

# Reducing Risks to Heritage

**International Meeting**  
**28-30 November 2012**  
Amersfoort  
The Netherlands

CANADIAN  
CONSERVATION  
INSTITUTE



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ICCROM

## Welcome and Opening

Today, preventive conservation is widely recognized as a priority line of action. However, decision-makers are confronted with difficult choices in planning conservation strategies with limited resources. Should we put all our resources in a sophisticated environmental control system, or should we upgrade the fire control system instead? What exactly will happen to this collection of costumes and basketry if they remain exposed to this level of light? And in the long term, how will this damage compare to that caused by the increasing number of visitors? The risk management approach, which informs and guides decision-makers in many other fields, offers a sound methodology to incorporate the most recent knowledge into current practice. It allows an integrated identification and analysis of all expected damages and losses to cultural property and a mitigation strategy to reduce these risks. It thus provides a useful tool for the design of more efficient conservation strategies.

Since 2005 ICCROM, CCI and RCE (formerly ICN) have worked on developing and disseminating the risk management approach for cultural heritage and have organized six joint courses. The most recent course in 2011 included, for the first time, a substantial distance-learning component to enable participants to apply the risk management approach in their own working and cultural context. The method and tools that have been developed for the course proved to be applicable for all types of heritage, ranging from a single wall painting and large collections to historic buildings and archaeological sites.

This meeting brings together 150 people from 37 countries who have developed an interest in heritage risk management over the past decade. It is the conclusion of a successful cooperation, not just between the three main partners but with a network of people and institutions that has expanded through the years. The aim of this meeting is to synthesize and share the knowledge and experience between all the players in this network, to expand the risk network further and to explore new directions for the future.

On behalf of the partners we welcome you to the Cultural Heritage Agency of the Netherlands and wish you a fruitful meeting!

Cees van 't Veen, Director Cultural Heritage Agency of the Netherlands  
Janneke Ottens, Head of Movable Heritage Research  
Agnes Brokerhof, Program manager



Rome (2005)

## A message from ICCROM

A very diverse world is meeting here to learn and to debate cultural heritage risk management – thirty countries, different types of institutions, a large range of specialties and responsibilities, different contexts, different value systems, and different approaches. For ICCROM and its partners – the Canadian Conservation Institute and the Cultural Heritage Agency of the Netherlands – this meeting is a milestone at the end of a long, arduous and exciting journey!

Created some 50 years ago by UNESCO to assist member-states in the implementation of their conservation and restoration policies, ICCROM by the mid-70's was already engaged in teaching and advocating preventive conservation. In 2003, CCI and ICCROM joined forces to propose a *cutting edge* course for preventive conservation teachers. Many of the speakers at this 2012 meeting taught or participated in the 2003 course! At that time, Stefan Michalski and Rob Waller were given a brief time to introduce the risk management approach. By the end of the course it was clear that this approach was becoming the most requested development in preservation. Two years later, CCI, RCE (formerly ICN) and ICCROM inaugurated a new course and began a seven year intense partnership for *Reducing Risks to Cultural Heritage*!

Our initial targets were the smaller museums in Canada, the Netherlands, and all over the world, who struggle with few resources and need to make effective decisions. Soon however, we began to consider not only collections but their historic building envelope. By 2011, some of our course participants were even more adventurous and challenged us to consider entire archaeological sites and historic cities.

Together, we accomplished incredible results. In seven years, we designed and implemented six international courses – Italy, Canada, Romania, China, Equator and Turkey – involving 130 professionals from 60 countries. We produced a substantial body of learning and teaching materials, all systematically reviewed, improved and adapted by the partner's team, as well as by consultants and former course participants. Both CCI and RCE have designed and carried out research projects and dissemination initiatives, creating manuals, a database, a pool of risk scenarios, risk models, risk maps and other tools to better identify, document and analyse risks. Throughout, the three partners strived to communicate and test this growing knowledge via articles in the scientific literature, talks at international and national conferences, regional and national workshops, and field projects.



Some of our key note speakers will humbly claim that the journey is only beginning; nevertheless preventive conservation will never be the same.

What we accomplished could only be the fruit of a subtle combination of institutional partnership and professional collaboration. With their long term commitment, CCI, RCE and ICCROM provided the necessary visibility, direction, justification and resources however, it is the individuals within who made it happen with their commitment, their professional rigor, their expertise, their generosity, their capacity to take risk, their creativity, and their

continual hard work! On behalf of ICCROM, I would like to thank each and everyone of our CCI and RCE colleagues. I would also like to thank the various experts who joined us during this project. I feel privileged to have participated in our endless working sessions, when planning, designing or reviewing course sessions and materials, or when assessing sites and museums for case studies.

On behalf of the partners, I wish to acknowledge also the role and contribution of our course participants. Each course brought its sparkle, and profoundly pushed the project forward. Participants inspired our partnership, produced new knowledge, applied the methodology, or provided critical feedback. Some brought the course to new audiences and found the institutional partners and the resources to do so. Many wrote articles, gave talks and short courses, and some integrated it into formal conservation education programmes.

This project is an excellent illustration of the intimate link between research and development and training. The international and intercultural platform of ICCROM allowed rapid progress in the methodology. After these seven intense years, I do hope that we can develop new forms of collaboration, to strengthen the capacities of institutions with lesser resources whether in Canada, the Netherlands, or anywhere else in the world.

Catherine Antomarchi  
Unit Director, Collections Unit  
ICCROM







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# Program



## Wednesday 28 November 2012

- 09:00-10:00 Registration, coffee and putting up posters
- 10:00 Opening and Welcome by **Cees van 't Veen**, general director, and **Janneke Ottens**, head of movable heritage research
- 10:15 **Keynote: Jonathan Ashley-Smith**: I can see clearly now

### Theme 1: Methods, techniques and tools

Chair: José-Luiz Pedersoli

- 10:45 **Kick-off: Agnes Brokerhof**: Risk Management – so many choices, so many methods
- 11:15 **Luiz Souza** and **Willi de Barros Gonçalves**: A Critical Evaluation of Risk Management Issues at the World Heritage Site of Congonhas, Minas Gerais, Brazil

#### 11:30-12:00 COFFEE

- 12:00 **Anna Paolini**: Development and application of a risk management framework for protecting the world heritage site of Petra
- 12:15 **Rohit Jigyasu** and **Vesna Zivkovic**: Two different approaches - disaster risks and heritage risks
- 12:30 Discussion on methods - moderated by Janneke and José-Luiz

#### 13:00 - 14:00 LUNCH & POSTERS

Chair: Catherine Antomarchi

- 14:00 **Bart Ankersmit**: Scenario schemes - tools for identification, analysis and mitigation
- 14:15 **Giovanna Di Pietro, Frank Ligterink, Gerrit de Bruin** and **Henk Porck**: Pollution Pathway Method to support indoor air pollution decision-making
- 14:30 **Bill Wei**: Vibrations and cyclic loads - How strong AND how long?
- 14:45 **Punto Wijayanto**: Community involvement in disaster risk management
- 15:00 **Marja Peek**: The risk of theft in Dutch museums

#### 15:15-15:45 TEA

Chair: Vesna Zivkovic

- 15:45 **Björn Peters**: Asset fire safety (building and collection) for the New Rijksmuseum
- 16:00 **Bram van der Linden** and **Hanna Pennock**: 'Equal solutions' for fire security in listed buildings
- 16:15 **Firas Othman**: Risk Maps & Risk Management
- 16:30 **Wojciech Baginski**: Using GIS (Geographic Information System) to improve risk assessment and risk management in a historic residence
- 16:45 Discussion on tools - moderated by Catherine and Vesna
- 17:15 Poster snapshots

#### 18:00-20.00 DRINKS & BUFFET

## Thursday 29 November 2012

Chair: Frank Ligterink

09:00 **Keynote: Stefan Michalski** - The application of cost-effectiveness to risk based decisions

### Theme 2: RM in practice (Case-studies)

09:30 **Kick-off: Vesna Zivkovic**: Application of risk assessment in the development of a preservation strategy for archaeological sites- Vinca-Belo brdo, Belgrade

10:00 **Marta J. Guttman, Andrea Bernath, Morten Ryhl-Svendsen and Iulia Teodorescu**: Reducing risk to heritage - a radical solution

10:15 **Udaya Hewawasam**: Avoiding the third painter

10:30 **Jedert Vodopivec**: Archival & library repositories in Slovenia

10:45 **Laura Stedman**: Applying a risk assessment framework to a large cross-disciplinary collection at Museum Victoria, Australia

### 11:00-11:30 COFFEE

Chair: Irene Karsten

11:30 **Andor Vince**: Decision making in collection care

11:45 **Christina Sperantza**: Risk management: the case study of the wooden collection in the storage of the Folk Art Museum of Athens, Greece

12:00 **Patricia Smithen and Deborah Potter**: Reducing risks at Tate

12:15 **Willi de Barros Goncalves and Luiz Souza**: Managing risks through environmental management in temporary exhibitions

12:30 **Discussion on practice (I) moderated by Frank and Irene**

### 13:00-14:00 LUNCH & POSTERS

Chair: Bart Ankersmit

14:00 **Anna E. Bülow**: Between risks and costs: transferring documents for permanent preservation

14:15 **Yi Qing Zou**: Risk Assessment study of the 'Diao-lou' stone towers in Danba County, China

14:30 **Ana Pastor Perez**: Risk management in the field – differences between paleolithic and II iron age archaeological sites in Madrid

14:45 **Marc Stappers**: An approach for assessing climate risks to organs in historic churches

15:00 **Discussion on practice (II) moderated by Bart**

15:15 **Introduction to small groups by Bart**

### 15:30-16:00 TEA

16:00-18:00 **Small group discussions / workshops / Tours**

1. Working with the CCI database
2. Application of the RCE Handbook (in Dutch)
3. Learning more about the incident database DICE
4. Value assessment
5. Touring the RCE building
6. The monuments of Amersfoort
7. Visit and use library

### 18:00-20.00 DRINKS & BUFFET



## Friday 30 November 2012

Chair: Agnes Brokerhof

09:00 **Keynote: Robert Waller:** Perceiving Risks - Feeling and Thinking

### Theme 3. Values and Communication

- 09:30 **Irene Karsten:** Dealing with new challenges  
 09:45 **Tanja de Boer:** Values and risks - collection care in the National Library of the Netherlands  
 10:00 **Gamal Salem Abdo:** Value assessment and risk management at 'Altawelah Tanks' in Yemen  
 10:15 **Marjolijn Debulpaep, Caroline Meert and Hilke Arijs:** Creating institutional awareness to safeguard IRPA's photographic collection  
 10:30 **Lakshmi Priya:** Analyzing Risks to Built Heritage: the case of Naubat Khana, the Red Fort  
 10:45 **José-Luiz Pedersoli:** The *Value Pie* - an aid for effective communication and quantitative modeling of fractional loss of value in risk assessment for cultural heritage

### 11:00-11:30 COFFEE

Chair: Stefan Michalski

- 11:30 **Allison Callender:** Risk management and management - moving beyond reporting  
 11:45 **Karin Hermerén:** Management of public building-related art in public and private ownership  
 12:00 **Giovana Jaspersen:** Social participation as a strategy for preventive conservation: the case of current Mayan communities in Yucatán, Mexico  
 12:15 **Veerle Meul:** Towards a risk-based conservation support  
 12:30 **Discussion on Values and Communication moderated by Agnes and Stefan**

### 13:00-14:00 LUNCH & POSTERS

Chairs: Catherine Antomarchi and Julie Stevenson

- 14:00-16:45 Group work session: How now - evaluation and future trends  
 Plenary presentations and discussion moderated by Catherine and Julie

### 16:45-17:00 CONCLUSION AND CLOSING

### 17:00-19:00 FAREWELL DRINKS & BITES

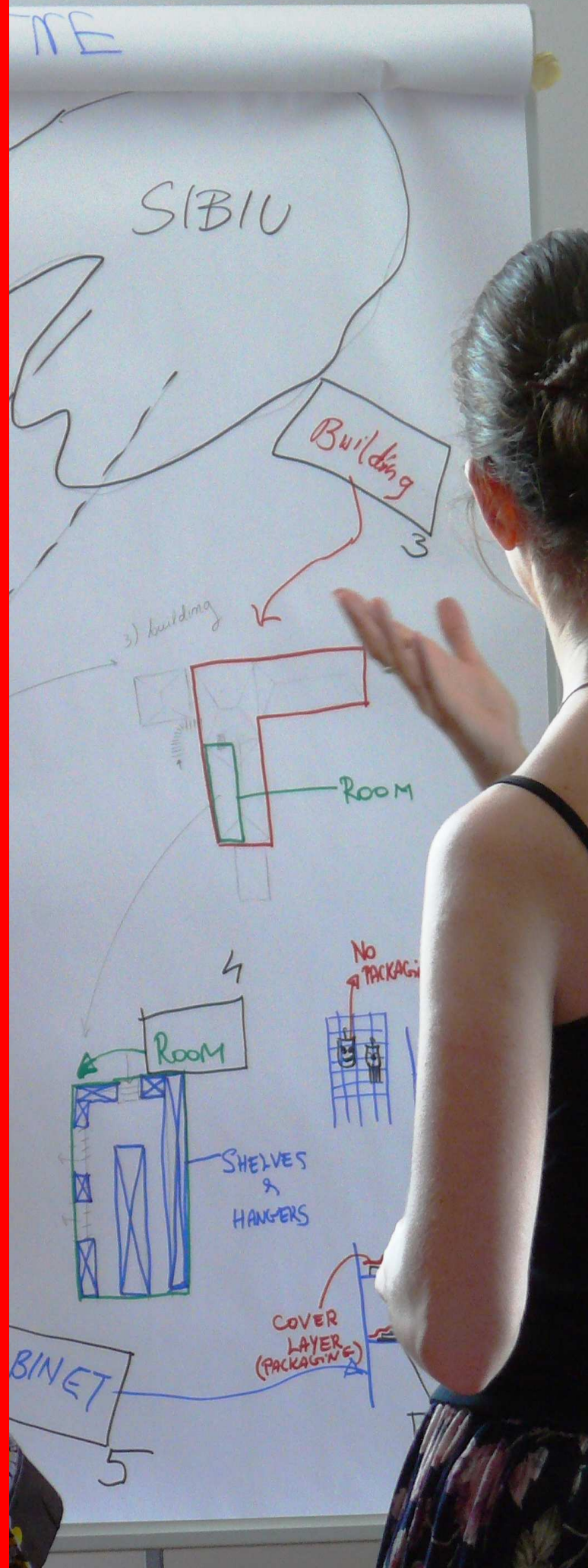


Rome (2005)

# Abstracts

**Wednesday  
28 November 2012**

**Theme 1:  
Methods, Techniques  
and Tools**



## Keynote lecture

### I can see clearly now

**Jonathan Ashley-Smith**

Freelance Consultant, Cambridge, UK

I have been asked to give a personal view of the risk-related developments I have noticed since I wrote a book with the word 'risk' in the title. And to explain where I think we are now. And to predict what the future holds. Successful 360 degree vision requires great clarity.

