



If the library and the archive decide to safeguard their cultural heritage

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Meeting:

88. Preservation and Conservation, Preservation and Conservation Core Activity

WORLD LIBRARY AND INFORMATION CONGRESS: 76TH IFLA GENERAL CONFERENCE AND ASSEMBLY
10-15 August 2010, Gothenburg, Sweden
<http://www.ifla.org/en/ifla76>

Abstract

The aim of this paper is to give some suggestions for the creation of an emergency plan in libraries and archives. We want to present a concise draft document as a first step for staff and public and to make stakeholders aware of emergency procedures for the safeguard of cultural heritage. The most important problem is security and the prevention of disasters in the library/archive, where people of course are the first priority, but particular care must be taken to safeguard collections. How to manage and reduce damage is the topic of our essential guidelines. This is a first deliverable, result of a working group at regional level, who wants also to practice and experiment together drills that simulate a disaster in libraries and archives and to expand the reach of this initiative to a wider area. These guidelines explain how to implement a systematic organization and train a team capable of protecting books and documents in case of disaster caused first by weather, fire, water and human factors. A special emphasis is placed on specific responsibilities of individuals within the group. A crucial element of the proposed approach is the definition of criteria for the prioritization of the most important items to be rescued. The role of staff in the library/archive, how to practice and prepare triage treatment of cultural heritage after a disaster and some simulation- demonstration in a library and archive housed in historic buildings in Milan will be given. Furthermore, examples of the experience gained after the terrible

earthquake in Abruzzo last year are presented. The invaluable involvement of the Civil Protection, its volunteers and other protagonists such as firemen, policemen during and after the disaster are considered, but the attention is focused on the role of librarians, archivists and restorers.

Introduction

Since 2007 archivists and librarians from various Institutions in Lombardy have started a joint working group on preventive conservation and emergency preparedness, with a special focus on response to natural disasters. This resulted in the production of a SOS disc, providing quick guidelines for the first actions to be implemented after a disaster caused by water or fire in a library or archive. Additionally a few successful seminars on preservation themes were organized, including topics dealing with emergency situations¹. Furthermore the group decided to focus on ways to help libraries and archives to verify security of their people and holdings in case of emergency, incorporating input from different professional viewpoints, such as those of conservators, civil protection officers, fire protection brigade etc. It was soon realized that an emergency plan was needed to provide guidelines on how to preserve books and documents in the case of negative events : such plan do not exist at the moment. The regional body of Civil Protection joined the working group and we started to analyze the literature and experiences in the matter, including some advanced examples, such as COSADOCA in Switzerland ². We also considered the impact of climate change during the last century, the increased risks due to more frequent floods, the damage and destruction caused by vandalism and terrorism and wars. Last year in Italy we had a terrible Earthquake and for this reason the urgency to have an efficient emergency plan cannot be emphasized enough. This is a duty which , in our opinion should not be delayed. In that context the experience of the salvage of cultural heritage has been thoroughly tested . The national Archive of Aquila and some ancient library records were put in a safe storage space and documents handled and recovered by many skilled volunteers, coordinated by the Civil Protection and under the supervision of expert archivists, librarians and restorers sent by the Ministry of Culture and local institutions³. Everyone worked together during the first emergency period, and although the triage was successful, however now the issue remains on how to approach conservation and restoration of books and documents that were damaged during the

¹ SOS Emergenza beni culturali is the Italian translation of "The Emergency Response and Salvage Wheel" published in 1997 by the Heritage Preservation and the National Task Force of Emergency Response.
(Federal Emergency, Management Agency , Getty Conservation Institute and Heritage Preservation).
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² The Consortium for the Preservation of Documentary Patrimony in case of Disaster (COSADOCA) arises from an agreement ([Agreement and regulations](#), ; <http://www.cosadoca.ch/> It also defines the emergency plan. The emergency plans of COSADOCA's member institutions are accessible by some examples .

