, Dr. Zbornik, Head of department of Art and Libraries of the Czech Ministry of Culture, Christiane Barylá, IFLA-PAC Director, and Dr. Michal Ďurovič, Head of conservation and physical care of archival materials in the National Archives of Czech Republic, opening the conference. Photo : Eva Hodíková

(1997), Prague (2002), and from flood incidents, as in the National Library of Scotland (February 2009) and at the Albertina (Wien, Austria, June 2009). Isabelle Rollet from the BnF also spoke about internal damages linked to the necessary presence of water in the building, which also have to be dealt with. A key part of the conference concerned of course the emergency plans which have been implemented since then. An interesting collaborative initiative has to be quoted: EURANED, which is an European initiative in disaster prevention and disaster management gathering three state archives (Germany, Poland and Czech Republic) whose goal is mainly to disseminate information on disaster and facilitate cooperation (See the paper of S. Barthelet p. 17). Karen L. Pavelka also introduced AIC-CERT, the American Institute for Conservation of Historic and Artistic Works (AIC) Collections Emergency Response Team (CERT) aiming at responding to the needs of cultural institutions during emergencies and disasters through coordinated efforts with first responders, state agencies, vendors and the public.

Other cultural heritage institutions presented their own emergency plan, such as The Royal Library of Denmark. Gerrit de Bruin, from the National Archives of the Netherlands, introduced the very interesting Delta plan intended to resolve the crisis situation in Netherlands. France Saie-Belaïsch, from Archives nationales de France, made also a very complete communication on the recommendations for the new archives building in France: all the architecture designs to be avoided to prevent flooding.

Finally, the other striking aspect of this two-day conference was the debate about the diverse drying methods used: vacuum freeze drying, microwaves drying... Jirí Neuvirt, from the National Library of Czech Republic, presented the universal drying chamber for water damaged library and archival materials. Universal because it permits three drying methods – vacuum freeze drying, vacuum drying, and drying in controlled atmosphere. Milan Hájek from the Czech Academy of Science, introduced a new advanced microwave drying technology which succeeds in preventing damages such as hot spots which was the main inconvenient of this technique.

The conference closed on a fascinating story: a Codice manuscript discovered in the Mediterranean sea on which ICPAL is still working to know its origins...

Two visits were proposed on October 31: Belfor facilities at Jirny (<http://www.com.belfor.com/>) and the technical centre of the Czech National Library with the universal drying chamber.

Christiane Baryla would like to thank M. Jurek Stankiewicz for the perfect organization of this event. She is also delighted to announce that the two last conferences of the cycle (Earth and Fire) should be held together in Palermo, Sicily, with the collaboration of Centro Regionale per la Progettazione e il Restauro della Regione Siciliana, in June 2010 (date to be confirmed).

Report on "Doing more with less? Forum on skills development", British Library Preservation Advisory Centre, 30 November 2009, London, UK

The British Library newly launched Preservation Advisory Centre (ex National Preservation Office), specialized in preservation training, organized a one-day conference focusing on the latest developments in preservation learning.

The two main topics that were discussed during the conference were:

1. Cost cutting: how will you do better with less?
2. Collaboration as the only viable economic option.

After an introduction by **Caroline Peach**, recently appointed as the Head of the Preservation Advisory Centre, **Helen Shenton**, Head of the British Library Collection Care, spoke about the strategic challenges for preservation raised by the Google Generation whose new habits necessarily impact the libraries and archives' world, the way collections are used and preserved. She highlighted the work done by the British Library which has to date 64% of its physical collections in satisfactory environmental conditions, as against 0% before St Pancras occupation and 42% in 1998. This percentage will be of 74% in 2013 upon completion of the Newspaper Storage building programme. She also evoked the rating between physical / digital collections cost of preservation, which is 21 to 1 today but may evolve within 5 years from 4 to 1, which may cause changes in preservation strategy too.

Jane Arthur, Preservation Training Coordinator, Preservation Advisory Centre, presented an interesting survey of the training needs in Research Libraries UK and higher education libraries. The most important is to have a programme based on identified needs and a determination of priorities based

on evidence for sponsors. The survey reveals that among the practical topics (handling, repair, cleaning, display, environmental control, salvage) and the strategic ones (preservation culture, advocacy, prioritization, policy), basics are the most popular. Jane Arthur reminded that as the financial climate has changed, cooperation has become the only viable economic option.

Sheila Hingley, Durham University Library, showed the benefits of partnerships in preservation projects by presenting the "collection care scheme" which is a project led by the North East Museums, Libraries and Archives Council (NEMLAC) associated with Durham University Library. It provided advice, training and support in preservation issues and creates a real network in heritage sector. The phase 1 (2002-2004) involved 35 institutions, while the phase 2 (2004-2006), 33.

Vicki Marsland, National Trust Conservator, dealt with another issue, which is volunteers' training (see at <http://www.nationaltrust.org.uk/main/w-trust/w-volunteering.htm>). **Jean Brown**, Northumbria University, presented her very impressive university e-learning portal offering online teaching including audiovisual recordings and Powerpoints supported by voice overs, with interactive services as question/answer sessions, chat rooms, discussion boards, e-journal...

After a communication of **Catherine Atkinson**, Head of the Conservation Learning and Development, on learning opportunities at the British Library, the afternoon was dedicated to specific preservation issues: digital, audiovisual, modern material...