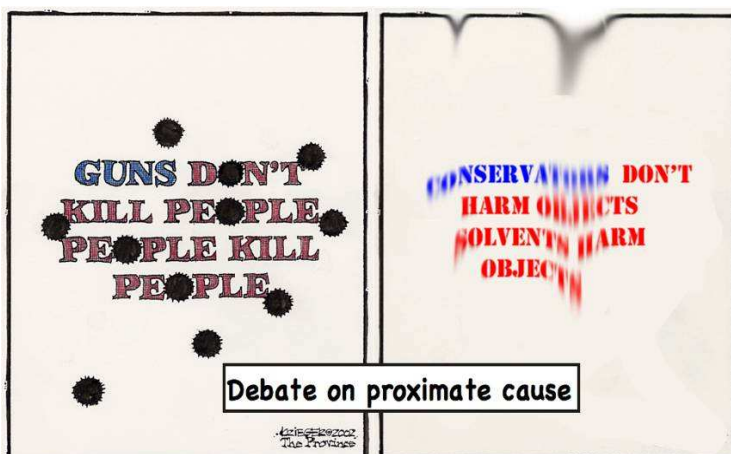
My chosen title comes from the lyrics of a song: *"I can see clearly now, the rain is gone, I can see all obstacles in my way"*

The first-person narrator is at a point 'now' and has a plan to be somewhere else in the future. He believes he has identified all the obstacles. He makes an optimistic prediction that it is going to be a bright bright sun-shiny day. But at the moment he is still at the point 'now'; the day and the journey still lie in the future. Either he is just making wild guesses or his assessment is based on knowledge, probably gained from past experience.

My title also reflects the fact that I ought to have a clearer vision, after sixty something years of life and 18 years thinking about risk. What I can see clearly now is the extent of my uncertainty.

The idea of a purposeful journey puts 'risk' firmly in the business arena. It is not about just sitting still and counting the distant obstacles, it is about planning a successful enterprise. The relatively new ISO standard defines risk as "Effect of uncertainty on objectives". Bean-counting is not a business; declaring objectives and looking for successful outcomes is. One business-risk-related project that I have been involved in is the Risk Awareness Profiling Tool, RAPT. This is a free web-based assessment tool that allows a museum manager to assess whether his/her organization is aware of all the business risks.

In 2008 I made a prediction that the profession's passion for self-regulation would subside and we would soon lose interest in conservation ethics and environmental standards. Both standards and ethics describe ways of running a business, and imply decision-making under uncertainty. So they are about risk. Needless to say my prediction was wrong.



Given a consistent record of poor prediction I'm a bit cautious about saying what lies ahead. One way to minimize uncertainty is to say what I hope to do. One ambition is to produce a general museum business risk model. This would allow museum management to be a full-blown agent of deterioration rather than relegated to being just a 'magnifying factor'. To do this requires looking at the chain of cause and effect, and determining at which point control can be effected efficiently. Start with the idea that "guns don't kill people, people kill people" and try applying it to relative humidity.



## **Kick-off**

### **Risk Management - so many choices, so many methods**

#### **Agnes Brokerhof**

Cultural Heritage Agency of the Netherlands, Amsterdam

Or 'so many methods, so many choices'. During the three days of this meeting a range of methods and tools for risk management will be presented. Different as they sometimes may seem, they all go back to living with uncertainty and making decisions with the future in mind; decisions supported by sound arguments and with power of conviction.

Carrying out a full risk assessment requires stamina, time, knowledge and information. We see that this is a major hurdle for heritage managers. So there needs to be a reason to put in the effort, the outcome has to be worth it, and effort needs to be in the right proportion to outcome. The decision determines the method. For the choice 'acid free box or not' an assessment of the most relevant risks suffices. The choice between conservation treatment X, Y, or Z requires an assessment of the need for treatment (the risks of doing nothing), risk reduction and new risks introduced by the different options. Determining the priorities for collection care requires a comprehensive identification and analysis of all possible risks.

There are also the availability of knowledge and uncertainty. Despite more than half a century of conservation science, we can say little about the 'service life' of heritage, the rate of degradation or the chance and effects of incidents in museums. There is no point in analyzing risks in detail when proper knowledge and information are lacking. Therefore, also the quality of our data determines the choice of method. And why put in a lot of effort to acquire data that will not influence the outcome of the decision? For most decisions a risk matrix with argued scores is the point of departure. When decisions need more solid foundations and their arguments will be scrutinized, a well-informed risk scenario with at least a semi-quantitative assessment is required. When the stakes are high and the decisions far-reaching, it is worth time and effort to reduce uncertainty and make detailed estimates of specific risks, generic risks, complex risks, multiple risks.... CPRAM offers an entry into that world. We have only just arrived at the doorstep of 'Event Tree Analysis', 'Fishbone' and 'Bow tie' diagrams.

These three days present the experiences with application of various methods in different decision contexts and with different levels of knowledge. The technical talks on the first day provide additional information on a number of agents of deterioration and introduce useful tools for risk identification, analysis and mitigation. One concept that evolved through the years is that of managing heritage values. Robert Waller introduced the 'Loss of Value' in his CPRAM method in the 1990s as dimension to express the different changes and damages. In our courses we have complemented it with the 'value pie'. The third day of this meeting looks at values, pies and the way in which they are used to communicate aims and means of heritage preservation.

Looking at the situation in the Netherlands, I come to the conclusion that we have come a long way since our start with Robert Waller in 2003. In our cooperation with ICCROM and CCI we have been able to develop our thinking further. And thanks to working with our colleagues in the heritage institutions home and abroad, we have come to the point that we can share all we have learned, developed, and know in our Dutch 'Digital Handbook for Collection Risk Management'.



## **A Critical Evaluation of Risk Management Issues at the World Heritage Site of Congonhas, Minas Gerais, Brazil**

**Luiz Antonio Cruz Souza** and **Willi de Barros Gonçalves**

Federal University of Minas Gerais, Belo Horizonte, Brazil

The world heritage site of the Sanctuary of Bom Jesus of Congonhas, in Minas Gerais, Brazil, presents an outstanding example of outdoor exposed soapstone sculptures. The sanctuary is situated in Minas Gerais, south of Belo Horizonte, and was built in the second half of the 18th century. It consists of a church with a magnificent Rococo interior of Italian inspiration; an outdoor stairway decorated with soapstone sculptures of the prophets; and seven chapels illustrating the Stations of the Cross, in which the polychrome sculptures by Aleijadinho are masterpieces of a highly original, moving, expressive form of Baroque art. Our presentation discuss the difference in approach to the preservation of the site by the way we look at it today in terms of risk management and the way it was performed some 20 years ago, in terms of the degradation patterns and mitigation processes.

## **Development and application of a risk management framework for protecting the world heritage site of Petra**

**Paolini A.<sup>a</sup>, Vafadari A.<sup>a</sup>, Cesaro G.<sup>a</sup>, Santana Quintero, M.<sup>b</sup>, Vileikis O.<sup>c</sup>,  
Van Balen K.<sup>c</sup>, Fakhoury L.<sup>d</sup>**

a UNESCO Amman Office, Culture Unit, Amman, Jordan

b Carleton University, Civil and Environmental Engineering, Ottawa, ON, Canada

c Raymond Lemaire International Centre for Conservation (RLICC), KULeuven, Heverlee, Belgium

d GJU- German Jordan University, Amman, Jordan

Identification, assessing impact and mitigating risks -preventively or actively- at heritage sites require holistic and systematic methodology, which when applied, can provide site managers the possibility to make appropriate decisions to protect the significance and integrity of sites and monuments, as well as, to protect stakeholders and visitors to the site.

This presentation examines a risk management methodology developed using existing risk management approaches and literature, mainly two concepts developed for assessing and reducing risks to collections and artefacts, the Cultural Property Risk Analysis Model: Development and Application to Preventive Conservation at the Canadian Museum of Nature by Waller (2003), and a similar approach proposed in the Risk Management Australian/New Zealand Standard (2004) and adopted by the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the Canadian Conservation Institute (CCI)-Institute for Cultural Heritage of the Netherlands (ICN), for their courses in preventive conservation and risk reduction to collections. These approaches have been adapted and enhanced to be applied at heritage sites, in order to provide a systematic approach for heritage managers to identify, assess, and mitigate risks due to natural and anthropogenic threats. The risk assessment has been applied at the selected structures and area (pilot area) of the Petra Archaeological Park (PAP) carried out by a team of experts from the UNESCO Amman Office, Raymond Lemaire International Centre for Conservation (University of Leuven), Petra Development Tourism and Region Authority (PDTRA), and Jordan's Department of Antiquities (DoA), as well as, experts from Jordan.

The risk assessment application used non-intrusive techniques, which involve "rapid" visual inspection, use of off-the shelves information management systems (MEGA-J), simple global navigation satellite system (GNSS), and digital photography. The predefined categories of threats from MEGA-J (Middle Eastern Geodatabase for Antiquities-Jordan) -Jordan inventory and management tool for archaeological sites-, has been used to identify and record threats. Quantitative and qualitative methods for risk assessment have been applied to assess the impact of risks. The approach takes into consideration the comparison of vulnerability to sites with the value assessment to prioritize monuments at risk based on their importance of significance and magnitude of risk, in order for the authorities to plan more in-depth assessment for those highly significant monuments or areas at risk.

More studies and field works need to be done in order to analyze the results of the risk assessment fieldwork on the pilot area, and to undertake the complete risk management steps in close involvement with the local authorities and site managers. This proposal for application of a systematic method for risk assessment and management as a preparedness tool will not only benefit the site managers at the PAP but also other national and international stakeholders concerned with the management of World Heritage properties. Such approach is envisaged to be part of the overall management and conservation plans of the sites.

## **Two different approaches - disaster risks and heritage risks**

**Rohit Jigyasu<sup>1</sup>** and **Vesna Zivkovic<sup>2</sup>**

1. Conservation & Risk Management Consultant, Chandigarh, India

2. Central Institute for Conservation, Belgrade, Serbia

The notion of cultural heritage has undergone a radical change over the last few decades. It is no longer categorized merely as movable and immovable heritage. Rather it is being increasingly understood as a product of multiple interrelationships between human beings and natural environment resulting in cultural resources in which movable and immovable components of heritage are interconnected in multiple ways. At the same time, cultural heritage risk management is now an emerging area that seeks to mitigate various risks to cultural heritage. This paper seeks to draw linkages between two different approaches for risk management: one dealing with disaster risks and the other dealing with collections and both catastrophic and slow and cumulative risks by considering the terminology, methodology and tools used in these two approaches. It builds a case for integrated approach of risk management by addressing all kinds of risks to both movable and immovable heritage components of these complex cultural resources.

## **Discussion on methods**

Moderated by Janneke Ottens and José-Luiz Pedersoli



## Scenario schemes: tools for identification, analysis and mitigation

**Bart Ankersmit**

Cultural Heritage Agency of the Netherlands, Amsterdam

Although a lot of useful information that can be used in risk management is available on Internet and (inter)national literature, most of this is not used to its full potential by museum professionals. The RCE felt the obligation to provide easy access to background information that can be used directly in collection risk management. During several case studies and educational exercises it was recognized that there are several topics that needed to be made clearer for the collection manager to enable a proper management of risks. Information that is generally lacking includes:

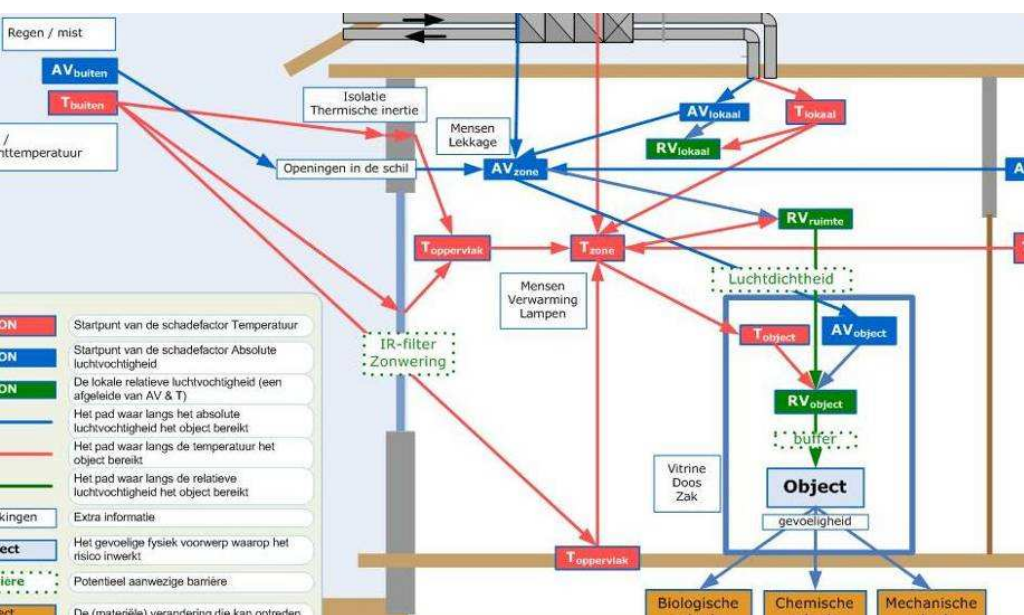
- Background knowledge about the agent of deterioration;
- Coupling theoretical hazards to the actual situation (reality);
- Knowledge about the of institutional mitigation strategies present or lacking;
- Understanding and analyzing efficiency of mitigating strategies;

The RCE decided to develop so-called scenario schemes that would overcome these issues. These schemes should provide the user with generic information that can be used in specific situations. The scheme is a graphic representation that shows how specific sources of an agent of deterioration follow a specific pathway, passing barriers, to reach an object, causing a material change. The accompanying text contains the most relevant information needed to identify and analyze specific risks.