³ Aurora Tomasello, Soprintendenza ai Beni Librari e Biblioteche della Regione Abruzzo: *Interventi di recupero del patrimonio librario e documentario delle Biblioteche d'Abruzzo all'indomani del terremoto* (Feb. 2010) and Marchetti ,*Pictures*, readable in the page :
http://www.cultura.regione.lombardia.it/cs/Satellite?c=Redazionale_P&childpagename=DG_Cultura%2FDetail&cid=1213351170227&packedargs=menu-to-render%3D1213349371728&pagename=DG_CAIWrapper

earthquake. The general economic crisis obliges us to reduce costs and investment in restoration and preservation. We are waiting for a suitable and convenient solution to solve the technical problems but also for funding from private foundations.

Another important action of the working group, which was implemented earlier this year, is to perform simulations of disasters. In May of this year the Trivulziana library,⁴ which also holds the civic historic archive, became the first test-site for the drill. This offered us an opportunity to test basic guidelines for an emergency plan in a very difficult context: an historical building, the castle in the town, which also holds other museums, libraries and archives. About forty volunteers of the Civil Protection, and about twenty five of the local of security and library staff, many observers and journalists took part in our simulation, focused on how to save and move books and documents after a water /fire disaster and to care for them immediately.

The successful experience produced a positive ripple effect in the field. Some other libraries and archives asked for our help in preparing their first emergency plan, thus prompting us to write short guidelines to be tested in different situations.

The new instructions will be tested in future simulation drills. Additionally, a novel initiative has been started which focuses on the development and implementation of e-learning modules - in collaboration with university researchers⁵ - to provide on -line training on how to prepare for emergency. This initiative has been announced in a seminar held last March⁶

Furthermore the ICPAL (Istituto Centrale per il restauro e la conservazione del Patrimonio Archivistico e Librario, Roma) is testing another new methodology improved with the European project PREM (Prevenzione e Risposta alle Emergenze) translating the online disaster-planning template prepared by the [Northeast Document Conservation Center \(NEDCC\)](#) and the [Massachusetts Board of Library Commissioners \(MBLC\)](#). The development of the template was funded by the [Institute of Museum and Library Services \(IMLS\)](#) and the [National Center for Preservation Technology and Training \(NCPTT\)](#). ICPAL has launched the project **PREM** for developing and sustaining the utilisation and spreading in Libraries and Archives of this important tool.

⁴ The exercise in Trivulziana Library has been managed on 8th May 2010 referred to a simulation of a water and fire disaster, promoted by Regione Lombardia and Comune di Milano, .

⁵ The project "*e-Mergency. Virtual learning* per la formazione ai piani di emergenza per biblioteche e archivi", virtual learning for the emergency training in Libraries and Archives di Maria Barbara Bertini e Simona Budassi aims to train to respond to emergencies. The online course was tested at the G.D'Annunzio University of Chieti and the 'Università Telematica Leonardo da Vinci di Torrevicchia teatina (Chieti, Italy) and will find a new platform open source for the dissemination of the experience.

⁶ Meeting: *Tra sicurezza ed emergenza in biblioteca e archivio*, 13th March 2010, Milan. In that seminar some new projects to learn and how to face the emergency and methods of preparing emergency plans had been presented. Documents available at http://www.cultura.regione.lombardia.it/cs/Satellite?c=Redazionale_P&childpagename=DG_Cultura%2FDetail&cid=1213351170227&packedargs=menu-to-render%3D1213349371728&pagename=DG_CAIWrapper .

The emergency plans for libraries and archives.

An emergency plan is a complex and delicate project, aimed at protecting the safety of people and the collections located in a particular institution. Its goal is, therefore, to prevent to any extent and situations of possible danger and, where the emergency happens, to carry out all the necessary intervention protocols for the safety of objects and persons.

There have been numerous disasters and damaging events not only to national but world history which have involved library collections of great value and which have been extensive.

Unfortunately, we are not only talking about major disasters. More frequently, dangers come from the most banal incidents, but for this reason they are more likely to occur. Emergency plans, in fact, are applied to both natural disasters (earthquakes, floods, hurricanes, tornadoes) and events caused by people.

If it is a natural event, people can, within limits, confine and control it. However the same cannot be said for every dangerous situation caused by human carelessness or bad institutional management: flooding caused by a leaking roof or a broken pipe; fires caused by short circuits or human negligence; damage produced by extensive mould or insect or animal pest attacks are some common examples. They are all phenomena not only preventable but above all avoidable thanks to effective and thought-out conservation and prevention plans.

