

Teamwork
for
Preventive
Conservation



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Conservation

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Preface

Every day, museum collections are placed at risk. The causes of damage include light, unstable temperature and relative humidity, pests, pollutants, poor storage and display mounts and poor handling. They are also placed at risk by the threat of disasters including floods, fire, and the impact of war and natural disasters.

These risks can only be minimised if there is a common understanding of the problems that exist, and the long-term benefits to the museum if they are addressed. This requires awareness, on the part of each staff member, of how the work that they do might affect the condition of the collection. This awareness gives staff the scope to directly improve the care of the collection.

All types of staff are involved. The work of engineers and architects directly affects the environmental conditions and levels of natural light in the buildings. The materials designers select for constructing exhibit cases determine levels of pollutants and their work is critical in determining the levels of artificial light.

Decisions on holding public events in museums affect decisions on risk assessment and these decisions in turn impact on the work of security guards who protect the collection against damage from the public. Staff working in public entertainment and education can instil the importance of preserving heritage in visitors. Decisions made by managers impact on all of these areas and more. Finally, there is the day-to-day work the curator does with the collection, and in institutions that employ them, the care that conservator-restorers provide.

The actions of everyone within the museum will affect the condition of the collection to some degree, in either a negative or a positive way. A multi-disciplinary approach to preventive conservation is needed to ensure that these effects are positive. This requires the implementation of teamwork into museums.

The approach to introducing teamwork to improve preventive conservation in museums advocated in this document is based on the experiences of eleven museums from nine European countries that took part in ICCROM's Teamwork for Preventive Conservation Project.

The document contains a suggested framework for planning and team-development, as well as highlighting methods for developing networks among museums and other institutes to provide additional support for preventive conservation.

Neal Putt and Sarah Slade

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1 Why Teamwork for Preventive Conservation

A Multi-disciplinary Approach

Preventive conservation is no longer considered as a conservator's obsession but everyone's professional duty.

National Museum of Folk Arts and Traditions,
France

The aim of preventive conservation is to reduce the deterioration and maintain the integrity of museum collections in an affordable manner, and to ensure their availability to society now and in the future.¹

Improved collections care is not just an aim in itself, but needs to be achieved in a way that enables increased public access to the collection.

The tasks are so broad that they are impossible to do in isolation. They require the awareness and involvement of everyone in the museum, a multi-disciplinary approach to preventive conservation that can be achieved through teamwork.

We were unanimous in recognising that teamwork permits museum personnel to meet each other, to reassert their ties, to create a dynamic. I discovered people and I have easier contacts now, more frequently, with people with whom I had not previously had any professional rapport.

National Museum of Folk Arts and Traditions,

The Essentials of a Team

Teamwork shifts responsibility for an area of work from one person to a group of people. In the case of preventive conservation, teamwork brings together all staff whose work impacts on the collection and its care. In bringing these people together, teamwork:

- focuses all the knowledge and skills that are available on the issue.
- allows the planning to be done by the people who will do the work.
- encourages the efficient use of funds and staff, minimising added costs.

No two museums will implement teamwork in the same way. Staff sizes range from less than 10 personnel up to 600. Collections range from 400 works of art to 300,000 natural history specimens to 500 automobiles, aeroplanes and trains. Facilities range from small wooden houses to stone castles to multi-million dollar showplaces. The work culture within each museum will be different. Teams in a regimental museum in the Netherlands will not be the same as teams in a national museum in Fiji or a village museum in Canada.



Lone Crusader

The team structure . . . encouraged dialogue and co-operation in the area of preventive conservation to an extent not previously seen. It proved helpful for staff to recognise that the problems they face are, more often than not, shared and are by no means unique to a particular staff grouping or discipline.

Ulster Museum



Shared Responsibility

Although each museum will implement teamwork in a different way, the essentials of a team will remain the same. All teams need a clear realistic aim and the visible on-going support of the museum's Director and Administration. Teams need to be made up of representatives from all the key areas of the museum and be given the authority to determine what the issues are and how to address them. Finally, teams need to be given the resources necessary to see these recommendations are followed through and achieve real outcomes.

When implemented and supported in this manner, teamwork allows people to change, to compromise and to share approaches. It sets achievable objectives and establishes successful work habits.