The scheme is intended to be used to develop a comparable map of the user's specific situation indicating sources, barriers, zones and objects location. It is believed that drawing such a risk map allows analysis of:

- The relation between source-barrier-object and change, which can be used as short risk scenario sentence;
- The risk pathways: i.e. from source → barrier → object and from object → barrier → source and it shows how risks are linked by specific barriers;
- Of indentifying the weakest link in the chain (barrier with lowest efficiency) and how different pathways (ie risks) (potentially) pass one specific mitigating barrier

Ultimately it is expected that drawing these maps helps in overcoming in implementing best practice mitigating options by forcing to identify efficiency of barriers.



Detail of the scenario scheme for indoor climate

## Pollution Pathway Method to support indoor air pollution decision-making

Giovanna Di Pietro<sup>\*1</sup>, Frank Ligterink<sup>2</sup>, Gerrit de Bruin<sup>3</sup>, Henk Porck<sup>4</sup>

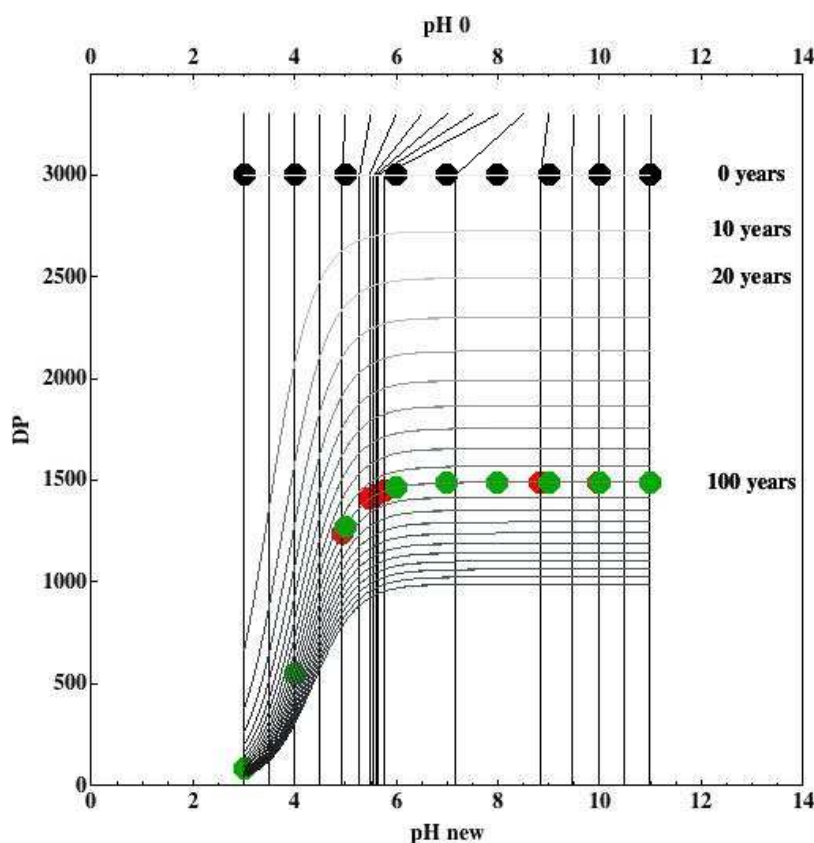
1) Hochschule der Künste Bern, Bern, Switzerland

2) Cultural Heritage Agency of the Netherlands, Amsterdam, the Netherlands

3) National Archive, The Hague, the Netherlands

4) Koninklijke Bibliotheek, The Hague, the Netherlands

To support actual decision-making in cultural heritage institutions, the current risk management methodology would benefit from a stronger focus on risk treatment. We present a new approach to risk management in libraries and archives for the single agent indoor air pollution focusing on mitigation measures. The Pollution Pathway Method allows to calculate whether the positive effect of chemical filtering of the air, often regarded a necessary measure by paper-based institutions, really counterbalances the cost of initial installation, maintenance and energy consumption of the filters. It is shown that dominant mechanisms leading to loss of collection value can be identified and quantified by mathematical modeling. Application of the Pollution Pathway Method in practice (Copenhagen, Bern) has demonstrated its success.



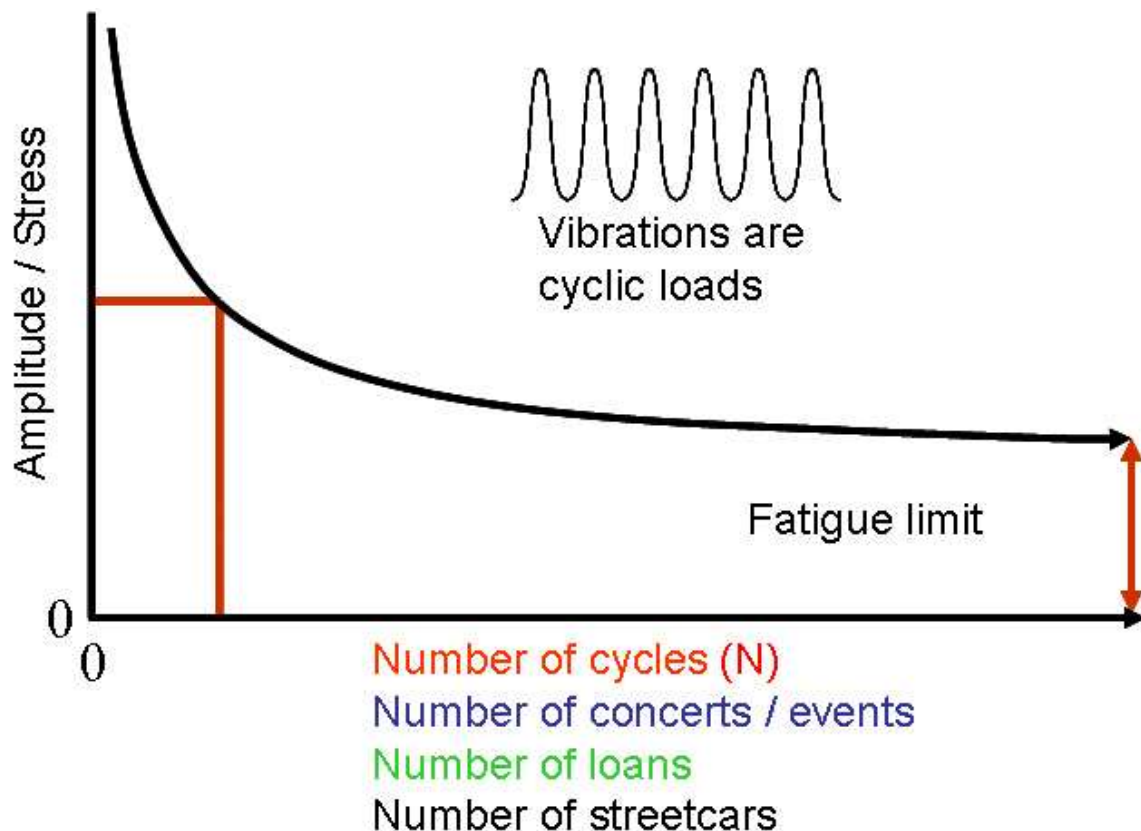
*Predicted DP decrease of paper of different initial pH exposed (red dots) or not (green dots) to 150 ppb of acetic acid.*

## Vibrations and cyclic loads - how strong AND how long?

**Bill Wei**

Cultural Heritage Agency of the Netherlands, Amsterdam, the Netherlands

The effect of vibrations and other cyclic loads on the condition of sensitive objects is cumulative. In the past, virtually all questions, research and literature on vibration effects only deals with what levels of vibrations are allowable for given types of objects, that is, how strong may the vibrations be. However, the effect of vibrations is cumulative. One must also know how long they last. In this presentation, this concept of how strong and how long, known in the engineering world as fatigue, is presented, and the application of fatigue data to the assessment of possible damage to objects is discussed.



## **Community involvement in disaster risk management**

### **Punto Wijayanto**

Badan Pelestarian Pusaka Indonesia (Indonesian Heritage Trust), Jakarta, Indonesia

Located in the ring of fire area, Indonesia has serious disaster threats. Disasters can destroy not only on physical infrastructure and physical cultural heritage, but also intangible cultural heritage. I will present a case of disaster risk management efforts in a disaster-prone area Kotagede (Yogyakarta), a Javanese town built in the 16th century. On May 27th 2006, earthquake struck the region of Yogyakarta and Central-Java. The entire area surrounding Kotagede suffered damage. As result, dozens of historic buildings were totally collapsed or heavily damaged (see also <http://www.wmf.org/project/kotagede-heritage-district>). Until mid-2012, the rehabilitation and reconstruction efforts have been implemented. During that time, some traditional wooden buildings have already been restored. Recognizing that earthquake is a permanent threat to Kotagede, disaster risk management becomes necessary. For this reason, one of the rehabilitation and reconstruction activities is the preparation of village planning documents. In the preparation stage, the community is invited to recognize heritage assets, disaster threats and preparedness and to think about efforts to overcome problems.



## The risk of theft in Dutch museums

**Marja Peek**

Cultural Heritage Agency of the Netherlands, Amsterdam, the Netherlands

There will always be thieves and collections cannot simply be kept behind bars or in a safe. To select appropriate security measures the risks of theft to museum collections should be assessed. Yet there is actually little knowledge available to assist risk analysis. How many incidents occur each year? Which objects are stolen and how many at a time? Which and how many objects are recovered after theft and how? Because of the lack of data prevention of theft is often based on best practice and technical or financial feasibility instead of what is really relevant and effective considering the specific situation.

Therefore, I interviewed museum security experts in The Netherlands to obtain opinions about probability, impact, and effectiveness of security measures for museum theft in the future taking into account current and expected developments in both security technology and criminal interest. The results of this consultation are quantified as much as possible to support risk scenarios with data. The numbers may not suffice for quantitative analysis, but some qualitative conclusions can be drawn.

According to expert opinion a museum in the Netherlands is likely to have one or two theft incidents per year. This seems rather high compared to what reaches media coverage, yet only a small percentage of incidents is made public for various reasons. Of the different types, internal theft is the most likely to occur. Per incident only a few objects are lost (3-4), but if unnoticed, numbers can accumulate over the years to reach hundreds. Opportunistic theft also has a high probability in which case small objects are at high risk. However, in the case opportunistic theft only 1 object is stolen. Burglary has the largest loss of objects per incident, averaging 4 to 5. The probability of recovery of stolen objects in general is estimated moderate. Object registration, reporting losses to authorities, registration in databases, media attention and insurance increases the chance of recovery.

The general trends and rough data generated by this study can be applied in collection risk management. Having a better insight in probability of particular types of theft in relation to the institution's type of objects, can assist in identifying appropriate security measures and indicating strong and weak links in the chain of defence.

In September 2012 a selection of 180 museum employees received a questionnaire on theft incidents in the past five years. This survey will hopefully provide additional data that can be used to complement the earlier study. In my presentation expert predictions will be combined with museum data on occurrence in the past. Together they should provide better insight into the risk of theft.



*External theft in a small community museum in the Netherlands: 6 paintings stolen and 2 paintings damaged.*

## **Asset fire safety (building and collection) for the New Rijksmuseum**

**Björn Peters**

DGMR, Den Haag, The Netherlands

Recently the New Rijksmuseum has been declared the most fire safe building in the Netherlands. This is due to the fact that the fire safety concept does not only aim for personal safety and damage control for the neighboring sites, but provides additional measures and precautions concerning the fire safety of the monumental building and its high value collection as well. In the decision making process, joined by stakeholders as the Rijksmuseum, the government Buildings Agency and the Cultural Heritage Agency the necessary safety level was determined consisting of a comprehensive set of additional passive, active and organizational measures and precautions is composed, based on research on the safety level in museums all over the world. In the design process and the further elaboration of the measurements special attention has been paid to monumental elements within the building like the historical paintworks or existing steel structures so that these elements could be preserved.