The following are some of the consequences of a disaster on institutions like libraries and archives:

1. **Water entry:** this represents damage to materials and to the building itself, which in the most serious cases can run the risk of the humidity collapsing;
2. **Fire:** surely the most devastating hazard for library and archival collections; smoke also constitutes a danger, the heat and products used to put out the fire;
3. **Earthquakes:** buildings, in case of earthquakes, can sustain structural damage caused by the shocks (collapse of parts of the building, bookcases falling over, loss of electronic data, broken water pipes with consequent flooding, damage to the electrical system which can produce a fire);
4. **Armed conflict:** in such a circumstance, documentary and library materials can be voluntarily destroyed in order to erase local identity; they can be objects of theft or acts of vandalism and the entire building is exposed to the risk of fire and destruction.
- 5.

Therefore an emergency plan is set up for most cases:

1. **Prevention:** an organizational system to prevent the outbreak of an emergency;

2. **Preparedness:** a plan of formation and training of that institution equipped to be ready in the event of an emergency;
3. **Response:** interventions and protocols to be executed in the face of an emergency;
4. **Recovery:** the activities of recovery and cleaning together following an emergency.

Obviously, every phase has specific characteristics but each one must be understood and shared by all the library or archive staff. It is indeed the institutional staff that will put into action individual preventive solutions every day and, thanks to their own constant presence in the building, will point out unexpected, critical or new occurrences themselves. The same people will take the trouble to put into action the emergency response in a moment of crisis and consequently must be kept up to date on the plan.

In the United States, and even more so in Australia and New Zealand, emergency plans are not only present in nearly all the big institutions, but also small ones are adjusting thanks to a series of appropriate projects and initiatives to support small and medium cultural possessions present in regional areas.

Try a simple search on the internet: the English keywords *emergency preparedness* in a common search engine will produce pages of results. Unfortunately, the same search in Italian offers different and less comforting results. Preventive measures are not felt as an urgent problem and emergencies are not considered in terms of prevention but rather in terms of a response. The earthquake that devastated the Italian town of Aquila last year in April is a sad demonstration of this fact. Institutional seats of government, hospitals and university structures had no rules and were not furnished with any preventative plans lead to the loss of human lives and cultural treasures that, at least in part, could have been avoided.

On the other hand, legislation provides clear indications on the subject. The 2004 Italian government order number 132, whose object is “Emergency plans for the protection of cultural heritage,” points out that “*responsible people ought to prepare for an emergency plan that takes into account, in a uniform way, all known aspects (environmental, structural and human security, in case of fire, in use) for the security of cultural heritage and of their mutual interferences*. It is also supplied with an attachment on the essential contents of emergency plans, organized by the Special Permanent Commission for the Security of the National Cultural Heritage.

The subsequent government order, number 30 of February, 2007, instead establishes criteria which regulates the formation of internal team of the institutions, who “*will be able to carry out with programmed face-to-face meetings or at a distance by means of informational postings*.” Moreover, it defines the conditions of carrying out periodic exercises whose number “*is a function of the communication and extension of the installation, the critical situation emerging in the evaluation phase of risks, the number of employees, the type and quantity of the goods present, and the number of visitors*.” To this end the order offers a summary table of exercises to perform annually based on the type of installation.

1. **Begin preliminary research:** the team could search bibliographic materials and articles on emergency planning and recovery, analyze emergency plans of similar institutions and attend workshops pertaining to the theme.
2. **Arrange contacts and relations with local emergency units:** the team should contact the commander of the local fire station, who should then carry out an inspection of local institutions. Local, regional and national authorities should also be added so that they can better help highlight potential dangers.
3. **Establish objectives and tasks for members of the team:** members should be trained to know how to execute various tasks that are their primary responsibility. Draw up a list of telephone contacts, including the home
4. **Numbers,** of the team members as well as contacts who will eventually furnish equipment and other material, and also outside conservators or possible locations for the drying out of materials. The list should be regularly updated.
5. **Survey environmental risks:** a necessary step is to draw up a list of climatic and geological risks that might put the building in danger. Also, the presence of chemical industries or the closeness of train lines or roads transporting dangerous materials should be considered for the list.
6. **Survey internal risks in the building:** you should identify the types of emergencies that could occur, determine the probability that they can appear and decide which constitute a danger to the institution. Structural engineers should make a survey and recommend modifications to improve the building in order to respond to security standards. Bookshelves and storage cases should be anchored to the walls and also the lights, especially those on the ceiling. On this subject, it is good to follow some simple recommendations regarding the interior of the building:
 - ✓ Keep internal fire doors closed;
 - ✓ Check that emergency equipment is always accessible and in good condition and that there is no obstruction to extinguishers or other fire prevention systems;
 - ✓ Always keep storage cases closed when not in use;
 - ✓ Leave corridors and spaces beneath tables free;
 - ✓ Maintain a stable environment and forbid the consumption of food and drink within the building.
 - ✓