William Kilbride, Executive Director of Digital Preservation Coalition, a not-for profit organisation whose objective is to raise awareness of the importance of digital preservation in UK, made a lively contribution showing digital preservation is not so complex and how essential it is since digital resources are intolerant of gaps in preservation, all the more so as we are moving from niche to business-as-usual activity (see <http://www.dpconline.org/graphics/index.html>).

Will Prentice, Sound Archive, British Library, described the specificity of sound preservation which links 2 aspects: audio engineering and archival principles, while **Cordelia Rogerson**, British Library Acting Head of Conservation, showed the new problems related to modern materials such as plastic and the consequence of their use for conservation.

Caroline Peach closed brilliantly the conference by describing the skills development programme of the Preservation Advisory Centre:

- training and learning programme
- preservation assessment surveys services
- free information services: booklets, website, enquiry service...

She made a very interesting distinction between "efficiency" as **doing things right** and "effectiveness", as **doing the right things**, and underlined the essential challenge libraries have to face: how can public services achieve more for less, providing services that meet people's needs, while costing less?

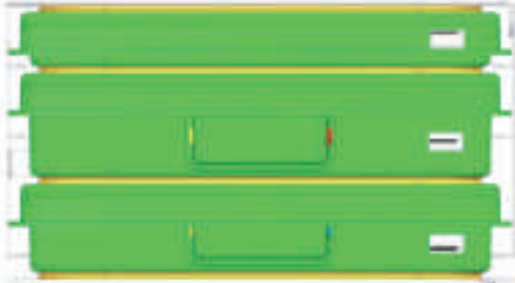


The morning panel discussion: (from left to right) Caroline Peach, Sheila Hingley, Jane Arthur, Helen Shenton and Victoria Marsland.
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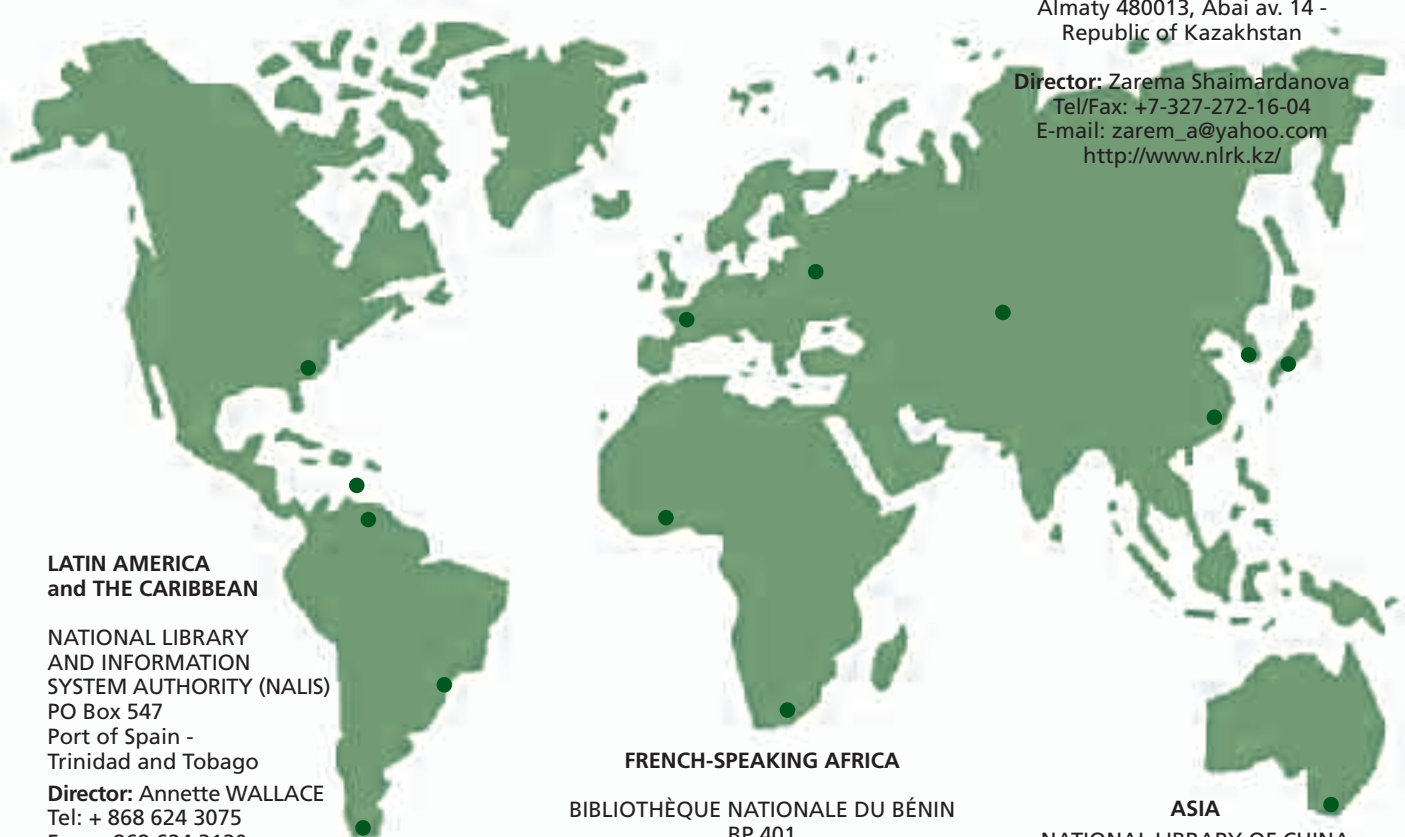
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