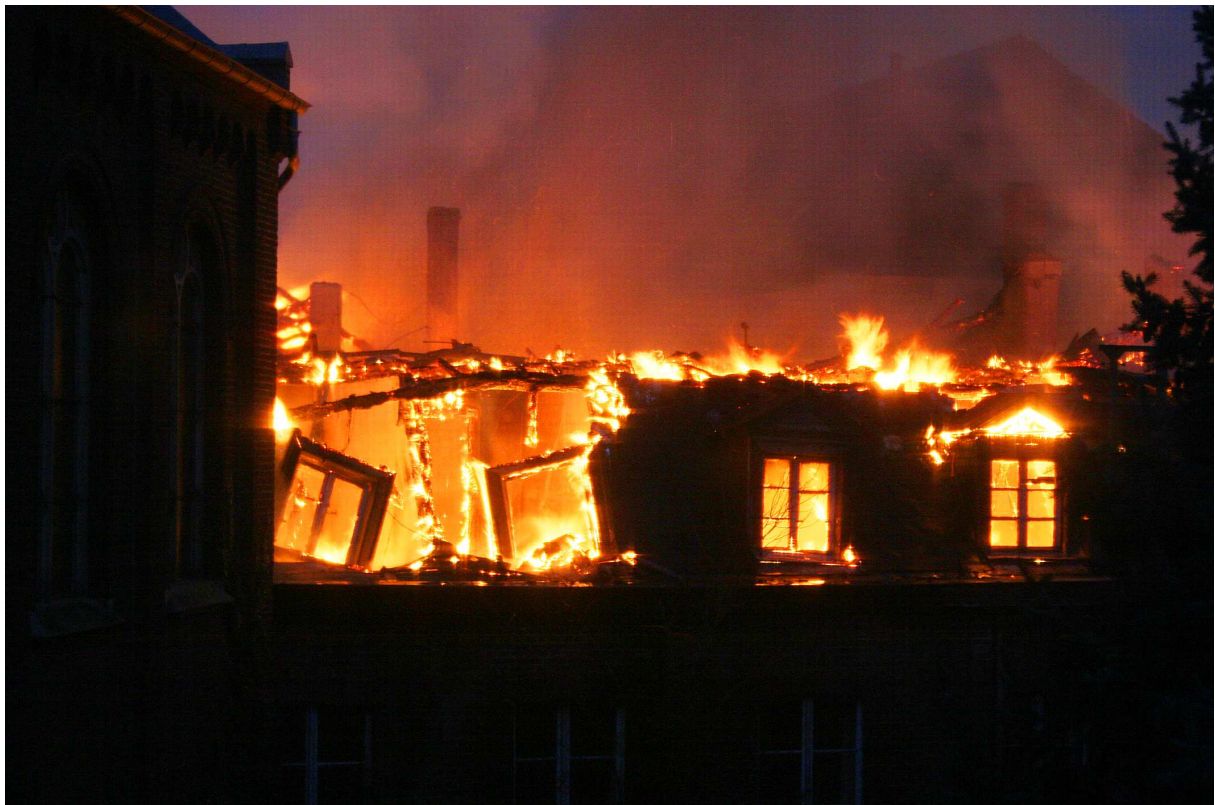
## Equal solutions for fire security in listed buildings

**Bram van der Linden** and **Hanna Pennock**

Cultural Heritage Agency of the Netherlands, Amersfoort, The Netherlands

The department of Safe Heritage brings together specialists in safety and security within the Cultural Heritage Agency. They make the owners and keepers of cultural heritage aware of the necessity of taking preventative measures, and advise them how it can be done. This is not a superfluous luxury, as the Database of incidents in cultural heritage shows. In the past two years for example, practically every week a damage occurred in listed buildings, due to storm, vandalism, theft or fire. (On the second day of the conference a special workshop is dedicated to the registration of incidents.)

In two years 77 listed buildings met with fire; 7 fires were so devastating that the building had to be deregistered. The Dutch legislation prescribes fire safety measures that can be damaging to the historic building. Bram van der Linden advises how to protect listed buildings from fire and, if necessary, from too drastic safety measures. There are different ways to realise the same level of protection. An example of these equal solutions is a relatively simple sprinkler system that can be installed as a form of compartmentalisation, and thus structural interventions can be avoided. This requires a good collaboration with the fire brigade. Although there are many general principles of protection, each building or collection has its own risks and needs a custom-made advice.



*Fire in the St. Gregor Convent in Steyl, in which 'Schutterij Museum' was housed (2008)*

## **Risk map & risk management**

**Firas Othman**

Heritage department, Sharjah, United Arab Emirates

This presentation will talk mainly about the concept of risk maps and its application in mapping territorial danger and vulnerability of archaeological sites. Its use and importance for cultural heritage conservation and preventive policies is illustrated with the experimental primary risk map of Syria which is done on a national scale showing natural and human sources of risks, the vulnerability of sites, and the negative and positive factors and difficulties of this experience, its circumstances, strategy, official concept of this work, the steps of the process and using the geographic information system for it.

The second part deals with the risk management concept by taking my experiment done within the reducing risks to cultural heritage course and the final reports which is done into site scale, how it is useful into cultural heritage conservation its process and steps with comparing between these two concepts risk map and risk management how they complete each other.

Also talking about latest duty and updates about these projects what is going on difficulties problems and what we have to do to manage these negatives and problems, complete this work update and develop it to reach to a good map treatment.

## **Using GIS (Geographic Information System) to improve risk assessment and risk management in a historic residence**

**Wojciech Bagiński**

The Wilanow Palace Museum, Warsaw, Poland

The Wilanow Palace Museum, Poland, is developing a new, very efficient tool to manage the big amount of data generated by preventive conservation staff. Setting data in a Geographical Information System (GIS) software environment is essential here. GIS enables archiving all data in an easily accessible, 2-dimensional matrix rather than as lists. Instead of the commonly used earth surface views (e.g. popular Google maps), products of architectural measurement (layouts of the palace and maps of the residence) have been used as 'base maps'. All data is strictly location-related. This allows integration of all data from the museum's few existing databases, which are usually isolated and used by completely different staff (art historians, technicians, restorers or guards).

The innovation is to combine those databases and create a new spatial database containing data related to all aspects of the property. Access to data is run mainly by context, intuition and familiarity with reciprocal spatial relations between objects, as it is in reality, not by knowledge of thousands of exact names and complicated codes. Most of the tabular data can be represented here by graphic codes (symbols, colours). Moving a cursor and clicking it is like walking and pointing or touching real objects. They can be viewed by linked images, or studied by linked documents as well. Another feature of the system is that data can be placed on an unlimited number of thematic layers, placed over a base map. Layers can be switched on and off in various configurations, which allows control and organization of the stream of data as well as both immediate and detailed analysis of relations between apparently distant phenomena. Such a matrix initiates productive management decisions (for example, once a risk arising from exposure to optical radiation is detected at a specific location, a restorer moves objects from the location or covers the windows with different types of films, etc.). By using the 'zoom in and out' tool a geo-coded spatial database makes another step in developing monitoring systems which establish links between the various scales of monitoring: landscape, site and detail scale, exposed to the same natural and environmental (or even social) influences. Last but not least, there is one particular layer included which presents the 2D matrix in the form of the Wilanow palace layouts filled with simple red-yellow-green code which represents the level of risk. It works as a de-constructed classic rectangular matrix which is commonly used as a risk managing tool nowadays.



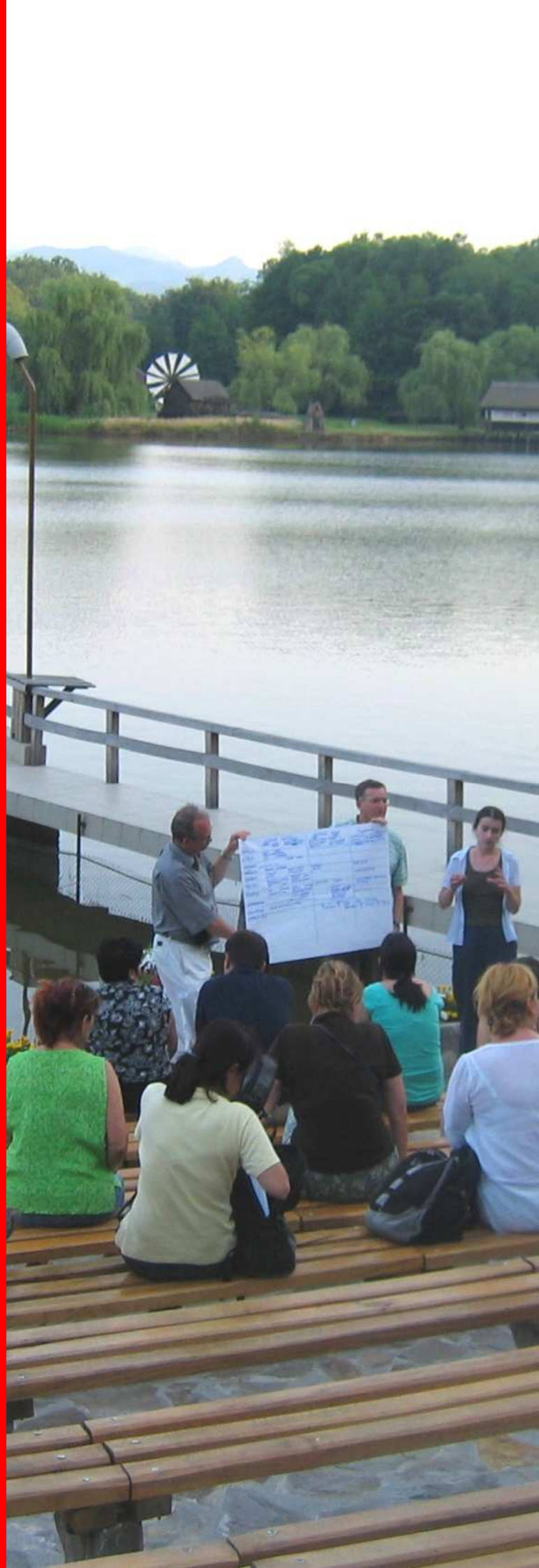
## **Discussion on tools**

Moderated by Vesna Zivkovic and Stefan Michalski

# Abstracts

**Thursday  
29 November 2012**

**Theme 2:  
Risk Management  
in practice  
(Case-studies)**



## **Keynote lecture**

### **The application of cost-effectiveness to risk based decisions**

**Stefan Michalski**

Canadian Conservation Institute, Ottawa, Canada

A significant improvement in the risk management method as taught in the course (and as used by CCI in its own work) has been greater emphasis on the 'Treat risks' step. We not only generate options, we analyze the remaining risk (based on option implementation) and then we evaluate the ratio of this risk reduction to its cost, i.e., the cost-effectiveness of the option. Our intent is to find that mix of options that reduces total risk more than any other mix, given the fixed resources of the institution. Finding this optimum mix however, is not so simple. To begin with, there is always more than just one optimum mix, and it depends very much on the choice of institutional time horizon. Many practical factors also enter option evaluation, such as the existence of special budgets for particular kinds of option, the possibility of new risks created by an option, and even the desire by an institution to at least start on something "manageable" even if it isn't the most effective. Finally, the cost of options that have any hope of reducing very large risks often exceed the resources available. Does this mean the institution should focus on finding more resources, or not? If so, does that mean we have simply fallen into the old habit of asking for more resources rather than using what we have wisely?

In our advice to institutions, we currently use cost-effectiveness in the following way:

1. We focus on options that treat the biggest risks, even if their cost-effectiveness is less than that of options that address smaller risks. Of course, given several options of similar effectiveness, we promote the most cost-effective. If effective and cost-effective options exceed the current budget, their analysis becomes an important argument for special funding.
2. For all those options that address all but the largest risks, the advice is driven almost entirely by cost-effectiveness.
3. Whether or not it dominates the final decision, we recognize that the cost-effectiveness calculation, and its subcomponents of risk reduction and option cost, are valued by the institution as essential pieces of information for their decisions.

In a later talk, Irene Karsten will illustrate the application of some of these issues through various case studies. Here, I want to clarify some of the "big ideas" that underlie the cost-effectiveness calculations, and which may guide us in its use.

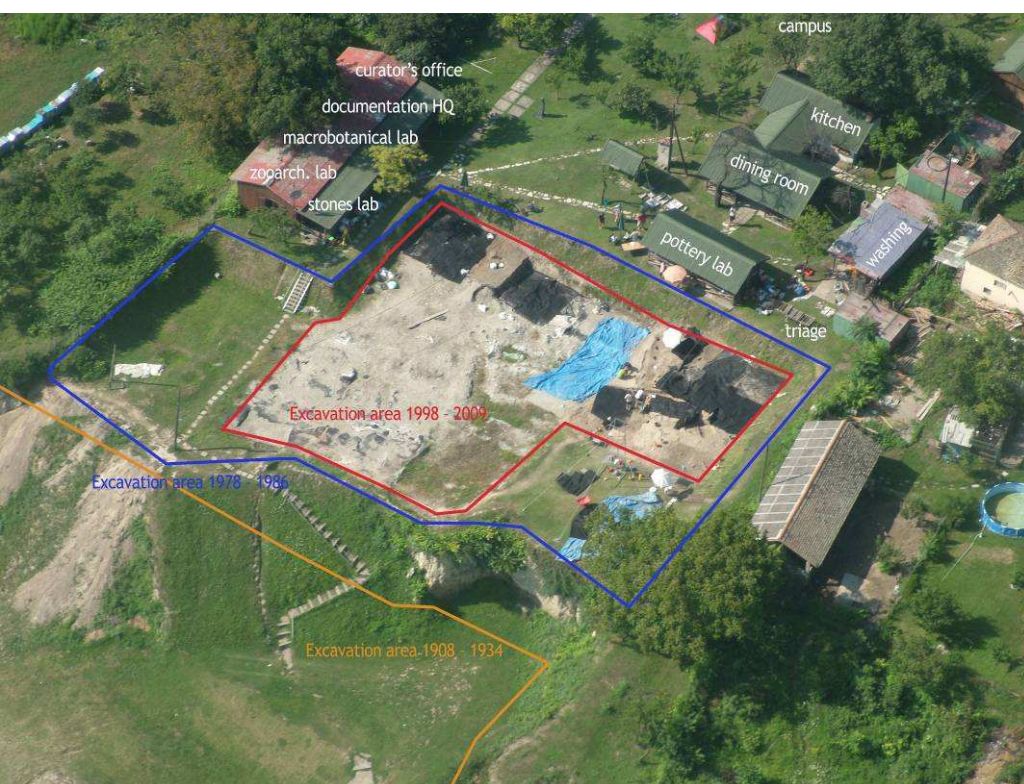
## Kick-off

### Application of risk assessment in the development of a preservation strategy for archaeological sites – Vinca-Belo brdo, Belgrade

**Vesna Zivkovic**

Central Institute for Conservation, Belgrade, Serbia

The archaeological site "Vinca - Belo Brdo" represents a monument of great importance, unique in the region of Southeast Europe and one of the essential elements of the urban development of Belgrade, the capital of Serbia, the territory on which it is located. The site comes under the authority of different boards and various cultural institutions. And with the characteristic geomorphologic profile of a prehistoric tel, within the village, on the banks of the Danube, this prehistoric habitat is a complex challenge for finding a balance between use and preservation. Despite the importance and its complexity there is no management plan or conservation plan for the site. The site was used as a case study for the application of the risk assessment methodology in order to explore the possibilities of including elements of the risk assessment methodology as developed for collections, in the development of the strategy for the preservation of archaeological sites.