Moreover, it is advisable to consider potential risks coming from individuals or groups. To this end, check the perimeter of the building, especially the entrances and exits at closing time, besides checking identification and the bags of people who enter during opening hours.

7. **Conduct an investigation of the collections and determine priorities for the salvage phase:** this is a very delicate operation, different for libraries and for archives and a source of panic and doubts for conservators who must put it into action. At any rate, conducting it objectively and not during an emergency will give basic results. For libraries, the priority of one collection

over another depends on the economic value of the pieces, their importance for students, scholars and researchers, and the special obligations of the institution. Absolute priority should be given to unique works which are difficult or impossible to replace. Next, pieces that could be replaced but at a high cost. Lastly, those that could be easily replaced with minor cost. For archives the selection is more difficult and every institution should establish internal priorities. In both cases it is necessary to foresee the act of saving record boxes, catalogues, inventories, files and employee files of the institution. For the general safeguarding of collections it is a good rule to

8. keep all valuable material in a fireproof and dustproof closet. On book shelves, volumes not worthy of conservation should be kept next to each other, to promote the passage of air and to limit the unnecessary bumping, and not to damage the conservation unit during the removal phase.
9. **Considering the costs:** the team must have an idea of the economic possibilities they have at their disposal in case of a disaster and must establish who can have access to these funds and to what extent. Basically, it will then be an accurate documentation of the collections, including photographs.

Once the preliminary phase is defined, the written draft of the plan should happen without any particular difficulty. Instructions must be **concise, clear and understandable**. Although every plan is specific, the basic structure should follow this typical grid:

1. INTRODUCTION: very brief, providing a description of the motives at the base of the plan, its scope and who it concerns. Also include the name of whoever has drafted it, the date of the draft and a date when it should be updated. Include definitions of responsibilities and possible foreseeable events in the plan.
2. FIRST RESPONDERS ACTIONS: include a list of who to contact in various cases of emergency and the first steps to take;
3. SPECIFIC PROCEDURES for every single emergency;
4. RECOVERY PLANS for the rehabilitation of the building and the utilization of the collections;
5. APPENDICES with the plan for evacuation, collection of keys; procedures for alarms; list of collections with priority for saving; list of outside suppliers and volunteers; forms for the registration of materials transferred elsewhere during the emergency.

The plan should be **regularly updated**, generally every six months, or even less.

A final precaution consist in keeping a copy of the **documentation locked up** outside of the building.

It is also fundamental to dedicate a part of the plan to activities in order to guarantee **the continuity of services**.

PROTECTION OF ELECTRONIC DATA

The best starting point is to prevent the loss of data by means of a **backup of software**. It is useful to ask some questions:

1. Where to conserve backups?
2. How much data is conserved and how expensive is it to make a backup?
3. At what point to send backups to a local or remote depository?
4. Who has access to the backups?

EMERGENCY PLANS—RESPONSE

A disaster can happen and, unfortunately, happen even if you have tried to adopt all possible preventative measures. An ever-growing number of professionals are, however, aware of the consequences of serious average emergencies which they can contain if staff members are prepared to react quickly.

FIRE

1. Sound the alarm, unless the fire is contained and can be easily controlled:
2. Call the fire department.

FLOODING

In case of flooding it is necessary to act within forty-eight hours at the risk of losing the goods.

1. DO NOT touch or stand in the middle of standing water. You could be electrocuted.
2. Cut off the source of the water or ask who must do it.
3. DO NOT touch any books or other library materials.