Archaeological site  
Vinca, Belgrade, Serbia  
(photo 'thanks to Project  
Vinca')



## Reducing risk to heritage: a radical solution

**Marta J. Guttman<sup>1</sup>, Andrea Bernath<sup>2</sup>, Morten Ryhl-Svendsen<sup>3</sup> and Iulia Teodorescu<sup>2</sup>**

1. Transylvanian Museum Society, Cluj Napoca, Romania

2. ASTRA Ethnographic Museum, Sibiu, Romania

3. National Museum, Copenhagen, Denmark

The presentation introduces the new storage building of the ASTRA Museum in Sibiu. The storage facilities were realized between 2009-2011 with funds obtained through the EEA Funding Mechanism (Norway grant). The tailor-made building was designed bearing in mind not only the needs of the collections but also the sustainability of the investment. Computer simulation checked the designed climate of the storage area and concluded good premises for passive climate in the storage rooms, if insulation is made according to the design, building is airtight enough and dehumidification is added in July and August. The paper presents how the real data matched the simulation and the challenges in the use of the new storages.



*The Astra museum storage building*



## Avoiding the third painter

### Udaya Hewawasam

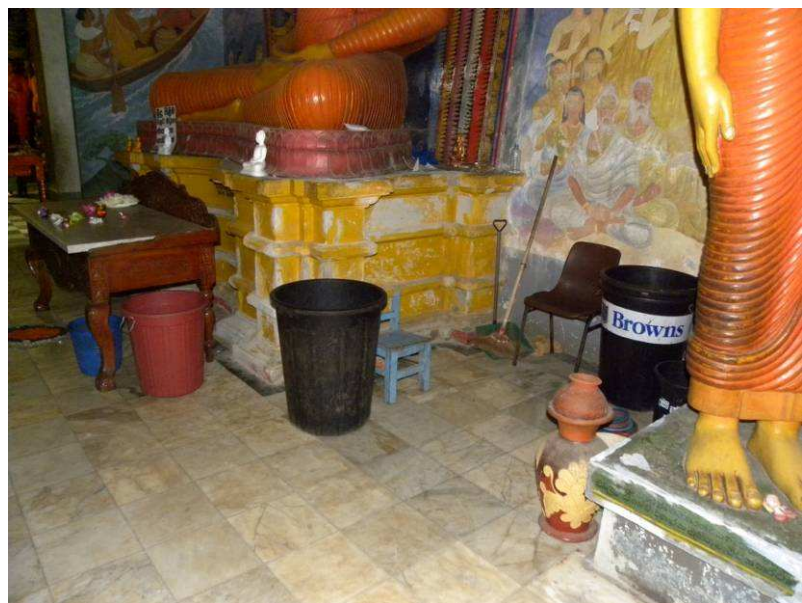
ConsArt Conservation Studio, Boralesgamuwa, Sri Lanka

Bellawila Vihara is a famous Buddhist temple situated in Colombo, Sri Lanka. The mission of a Buddhist temple is to share the Buddha's teaching. The most valuable element for Bellavilla Vihara is the bo tree that has gained historical significance. The second most valuable component of the vihara is the image house. The function of the image house is for devotees to offer flowers and worship the Buddha images and renew their feelings of compassion by (re)viewing the stories depicted through the wall paintings and statues.

The Bellawila image house was built in 1967-9 and the initial sculptures and paintings were done by G. Livera. After 20 years, these oil-based paintings had considerably deteriorated mainly due to the infiltration of water as well as the techniques used by the painter. As a result, in 1990 most of these paintings were removed and the walls were re-painted by Somabandu. And now, according to the stakeholders, Somabandu's paintings are considered more valuable than G. Livera's.

At present Somabandu's oil-based paintings are also showing noticeable levels of deterioration, mainly due to infiltration of water from the roof, walls, and capillary action of ground water. Physical forces due to improper day-to-day maintenance activities are scoring a small loss of value. There was a previous (probably exaggerated) treatment for the bird-pest risk that has led to the blocking or closing of all 3 doors and all ventilation holes. This has created zero ventilation within the image house. Therefore relatively high temperature remains for long periods of time and threaten to shrink the oil-based paintings. The average number of visitors per day is 2,000 and they emit considerably high amounts of water vapor. The loss of value in this case needs to be detected but this high temperature and high relative humidity is creating an uncomfortable atmosphere for pilgrims. On the other hand, these barriers for pest reduce contaminants from outside entering the area. Direct sunlight comes through glazed ventilation holes and lighting at nighttime also needs to be detected. Vandalism and fire risk are at very low magnitudes.

The final risk will be dissociation: the temple authority will ask a third painter to repaint the image house, as it happened 22 years ago. However, the probability of this is very low, as public awareness for conservation practices has been growing widely in the country lately. Also the present risk communication and risk management plan will play a considerable role in reducing this risk.



*Lack of garbage management causes abrasion to painting and loss of sculptured parts*

## Archival and Library Repositories in Slovenia

### Jedert Vodopivec

Head of Book and Paper Conservation Centre, Archives of the Republic of Slovenia, Ljubljana, Slovenia

The Slovenian public archives and library research devoted to the conditions in archival repositories examined depot units in the national archive, all six regional, three public and three church archives and ten library local history collections at Slovenian central libraries and the University of Maribor library. Assessments were made according to an integral methodology on the basis of the 'ten agent of deterioration', presented at ICCROM/CCI/ICN courses on preventive conservation and risk management. The research established that all archival repositories are filled to capacity while there are still many archives at the creators that will need to be transferred in future. All archival repositories, except three, are placed in buildings and premises which were built for entirely different purposes. None of them provide suitable climate conditions. The last new library constructions or purpose renovations of library buildings have not achieved the standards for long term preservation of library materials. In most cases, especially the environmental demands and those to prevent water damage have been neglected. The present research confirms the initial hypothesis that repositories are the basis of every archival and library institution and that in the field of repositories and preservation there is still much work to be done, both at the level of individual archives or libraries and on the level of the ministry or the state. Effective preservation can be mostly achieved with better understanding and correct planning. Therefore all parties involved must be qualified, from investors to executants but, mostly archivists and librarians themselves.



## **Applying a risk assessment framework to a large cross-disciplinary collection at Museum Victoria, Australia**

**Laura Stedman**

Museum Victoria, Melbourne, Australia

Museum Victoria, Australia's largest museum, is now 18 months into its implementation of the Cultural Preservation Risk Analysis Model (CPRAM). The Museum is applying this framework to its collection of 17 million items across Natural Science, History and Technology, and Indigenous Cultures.

42 collection units, across five campuses, have been identified for assessment during an initial five year cycle. A selection of these collection units will be discussed, including Mineralogy, Numismatics, Philately, Entomology and Arachnology (pinned specimens), Indigenous Archaeology and the 'Pumping Station' heritage site.

After 18 months we can reflect on what we have learnt about implementing a whole-of-collections customised risk assessment framework. This includes:

- project management requirements
- the risks that have been identified

using the risk results to inform mitigation at a 'micro collection management' level through to a strategic and corporate level

## Decision making in collection care

**Andor Vince**

The Fitzwilliam Museum, Cambridge, United Kingdom

The presentation discusses a case study at the Fitzwilliam Museum of how informed decisions in collections care can be made by applying the risk management methodology developed for the 'Reducing Risk to Heritage' courses organized by ICCROM, the Canadian Conservation Institute (CCI) and Cultural Heritage Agency of the Netherlands (RCE).



## **Risk management: the case study of the wooden collection in the storage of the Folk Art Museum of Athens, Greece**

**Christina Sperantza**

Directorate of Conservation of Ancient & Modern Monuments, Hellenic Ministry of Culture & Tourism, Athens, Greece

The presentation deals with the implementation of Risk Management in the collection held in storage at the Folk Art Museum (M.E.L.T.) in Athens, Greece. The collection in the museum central storage facility consists of 14,327 artifacts, of which 2,135 are made of wood (woodcarvings, traditional furniture, ecclesiastic objects, tools and household tools). The goal was to establish the context, identify, analyze and evaluate the risks to the wooden collection, in order to propose a plan of action and communicate the results to the stakeholders. The results showed that the risk with the greatest magnitude and the most catastrophic impact to the wooden collection was fire. The measures to reduce this risk are easy to apply and of relatively low cost. The risk of fire was followed by the risks of dissociation and of physical forces, while the lowest risks appeared to be the action of criminals&vandals and water.



## **Reducing Risks at Tate**

**Patricia Smithen** and **Deborah Potter**

Tate, London, United Kingdom

In 2012, a new 'Policy for the Care of Collections at Tate' was adopted replacing a one-size-fits-all approach with one based on identifying, evaluating and reducing risks. In Conservation, we review options against a defined list of criteria and decide which standard of care is appropriate, working to minimise risks within available resources while continuing to balance preservation and access. We will illustrate how this is applied through case studies describing challenges presented by contemporary art installations. Sustainability is having an increasing impact across cultural heritage and this presentation will also describe several recent initiatives being implemented to increase Tate's energy efficiencies, while reducing its carbon footprint and risks to its collection. A summary will review both the benefits and limitations of these initiatives and our plan for moving forward within the context of the UK and Internationally.

## **Managing risks through environmental management in temporary exhibitions**

**Willi de Barros Gonçalves** and **Luiz Antonio Cruz Souza**

Federal University of Minas Gerais, Belo Horizonte, Brazil

This presentation reports the risk management consulting work, performed by LACICOR, involving six temporary exhibitions held since 2009, in the Fiat House of Culture, located in Belo Horizonte, Brazil. The building was built in a contemporary style, with waterproof concrete roof, predominance of masonry walls and a balanced use of windows. Environmental monitoring started during assembly stage to verify the system behavior and possible adjustment needs. Weekly reports were produced, to inform the client about the system performance and needs. The presentation reports how environmental monitoring data and derived preservation metrics were used to support technical improvements in the HVAC system, in order to minimize possible risks to the conservation of artworks. It also discusses the interaction between conservation scientists and other people involved with the exhibitions, as the owners of the artworks, curators, local production team and HVAC maintenance engineers.

## **Discussion on practice (I)**

Moderated by Irene Karsten and Frank Ligterink

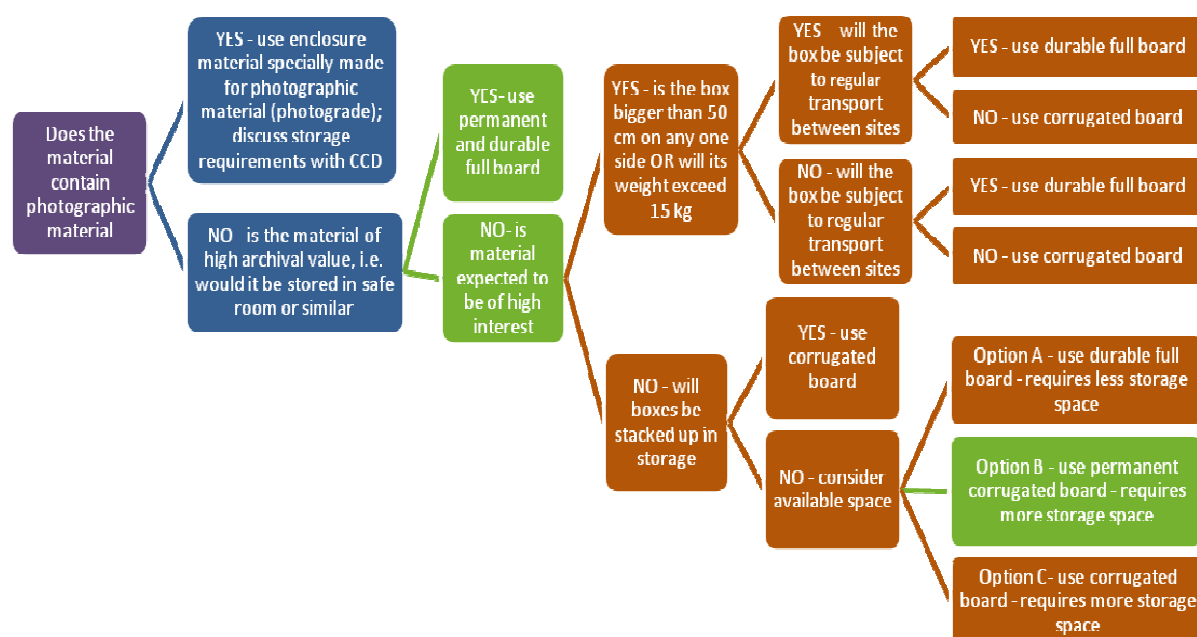
## Between risks and costs: transferring documents for permanent preservation

**Anna E. Bülow**

The National Archives, London, United Kingdom

In 2009, records legislation in the UK has changed from a 30-year retention schedule to a 20-year retention schedule. In practice, this has meant that government departments will select, prepare and transfer twice as many documents for permanent preservation to The National Archives between 2013 and 2023. In order to effectively support government in this process, The National Archives has to keep both costs to other government departments and the long-term implications for permanent preservation and accessibility in mind. Reviewing current guidance in consultation with users as well as latest research findings has lead the Collection Care Department (CCD) to propose a simple decision tree for the choice of boxes depending on size and vulnerability of records, anticipated public interest, as well as likely storage location. Three basic types of board are being used (see scheme): photo-grade board for use of files containing photographic material (blue); permanent board, which has less than 1% lignin content, neutral sizing, alkaline reserve of 2-10%, and no other fillers (green); durable board, which is from 100% chemical pulp and may be laminated (brown). Both corrugated as well as full board is permitted, where decisions will be guided by the archives' storage and transport requirements.

The resulting guidance is intended to support colleagues to make informed decisions together with government departments, balancing costs and risks to documents. They have been developed for current use within government and may change as requirements change.



*The National Archives 'Box Decision Tree', version 2012*

## **Risk Assessment study of the 'Diao-lou' stone towers in Danba County, China**

**Yi Qing Zou**

Cultural Heritage Conservation Center, Tsinghua University, Beijing, China

'Diao-lou' are tall stone towers built by Jiarong Tibetan in the West of Sichuan Province. There are over 500 'Diao-lou' distributed along the five river valleys. 'Diao-lou' with Tibetan villages are an important cultural landscape site in China. It was nominated as the sixth national heritage site in 2006 and titled 'The Kingdom of Diao-lou'. The regions of the 'Diao-lou' have several natural hazards like earthquake, flood, and landslides. Human activities like a hydropower station and high voltage transmission net constructions have increased the heritage risks and treats. Social developments have brought about changes in the life style of the local Tibetan community and traditional craftsmanship has declined. All these developments have complicated the conservation of the 'Diao-lou'.

A risk assessment of the natural and human threats to the 'Diao-lou' in Danba will provide quantitative and qualitative data, insight and conclusions. Results of the case study will be used in decision-making and general conservation planning of the 'Diao-lou'.



*Diao-lou*



## **Risk management in the field: the case of the archaeological and paleontological site of Pinilla del Valle (Madrid, Spain). Problems and dynamic around sets, constantly changing.**

**Ana Pastor Perez**

Universitat de Barcelona, Madrid, Spain



*View of the top of Cueva of Buena Pinta from Cueva Des-Cubierta*

The presentation describes a study of the implementation of risk management at an archaeological and paleontological site attached to the Regional Archaeological Museum of Madrid (Spain): Pinilla de Valle. The interdisciplinary study is based on the work and experience of a number of experts working in this space. The site is not open yet to the public. The risk management process is studied during its application at the time of excavation. The problems encountered, dynamic, new perspectives in the implementation of the method and future applications in the frame of Spain's economical crisis are discussed.



*Panoramic view of Cueva Des-Cubierta*

## An approach to assessing climate risks to organs in historic churches

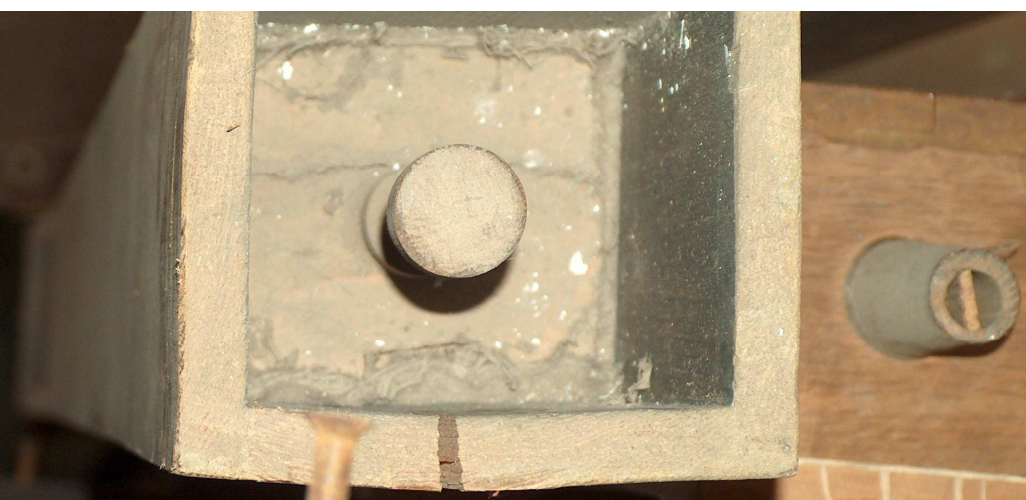
**Marc Stappers**

Cultural Heritage Agency of the Netherlands, Amersfoort, the Netherlands

This presentation discusses how the risk management methodology was used to advise church staff on the risks to historic organs in historic churches.

In general, the biggest threat to historic organs in heated churches in the Netherlands is supposed to be an incorrect relative humidity. Large seasonal relative humidity changes are the result of intermittent heating for thermal comfort in winter combined with a low absolute humidity outside during the spell of frost and high relative humidity in summer due to low indoor temperatures. This causes shrinking and swelling of hygroscopic materials of which historic church organs are constructed like wood (oak) and leather (sheep).

To prevent those materials from damage like cracking and compression set one of the most commonly proposed mitigation strategies is the implementation of (local) humidification. This introduces risks like mould growth, leakage of water and corrosion of metal organ parts. In order to decide whether or not to dehumidify, a risk assessment method is used. Based on long term climate data, risks due an incorrect indoor climate are identified and finally mitigated.



*A cracked organ pipe*

The assessment is done by combining measured indoor climate data with calculating the experienced RH using the response time for different organ parts. The surface of the object will pretty much experience the measured indoor climate. This will cause a difference in moisture content between the surface and the core of the organ part and thus the built up of stress. In the worst case this will lead to cracks and thus wind loss in the wind chest and the wooden organ pipes and ducts.

To determine if stress is acceptable, the measured and calculated data are compared with international research data for elastic and plastic deformation and failure of wood for the actual case and the proposed case with humidification with different humidifying capacities. Based on the outcome of this comparison a more risk based decision can be made which is of great practical importance to help clients that are less well informed because it gives a realistic cost effective solution with no or minimal loss of value and without introducing new risks.

## **Discussion on practice (II)**

Moderated by Bart Ankersmit



# Abstracts

**Friday  
30 November 2012**

**Theme 3:  
Values and  
Communication**



## Keynote lecture

### Perceiving risks: Feeling and thinking

**Robert Waller**

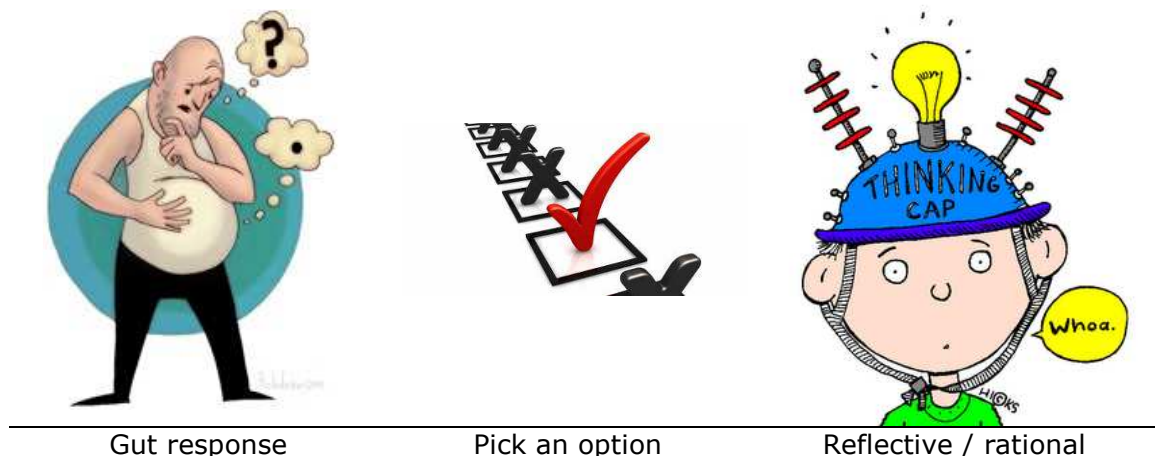
Protect Heritage Corp., Ottawa, Canada

This paper explores the ways in which we feel and think about risks. Participants will be actively involved in this presentation. Together, we will explore aspects of how our minds produce feelings and thoughts about the importance of risks. We will see that the incredible speed and versatility of our minds is achieved at a cost of sometimes erring in systematic and predictable ways. We will also see how these systematic errors, known as flaws and biases in our heuristic (rule of thumb) thinking, adversely affect our judgements about how to best achieve preservation.

Understanding the roles of heuristics, biases, and framing in judgements and decisions has been an active pursuit in psychology over the past four decades. Broadly accepted now is the theory that two types of mental processes, Type 1 and Type 2, are involved in our feelings and thoughts, including feelings and thoughts about risks. Type 1 processes are characterized as being rapid, intuitive, automatic, etc. They are "gut responses" or feelings. Type 2 processes are characterized as being conscious, analytic, reflective, etc. They are "head responses" or reasoned thoughts. Recent refinements to those theories are providing better insight into the underlying reasons for our perceptions of the importance of risks to differ from actuarial or calculated measures of risks. Most importantly, those understandings highlight the necessity of using a well-defined, structured model to support rational thinking.

A clearly defined, comprehensive model facilitates useful alternating between open and closed thinking which is essential for both setting context and being comprehensive in identifying risks. A sound model also enables us to structure rational thinking effort (a Type 2 process) in a way that supports learning to the point of expertise development (creating appropriate and correct Type 1 processes). Such a model is not necessary for simple ranking of recommendations for ways to reduce risks. However, an adequate model is critical for enabling clear accountability for preservation. That accountability is, in turn, required for the responsible operation of heritage preserving institutions as well as for the definition and development of the field of preventive conservation.

*Understanding how we are thinking (or not) .....*





## **Dealing with new challenges**

**Irene Karsten**

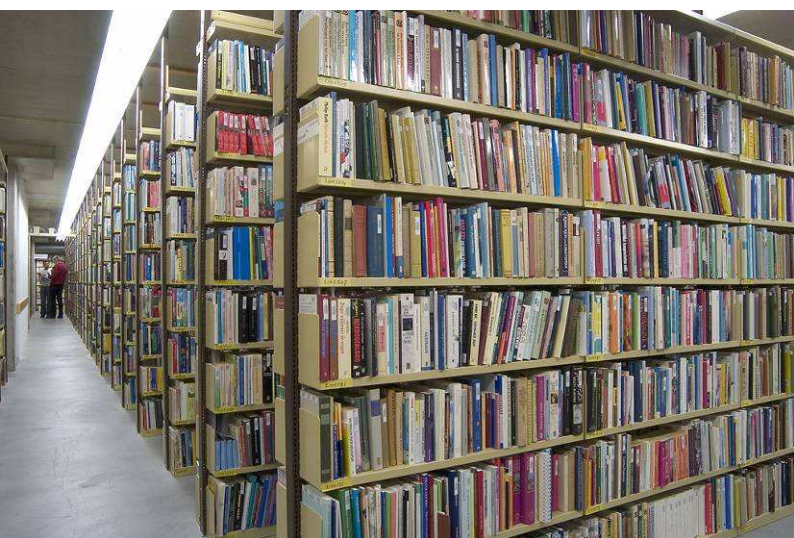
Canadian Conservation Institute, Ottawa, Canada

The Canadian Conservation Institute has applied the method used in Reducing Risks to Collections courses to two historic house museums, a fine art gallery and a provincial archive. This paper will review challenges encountered with respect to key steps in the risk management process. In consulting with external clients on the relative value of collections, we have integrated monetary and non-monetary assessments, calibrated relative item value across value pie categories including artifacts and building components, and assessed the impact of assuming equal value for all objects. We have developed interesting approaches to analysing risks such as the degradation of medium-stability archival collections, fire during construction, and tornadoes. Risk reduction modeling has provided support for major interventions when the risk is high but also for simple options such as budgeting for knowledge transfer when a building maintenance person retires or reinstating the practice of closing blinds in a historic house museum.

## Values and risks: collection care in the National Library of the Netherlands

Tanja de Boer

National Library, The Hague, The Netherlands



*Storage at the Koninklijke Bibliotheek, National Library of the Netherlands.*

The Koninklijke Bibliotheek (National Library) is building and equipping the National digital library. To support this vision a new Collection Care Plan was written in 2010, which is currently being put into operation. It sets out a strategy for integrated, efficient and effective collection care for both digital and physical collections.

The starting point for prioritizing levels of conservation and preservation is rationalised selection, for which we use value assessment. Research- and cultural values of collections are identified, qualified and quantified according to a limited set of characteristics.

Valuation is then combined with risk-indication. Based on expertise and experience we can indicate risks to be expected for different values.

The last step is designing a set of preservation- and conservation levels, applicable to specific collections, which share specific values and a sensibility to specific risks. The levels and the actions that go with them are aimed at preventing loss of value.

## Value assessment and risk management at 'Altawelah Tanks' in Yemen

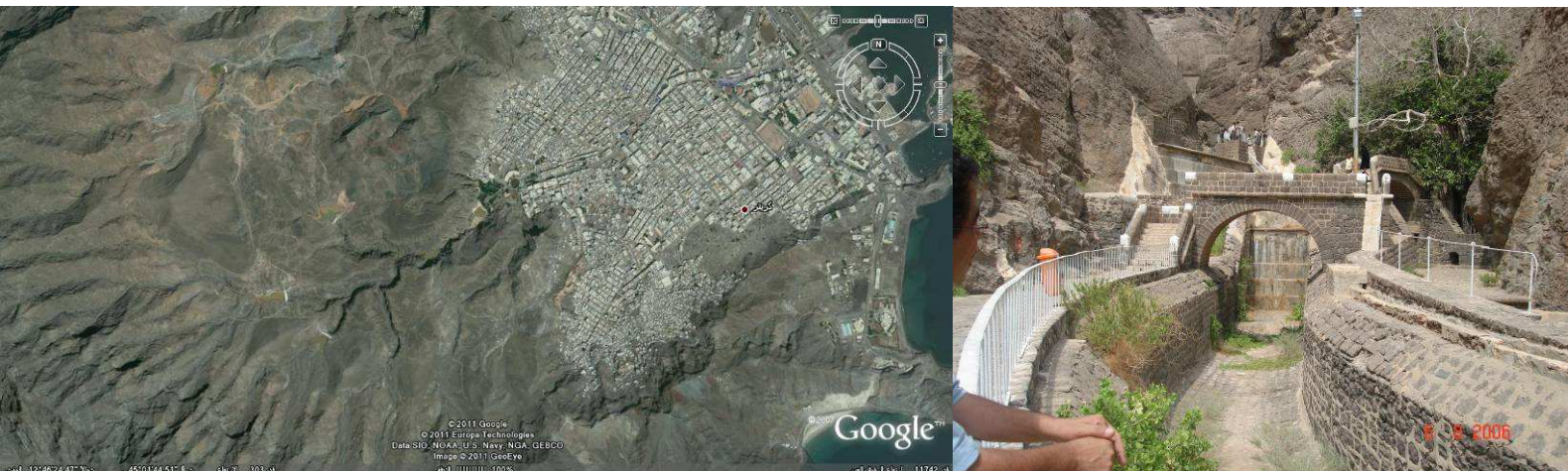
**Gamal Salem Abdo**

Social Fund for Development, Aden, Yemen

The site known as 'Altawelah Tanks' is one of the most important cultural heritage sites in Yemen. It is still in use as a water collection and flood protection system for the town of Aden.

The site is composed of three parts yet most people, even decision-makers, only consider the middle part of the site, which contains the tanks, as the whole site and that is one of the major problems in trying to develop a preservation strategy.

The risk management methodology, especially the value assessment and creation of the 'value pie' proved very helpful in creating a clear picture of the case and in showing the connection between the three parts of the site. This led to a new understanding of the site for many decision-makers whose support is needed in future interventions in the site.