Procedure to count up the damages:

—What has been damaged?

1. books, papers, audio and video tapes should be salvaged or treated within forty-eight hours

2. Computer discs require special treatment

—Where are the damaged materials to be found? (There should be a map of locations)

—How many pieces have been damaged?

—How wet is the material?

DAMAGES CAUSED BY WATER

Among all the damages that can happen the most common is that caused by water.

Around eighty-five percent of all emergencies involve damages caused by water, from flooding after a storm, water used to put out a fire or the result of a broken water pipe.

Standard recovery measures

If possible, dry or freeze water-damaged objects or put them in clean water within forty-eight hours to prevent the formation of mould.

Separate very wet pieces from those only slightly damp.

On-site dehumidification : this method, which consists in pumping the interior of the building with very dry air while extracting the humidity, is useful to use on the spot in the case of wet library and archive collections.

Air-drying : this procedure is used in general for small quantities of damp materials. Normally it requires a lot of time and space.

Interleaving : interleaving can promote the drying process, contributing to the reduction of humidity inside the books or stacks of paper. It prevents pieces sticking together and stops the transfer of colors from one piece to the other.

If the quantity of materials exceeds what can be treated on the spot during the immediate hours following the damage, it is useful to freeze them while waiting for specific treatments. This action should be done between twenty-four and forty-eight hours after in order that mould does not develop, glossy papers stick together, and colors and soluble inks not deteriorate.

NEVER freeze: paintings, furniture, magnetic tapes, music or video cassettes.

Vacuum freeze-drying: This is a process for drying frozen material by means of sublimation based on pressure and temperature below the freezing point. The objects are dried in a vacuum chamber at a temperature below thirty-two degrees Fahrenheit in a way to minimize swelling and distortion.

Vacuum drying: this process consists of drying the objects in an vacuum chamber, often in temperatures above one hundred to one hundred and four degrees Fahrenheit.

RECOVERY

1. Recleaning the environment.

The building : must pass an official inspection which declares it habitable again.

The collections:

a. if necessary, select an area where the materials will be conserved in a transitional way while waiting for the complete recovery of the location.

b. the materials might require a location space twice as large with respect to the original space, while waiting for the return of the normal environment and the resumption of their original dimensions.

c. Prepare an area to examine the materials and to proceed with the evaluation of their state of conservation. An early selection will act as the first step to complete a chain of work. The contribution of experts on the collections will be of primary importance. They will be able to help to establish if the library or documentary material ought to be considered unsalvageable, restorable or conserved as it is in protective containers. Also, in this phase, cataloguing activity is fundamental and the annotation of all the materials submitted to treatment, the locations of the laboratories to which they have been transferred, and so forth.

2. The report and revision of the emergency plan.

Following a disastrous event, it is imperative to write up a report of the facts that happened as quickly as possible and of the steps taken. The report, which ought to be accompanied by appropriate photographic documentation, above all should report the kind of emergency that occurred, its location and what caused it. It should include a

careful description of various actions taken, specifying types, data, names of the workers (both of the internal staff and outside consultants or volunteers) and should attach an evaluation of their work. Similar reports should be turned in by outside firms, who have been entrusted with the jobs of disinfections, cleaning, freezing, and restoration. In this part, beyond evaluation, it should be noted if the jobs were completed or are still in process or foreseen at some future time while waiting for the necessary economic assistance. Finally, the report should be signed by the coordinator of the job.

The draft of the final report on the emergency is not only important to document what happened and entrust it to the memory of the interested institution, it is a particularly important moment because it helps to go back over the phases of the emergency and the response and therefore allows the evaluation of the success of the emergency plan put into action, possibly pointing out gaps or strong points, to improve or expand it. In order to do that, it is necessary to call a first meeting with all those who took an active part in the operation. Each will bring to the others their own experience and play the part of a spokesperson for new suggestions or innovative procedures. Later, in a more limited meeting, reserved to the staff of the emergency group, the plan could be reviewed and eventually modified where necessary. In that office, in case a lack of readiness by the workers in the response phase, a developmental or informative activity might be planned for them and a simulation organized that would help the workers to familiarize themselves with the operational procedures.

It is necessary never to lower your guard and to always be prepared.

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