(left) Aerial view of the city of Aden. (right) The canal.



## **Creating Institutional Awareness to conserve KIK-IRPA's photographic collection**

**Marjolijn Debulpaep, Hilke Arijs and Caroline Meert**

KIK-IRPA, Brussels, Belgium

Dedicated to the conservation, research and inventory of Belgium's cultural heritage, IRPA houses one of the country's most important photographic collections. Confronted with nitrate decay, an emergency conservation campaign was set up to prevent further degradation and conserve the collection.

Although the state of urgency touched most of the staff, getting them engaged turned out to be quite complex. The fear of making mistakes and having to evaluate past decisions turned out to be a mental stumbling block for people who had to take action and assess risks. Different viewpoints and degrees of involvement with the collection made that certain risks, such as damage through inappropriate handling and manipulation, were not always identified as such. The main reason for this was the difference in value and status attributed to the collection amongst colleagues. Although the collection was originally conceived, and is still being used as, a tool in the inventory of the nation's heritage, these documents are now being preserved for their intrinsic value. Many of the items surpass their initial research value. They have become rare pieces and present a significant potential for the general historic consciousness as they literally represent the visual memory of Belgium's cultural heritage. However, identifying these different aspects in value and the items as such is far from easy. Several criteria (such as content significance, the impact of degradation on the image, and technical aspects) for deselecting are established, but reaching a consensus within a reasonable time limit proves to be impossible. Therefore it is necessary to make a balanced decision where the potential risk that the degrading photographic support presented for the collection was put in comparison with the eventual loss of information within its current context.

Because of the emergency situation, KIK-IRPA has been forced to look differently at its collection. Through presentations, several e-mail and poster campaigns, personal talks and some elementary 'shock therapy', where kilos of degrading nitrate film were put on show, people took notice of the urgency and the importance of the collection at stake. Because of the collection's new status, the main risks were also assessed as a case study during ICCROM's 2011 'Reducing risks to Cultural Heritage' course. Whilst the conservation campaign took form and the staff got more and more involved, even more risks were identified. When they noticed the damage caused by inappropriate manipulation, most staff also became aware of the impact on the collection. Moreover the personal contact with the supports boosted the interest for the images. As a result people not only became aware of the heritage value of the collection, also openness towards a new evaluation of the collections status was created. Furthermore the established consciousness is one of the important elements in foreclosing further degradation and risk prevention.

## **Analyzing Risks to Built Heritage: the case of Naubat Khana, the Red Fort**

**Lakshmi Priya**

National Culture Fund, Ministry of Culture, National Gallery for Modern Art, New Delhi, India

Comprehensive analysis of risks with respect to built heritage structures and archaeological sites is a constant challenge to all site managers. Naubat Khana is a heritage structure of high significance located in the Red Fort, Delhi. This Mughal pavilion constructed in 17th century forms the main entrance to the royal pavilions in the Red Fort and has withstood various transformations in history. While analyzing the risks to this irreplaceable heritage resource, it was found that insensitive interventions can be one of the major risks to cultural heritage properties.

This presentation aims to highlight the methodology for comprehensive risk assessment which particularly focuses on insensitive interventions for Naubat Khana, so that this risk can be minimized and future interventions in the building can be guided. An attempt has been made to undertake a systematic value assessment of Naubat Khana and an assessment of the risks to its various components, so that prioritization of works and appropriate techniques for conservation and budget allocation can be done appropriately.



## **The *Value Pie*: an aid for effective communication and quantitative modeling of fractional loss of value in risk assessment for cultural heritage**

**José-Luiz Pedersoli Jr.**

Freelance consultant, Belo Horizonte, Brazil

Modeling risks quantitatively requires the selection of appropriate, quantifiable variables to express their impact or consequence. Depending on the decision(s) that risk analysis is meant to address, the expected impact of risks can be quantified, for instance, as *profits/losses* (financial), *number of disease cases* or *expected years of life lost* (epidemiologic), *potentially disappeared fraction of species* (ecological), etc. Selecting the right variables to quantify the expected impact of risks is crucial to ensure that risk assessment will be useful to inform decision making.

Defining the goal of risk management applied to cultural property as “*to minimize the loss of value to heritage assets, as measured at some specified point in the future, and for a given cost*” implies that quantitative analyses of risks should express their expected impact in terms of *loss of value to the heritage asset*. The methodology jointly developed by CCI-ICCROM-RCE<sup>1</sup>, which adopts the definition above, does this by quantifying the fractional loss of value in each component of the heritage asset affected by the risk, as well as the current fractional value of all affected components. In other words, this approach models the items of the heritage asset that will be affected by the risk, the fraction of the overall value of the heritage asset currently represented by these items, and the fractional loss of value in each one of them. Dividing the calculation of fractional loss of value into these two parts aims at facilitating the assessment of complex cultural assets containing multiple components or items of different kinds.

In order to model the current fractional value of a heritage asset affected by different risks, it is first necessary to characterize how the total value of that asset is distributed amongst its different components. This constitutes a vital step in the process, since there are typically significant differences in relative value between objects or groups of objects that constitute heritage collections in museums, archives, and libraries, and the same can be inferred for different elements or components of archaeological sites, historic buildings, urban heritage areas, and other heritage assets. The presentation will discuss a pragmatic approach incorporated to the ICCROM-CCI-RCE methodology to help estimate, capture, and (visually) communicate how the overall value of a heritage asset is distributed amongst its components, as well as to ensure a consistent quantitative modeling of the fractional value of heritage assets affected by different risks when doing risk assessment: the *Value Pie*. Examples of applications will be shown, including the construction of *Value Pies* for different heritage typologies in different contexts, possible variations, the need to monitor and review, and the automated use of the *Value Pie* in the CCI Risk Management database, in particular to carry out sensitivity analysis and explore “*what if*” scenarios with different value distributions. A critical evaluation based on the author’s field experience with the use of the *Value Pie* will be presented, highlighting the main benefits and challenges encountered so far.

<sup>1</sup> Reference Manual for the CCI-ICCROM-ICN Risk Management Method, v. 3.0., May 2011.

## Risk management and management: moving beyond reporting

**Allison Callender**

Barbados Museum, Garrison, Barbados

Having conducted risk assessments following my attendance at the 2005 Reducing Risks to Collections course, I realised that the problems still existed. Being able to identify pests within a tropical environment and the management of these pests, made me realise that the problems were not about the pests themselves, but the process by which management handled.

Not only is it important that the identification of possible risks is understood, but the relaying of this information to management is even more vital. This paper therefore addresses the role which curators and other staff, who work closely with the collections play, and how that role impacts on how management addresses these issues.

The paper seeks to identify the timely process, and other challenges which many curators and staff face when trying to address issues which can effectively reduce risks to collections, while offering possible solutions in light of the current economical restraints.



*(left) The Doll section of the Children's Gallery" being cleaned by the museum support staff. (right) Doll with the front of her dress deteriorating.*

## Management of public building-related art in public and private ownership

**Karin Hermerén**

Department of Conservation, University of Gothenburg, Sweden

The National Public Art Council in Sweden has initiated a research project, Management of public building-related art in public and private ownership, to be carried out in collaboration with and co-financed by the Swedish National Heritage Board, 2011-2013. The Museum of Public Art and the Swedish Association of Local Authorities and Regions are also partners. The aim of the project is to analyse and to estimate the expertise and financial resources needed for the long-term management and preservation of public art commissioned for government buildings, county councils and municipalities. As case studies, 24 works of art were chosen. The findings showed the absence of overview, cooperation and legal safeguard for public art amongst the authorities supervising the cultural heritage. Risk assessment will be tried in order to visualize and systematize risks and to facilitate management by prioritizing both artworks and action taken.

"A few years ago the work of art by Atti Johansson was repainted by a local firm of painters and decorators, without conservation authorities or conservators being consulted. Unfortunately the paint began to come loose before long. At points where the paint has flaked off, the original paint beneath is exposed and can be seen to differ drastically in color from the new coat superimposed. Contacts are lacking for the procurement of heritage conservation counseling and management support. The work of art is repainted like any building in the area."

A detail from a public work of art by the artist Atti Johansson, *Hyllning till Ivar Lo-Johansson* (*Tribute to Ivar Lo-Johansson*), 1969-1970, placed in Sollefteå.





## **Social participation as a strategy for preventive conservation: the case of current Mayan communities in Yucatán, Mexico**

**Giovana Jaspersen**

Instituto Nacional de Antropología e Historia (Sección de Restauración-Centro INAH Yucatán),  
Merida, Mexico

This presentation tackles the experiences of the participatory conservation-restoration projects of symbolic religious objects in rural populations, mostly Mayan-speaking communities, of Yucatán, Mexico. It is proposed that, in socio-cultural contexts like these, it is impossible to implement preventive conservation measures without handling the situation from a people-oriented perspective. This is the way to get the society to take charge of the preservation of their heritage. Thus, besides material treatment, symbolic value and social function have to be taken into account.

Under this perspective of work the questions were:

- How to preserve objects that are used daily and that are valued as symbols and not as material objects?
- How to preserve the matter without prohibitive arguments about the use and social function of the objects?
- How to mediate between different viewpoints on cultural heritage?
- How to generate changes that ensure us that once the restorer has left the community, the objects will not return to their initial condition?
- How to promote in the communities inherited self-management processes orientated to the future conservation of the objects?
- How to help without imposing or altering a socio-cultural reality to which we do not belong?

These questions were used in the project as a guideline to the actions that were implemented. For example, amongst other social participatory mechanisms, lectures were given on heritage and conservation. Information was provided about the sculptures as material objects. Preventive conservation and risk management workshops were given. Community bilingual theatre performances were directed in order to establish understanding of risks and conservation. Conservators assisted and accompanied in festivities, processions and heritage management processes. Bilingual leaflets on conservation and risk reduction were published. Children and students were included in the project to ensure the future conservation.

Based on the revision of the realized participatory actions and the results, the presentation proposes to understand the conservation (in this kind of scene) as a socio-cultural intervention. It must mediate between the conservation professionals and the socio-cultural context in order to achieve success. Heritage conservation is a shared work and all the actors involved must understand the responsibility that that implies.



## **Monumentenwacht: towards a risk-based conservation support**

**Veerle Meul**

Monumentenwacht Vlaanderen, Antwerp, Belgium

Since 20 years, Monumentenwacht stimulates, informs and supports its members in the care of approximately 6000 heritage sites in Flanders (Belgium) and is considered as a successful model for implementing preventive conservation. Gradually, the principles of risk management approach are being adopted throughout its services. It is consistently applied in instruments and tools that aim to raise the member's conservation awareness: easy accessible publications, workshops, lectures and demonstrations focus on the understanding of the chain of cause and effect of heritage losses. Informing the government about the state of heritage shifted towards informing about the main risks detected. Competence building of the assessors is centered on identifying conservation risks and their mitigation strategies (e.g. in training and calibration sessions). Traditionally Monumentenwacht focused on professional condition surveys, but gradually, the assessment methodology has been oriented towards the risk management approach, in particular for archaeology and historic interiors. MAKSin, a database for reporting the interior assessments, facilitates value- and risk based prioritization of the advised strategies. It results in a more efficient and effective support for local conservation planning, enabling the member's limited resources to focus on those parts most valued and most at risk



## **Discussion on Values and Communication**

Moderated by Agnes Brokerhof and Rohit Jigyasu

## **Evaluation and future trends**

**Catherine Antomarchi** and **Julie Stephenson**

# Posters

***Preventive preservation through colorimetric measurement of the pictorial surface: Jose Guerrero's paintings***

Maria del Carmen Bellido Márquez

***Evaluating temperature, relative humidity and lighting conditions in a museum archive in Buenos Aires***

María de la Paz Diulio, Analía Gómez and Ana Laura Masielo

***All monuments great and small - conservation of archaeological sites and monuments: a modern integrative approach***

Saied Hamid

***Risks for the Mural Paintings in the Art Gallery of the Museum of the State Bank of Pakistan***

Asma Ibrahim

***A risk assessment strategy for the Basilica of Dominicans in Lublin (Poland)***

Joanna Kadlubowska-Boruchalska

***Status of Museum Objects in Bangladesh and Some Risks Factors***

Abdul Kuddus

***Practicability of risk management systems in small and communal museum's collections***

Marianne Landvoigt and Alexandra Jeberien

***The resilient museum***

Graciela Silvia Molina

***Safeguarding the National Museums of Kenya's collections against risks: sharing the risk communication experience***

Philemon Nyamanga

***Managing light in the historic interiors of the Wilanow Palace Museum – a case study***

Agnieszka Pawlak and Sylwia Pawełkowicz



## Preventive preservation through colorimetric measurement of the pictorial surface: Jose Guerrero's paintings

**Maria del Carmen Bellido Márquez**

University of Granada, Spain

Preventive conservation of the pictorial surface of works of contemporary art is a problem when environmental conditions in the exhibition area are poor. To scientifically understand the color changes of Jose Guerrero's paintings, we have carried out a colorimetric study of some paintings from the collection of the José Guerrero Centre (Granada, Spain). The overall objective of this research is to advance and expand existing knowledge on the conservation of this art collection, with the provision of scientifically verified data to optimize conservation and preservation criteria. Derived from this, a further, more specific objective is studying and listing the colorimetric features of the collection and to control colour changes in the future.

For the experimental section, we chose some representative real works from the collection. The measurements were made with a spatial distribution network consisting of a grid of equally spaced areas on the surface of the paintings. The colour was measured as a Photometric Reflectance Spectrum. The values were represented by diagrams, generated with the computer program 'Colour Data Software'. The study recorded numerical colorimetric data according to the international system CIALAB 1976 (International Commission on Illumination).



The colorimetric results show that the paintings have a great diversity of colors and chromatic variability. This is due to the way Guerrero painted his works and the colors used in his working technique. The chromatic variety is greater in the transition areas between blots, as a result of color degradations, tone super-positions and blank spaces. We would like to point out the high plastic and technical richness found in José Guerrero's works, their chromatic variety and the impressive creativity of his brushstrokes. His color blots are chromatically rich and with numerous shades, which are especially intense in the transition areas between different tones. The result of all this is a vibrant painting, with a high light variability and intensive color contrasts, which catch the spectator's eyes. Thanks to the quantitative registration of the colors (which has allowed their colorimetric cataloging), in the future we will be able to tell if the colors have suffered any changes due to the ageing of materials, maintenance and the environmental conditions. This research will help prevent color changes in the paintings over time.

## **Evaluating temperature, relative humidity and lighting conditions in a museum archive in Buenos Aires**

**María de la Paz Diulio, Analía Gómez and Ana Laura Masielo**

Laboratorio de Arquitectura y Hábitat Sustentable FAU- UNLP, La Plata, Buenos Aires, Argentina

The aim of the present work is to evaluate temperature, relative humidity and lighting conditions in which archive materials remain with the aim of preserving the collection and extending its lifetime. The museum is at 37° latitude South, in temperate climate, in a neoclassical building built in 1889 in La Plata, Buenos Aires, Argentina. The space to be evaluated is a 19 m<sup>2</sup> room without windows with a ceiling height of 5.40 m. The collection consists of film negatives and paper documents which are placed in two separate areas of the same room. Different materials have different needs to their preservation and the intention is to meet each one of them in spite of sharing the same enclosure.

A measurement is made with micro dataloggers which are placed in the photography area as well as in the paper area. They are located at three different heights to sweep the gradient variations that may occur due to its high ceiling height. The moment chosen for the measurement campaign is the month of September, mid-season, when like in the autumn months, the situation is critical in terms of relative humidity. The percentage of registrations obtained in which both temperature and relative humidity were kept within the tolerance values for paper: 18 and 22 ° C for temperature and 45% and 65% for relative humidity was calculated. During the analyzed period the values obtained were between 81% and 89% within the tolerance range, showing better results for the sensors located at lower heights.

It can be concluded that the storage area offers conditions that are suitable for paper conservation. However, preservation of film negatives requires active systems to reduce the temperature. The damage generated by the illumination is mitigated by the use of acid free protective cases which prevent light and UV radiation from reaching the material.



## All monuments great and small - conservation of archaeological sites and monuments: a modern integrative approach

**Saied Hamid**

Ministry of States of Antiquities, Cairo, Egypt

Archaeological sites and monuments pose unique problems because of their size and the myriad problems their conservation and management present. All too often conservation and site management take a "single shot" approach, emphasizing a single aspect of a successful conservation and management program. While potentially valuable, they are inherently limited in scope and what they can accomplish.

The poster will illustrate how a multi faceted approach to conservation and site management can be undertaken to create synergistic approaches to maximize the beneficial effects. This approach involves the use of extremely modern, sophisticated technology, training of local conservators and also very simple, cheap, but effective materials and techniques, as well as combining a public educational components.

The USAID-ARCE Luxor East Bank Groundwater Lowering Project has been given the responsibility of developing and implementing a conservation monitoring, maintenance and training program in order to assess and deal with the impact and effects of the groundwater lowering in the areas of Karnak and Luxor Temples and their satellite precincts.

Accordingly, the Program has as its aim the development of a training program for Egyptian conservators employed by the Supreme Council of Antiquities which will train these conservators to ultimately become the first line of defence and safeguarding of the monuments through the implementation of a continuously ongoing program of extensive monitoring and appropriate conservation responses to the dewatering Project and beyond, with the idea of developing a cadre of Egyptian conservators specifically trained for that purpose.

Classroom teaching and training was followed up with practical application of what has been taught on a day by day to allow application of new knowledge while still fresh. So several following up projects were carried out by students; such as desalination at Luxor and Karnak temples, stone work at Khonsu temple, cleaning the walls and ceilings of Khonsu temple and simple preventive conservation to prevent bats and birds damage to wall paintings.



*(left) Fixing screen doors to prevent bats and birds damage.  
(right) New walk way around the temple of Khonsu.*

## **Risks for the Mural Paintings in the Art Gallery of the Museum of the State Bank of Pakistan**

**Asma Ibrahim**

Museum and Art Gallery of the State Bank of Pakistan, Karachi, Pakistan

The recently inaugurated Museum of the State Bank of Pakistan is comprised of eight galleries, two galleries of coins, pre-Islamic and Islamic, stamps, the currency collection, the history of the State Bank and the Governor's gallery. On the mezanine floor is a beautiful Art Gallery with five large murals. One recently donated painting which measures 22x 8.5 ft is in a bad condition.

There are two problems to tackle:

- 1- the risk of maintaining the paintings
- 2- the conservation of the deteriorated painting

Unfortunately in Pakistan there is no training or education program for conservation. Attempts have been made to do some conservation of the painting but the results are not at all satisfactory. Other vital issues that need to be dealt with are managing the environmental conditions and security and developing a disaster preparedness program.

This poster presentation invites participants to discuss these issues, the shortcomings of conservation treatments and management of paintings with the author.

## A risk assessment strategy for the Basilica of Dominicans in Lublin (Poland)

**Joanna Kadlubowska-Boruchalska**

Faculty of Conservation and Restoration of Works of Arts, Academy of Fine Arts, Warsaw, Poland

Recently a risk assessment strategy was developed for the Basilica of Dominicans in Lublin (Poland), under supervision of Ph.D. Joanna Czernichowska. The work was divided into a theoretical and a research part.

In the first part specialized literature on risk management for works of art was studied and strategies were developed and presented for the historic building, taking into account its historic and sacred character. The four stages of the risk management process were discussed: identification, risk assessment, strategies of risk reduction, and evaluation of costs and benefits resulting from putting these strategies into practice. Detailed familiarity with the state of preservation of the building enables the conservator to identify the risks. The thesis contains a step-by-step procedure for how to identify the destructive factors which form a threat for historic buildings both directly and indirectly. The rational assessment of the harmfulness of the risks leads to developing the strategy for their prevention. In order to match the preventive methods optimally, the evaluation of their effectiveness must be carried out and the costs of maintenance and exploitation must be estimated. Furthermore in the first part, the character of the separate destructive factors and basic methods of their control were discussed.

The second part is research-based and devoted to the regulation of the micro-climate factors in the historic sacred spaces. The research was carried out in the Chapel of the Immaculate Conception of the Blessed Virgin Mary and in the adjacent vestibule with

sacristy in the Basilica of Dominicans in Lublin. Measurements of relative humidity and temperature were carried out for the period of one year, from February 2011 until the end of January 2012 with Onset sensors. Based on the experience gained by conservators, for instance during the 'Friendly Heating' research project and completion of humidity and temperature measurements, an individual micro-climate for monitored spaces was created. Its main aim of this is to limit or eliminate the risk of damage caused by incorrect temperature and relative humidity for movable heritage which will be stored in the chapel in the future.



*Facade of the St. Stanislaus the Martyr's Basilica*

## Status of Museum Objects in Bangladesh and Some Risks Factors

**Abdul Kuddus**

Varendra Research Museum, Rajshahi, Bangladesh



**MAÑJUŚRĪ** (*Gilded Bronze*), Period: c. 7<sup>th</sup> Century A.D. Museum, Rajshahi University, Rajshahi, Bangladesh

Bangladesh has a prosperous past. It has socio-economic-cultural and art traditions going back to ancient times. To build up this golden history, approximately 200 museums play a vital role in preserving the country's antiquities.

Some museum collections are very impressive and irreplaceable, but the preservation methodologies are very poor. There are few museums in the country that have a conservation laboratory. In many cases, although a conservation section exists, the staff which are engaged for conservation, are without training whatsoever. No less than five thousand employees work at the museums were recruited without having any museum knowledge. It is a pity that there is no academic curriculum on museum studies at college or university level.

The major risk factors for artworks are uncontrolled temperature, RH, insects, salinity, dust and dirt, inadequate handling, improper storage, lack of conservation facilities, illegal trafficking etc.

## Practicability of risk management systems in small and communal museum's collections

Marianne Landvoigt<sup>1</sup> and Alexandra Jeberien<sup>2</sup>

1. Kirchplatz 6, 91809 Wellheim-Konstein

2. HTW Berlin, Studiengang Konservierung und Restaurierung MA, Berlin

"Prevention is better than cure" – preventive conservation in the field of cultural heritage is primarily based upon this short expression, which transferred into practice leads to: measurements helping to protect cultural heritage from degradation should rather be implemented than restoration actions. While financial support for museum's collections is already very limited, it becomes more and more difficult for cultural institutions to keep up with conservation standards. Particularly small and communal museums often cannot afford the essential techniques and instruments, which help to protect collections. Furthermore, cultural heritage on display often is exposed to a large potential of threats, e.g. light intensity, climate frequencies, volatile compounds, bad mounting solutions or visitor's violations. These risk potentials are often highly complex and difficult to structure, which makes it very difficult to decide on how to apply the limited financial and personal resources.

In order to deal with differing problems, several systems to analyse and manage risks for cultural heritage and collections have been developed since the 1980s. All of them employ simplifying strategies to detect threats and to systematically obtain estimates in order to decrease risks and furthermore, check potential risks on a frequent basis.

Within the framework of a Master thesis, the applicability and practicability of Robert Waller's CPRAM system was investigated from June 2011 until December 2012. As a study case and cooperation partner *Stadtmuseum Ingolstadt*, Bavaria/ Germany could be enlisted, whose collections and exhibitions have been located close to the town centre in a former defence building since 1980. Due to the large size of the building and the defined time of the project, the assessment was primarily applied to the archaeological exhibition and to two other important objects: a stuffed horse from 1632 and the gown of theologian *Petrus Canisius* from 1597.

The assessment showed the potential risks for the collection and the two priority objects and will enable the museum's staff to develop and carry out practical solutions for decreasing them. Within the master thesis the assessment's results will contribute to an evaluation and the development of risk management systems for German cultural institutions.

### Biography

Marianne Landvoigt graduated from the University of Applied Sciences Berlin in 2011 as a Bachelor of Science in "Conservation and Restoration / Field Archaeology". Her Bachelor thesis dealt with brass needles from a wooden child coffin located at the Schlossplatz Berlin-Mitte. Within her Studies in the Master program "Conservation and Restoration", she currently is writing her thesis on the practicability of risk assessment and management systems for German cultural institutions.



## The resilient museum

**Graciela Silvia Molina**

Secretaria de Cultura de la Nacion Argentina, Buenos Aires, Argentina

Resilience is called the set of attributes and skills innate or acquired to adequately address adverse situations. This ability derives from the existence of the reserve adjustment of internal resources. This resilience strengthens protective factors and reduces vulnerability to threatening situations (earthquake, flood, tornado).

Resilient characteristics of a museum:

- Ability to deal effectively with adverse situations based on the organizational potential of the institution.
- Dynamic variable along evidence of step response and recovery in an emergency. The time factor is critical in relation to various stimuli.
- Requires interaction with extra-institutional resources: non governmental organizations, public security forces to strengthen and nourish. But also needs to have good investments and safer buildings. You must perform manuals and action guides to the emergency, drills and other self-assessments.
- Risk reduction by improvements in infrastructure, energy efficiency in lighting, exhibition resource renewal safer.

Institutional resilience is evident in crisis situations but it depends on the particular characteristics of institutions to: comply with the objectives of the mission and performance, develop communication skills, and have management autonomy.

A resilient museum is able to keep from the institutional integrity in addition to having the ability to overcome the difficulties, learn from their own failures and reconstituted itself creatively. Heraclitus mentioned that we never bathe in the same river, after a disaster we never returns to the same starting point.

The development of resilience required of networking in risk management, the ability to learn from mistakes, an effective management style, and the activity oriented to the future.

We must develop policies, strategies and best practices to promote leadership, develop the ability to manage stress efficiently and the intellectual capital of individuals, in order to resist, adapted and strengthened to an event can alter the whole dynamic of the institution.

## **Safeguarding the National Museums of Kenya's collections against risks: sharing the risk communication experience**

**Philemon Nyamanga**

National Museums of Kenya, Nairobi, Kenya

Humanity's high value of heritage prompts a determined search effective conservation and management in the face of continual challenge from natural, technological and social hazards. Risk reduction is a preventive approach to heritage management that employs the Risk management methodology. Every museum should endeavor to fully understand the risks to its collections and make effort to reduce and mitigate them. This paper captures the various challenges to Risk Management Methodology as part of the experience gathered in articulating risks and management options to the National Museums of Kenya community. The NMK community enthusiastically accepted the Risk management methodology and asked me to develop a training program whose results shall be shared, highlighting the Risk Management Cycle, the tools and resources used in the process. Institutions are weary of adopting new strategies largely because of the way we communicate this process and the willingness of the parties to listen and provide the necessary support towards such a program is compounded by time lapses and inadequacy of resources.

## Managing light in the historic interiors of the Wilanow Palace Museum – a case study

**Agnieszka Pawlak** and **Sylvia Pawełkowicz**

The Wilanow Palace Museum, Warsaw, Poland

Between 2009 and 2012 VIS and UV radiation in the indoor environment of the Wilanow Palace Museum has been monitored. This research enabled identification of several threats to the historic interiors and facilities. Various monitoring techniques were used, such as LightCheck<sup>®</sup> dosimeters, luxmeters, and radiometry (Elspec). To protect the interiors and objects against luminous radiation, the Museum replaced the window woodwork and glazing, applied UV filters to the windows, installed different types of blinds to the windows, sewed protecting covers for the antique furniture, planned rotational expositions, changed the position and location of objects in respect to windows and doors and introduced safe and modern artificial illumination based on LEDs. The research indicates the need to verify the currently used general standards which often cannot be achieved, and to prepare new guidelines for museums located in historical buildings, based on individual and shared experiences.



Muzeum Pałac w Wilanowie lampka dla przewodników fot.A.Indyk 17.10.2012

# Delegates

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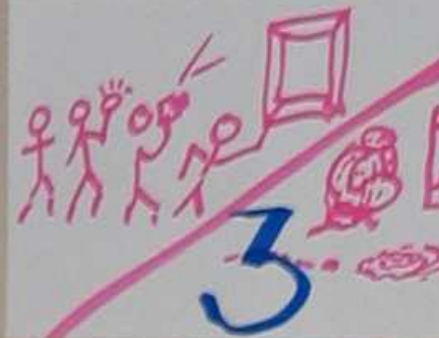
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