This Guide – Models and Experiences

This guide outlines an approach to introducing teamwork to improve preventive conservation in museums. It is based on the experiences of eleven museums from nine European countries that took part in ICCROM's Teamwork for Preventive Conservation Project. This project, started in 1994, involved staff from the 11 participatory museums and drew on the support of 14 conservation advisory services. The project gradually perfected the methods and developed consensus on the approach.

This guide presents a five-step framework for planning and team-development, and methods for developing networks among museums and other institutes to provide additional support for improvements in preventive conservation.

Teamwork for Preventive Conservation Framework

This framework is based on the experiences of project participants and their thoughts and observations are provided throughout the publication. Summary information about the participating museums is provided in Appendix A.

Participating Museums

Municipal Museum 'Vander Kelen-Mertens', Leuven, Belgium
 Czech National Museum
 National Museum of Folk Arts and Traditions, France
 Museum of Ethnography, Hungary
 Brescia Civic Museum of Natural Science, Italy
 National Museum of Archaeology (Ferrara), Italy
 Royal Netherlands Army and Arms Museum
 National Museum of Ancient Art, Portugal
 Barcelona Museum of Contemporary Art, Spain
 Ulster Museum, United Kingdom
 Birmingham Museums & Art Gallery, United Kingdom

<p>Step 1 Getting Started</p> <ul style="list-style-type: none"> • Determine who to involve in the project • Appoint Preventive Conservation Planning Group <p>Step 2 Building Participation</p> <ul style="list-style-type: none"> • Develop a shared vision for preventive conservation • Identify key issues to be addressed <p>Step 3 Targeting Preventive Conservation</p> <ul style="list-style-type: none"> • Undertake detailed assessments of the collection • Write verifiable preventive conservation objectives <p>Step 4 Building Teams and Keeping on Track</p> <ul style="list-style-type: none"> • Create preventive conservation teams • Identify levels of authority • Allocate resources • Monitor progress, problems and success <p>Step 5 Building Preventive Conservation Networks</p> <ul style="list-style-type: none"> • Create support networks within the museum profession • Develop projects to gain public involvement and support

2 Getting Started: The First Sparks

Building Participation and Respect

The achievements we reached can convince other museums: for decades there were ideas only about these kinds of developments! The ideas were the same, but the activities did not follow them! Changing the way of thinking about them is the most important thing!

Museum of Ethnography, Hungary

Participation in 'Teamwork' permitted validation of preventive conservation actions among the ensemble of personnel. It was able to create a permanent dialogue. The personnel have not forgotten this period where, for the first time, meetings gathered all levels of staff and allowed the most 'humble' to offer contributions and criticisms.

National Museum of Folk Arts and Traditions,
France



Ideas

The crucial first step to introducing Teamwork for Preventive Conservation is building a spirit of participation among staff members. Attitude is as important as plans and resources.

The decision to introduce a teamwork approach to preventive conservation gives the issue a higher profile, as the Administration singles preventive conservation out for particular attention. If this process is managed well, it can create a renewed respect for the collections and awareness in all staff of the part that they can play in its care.

Eliciting commitment and co-operation is the initial aim. The museum's Administration should start the process by bringing all of the staff together. In the framework of the ICCROM project, this consultation process essentially took place in two stages or workshops. The organisation of these workshops is discussed in detail in Chapters 3 and 4.

During these workshops, staff:

- acknowledge and validate their respective experience and recognise the importance of the actions that they carry out on a regular basis
- identify the museum's long-standing problems in the area of preventive conservation
- elicit creative ways to tackle the problems and ideas for new directions

The workshops must be designed to encourage co-operation, to resolve well-known problems and open up avenues to new approaches. The benefits of participation and respect will last long after the first objectives are completed. They are the single most important result of



Open Communication

Interestingly, the perception was that the staff most responsible for creating this spirit were the janitorial, maintenance and security staff, those, in other words, who had traditionally played a marginal role in working towards fulfilment of the museum's mission and who suddenly realised that their input was being sought out, valued, and quoted.

Barcelona Museum of Contemporary Art

Team planning contributed to a change in the way of thinking, and part of that was a change away from seeing only the lack of money. The Administration and staff established new structures and habits of communicating and working together. They began a series of achievements based on small changes in the use of people and resources. An essential first step was a workshop of a committee of a cross-section of personnel, which created awareness and gave everyone the opportunity to make their own suggestions for good collections management.

Museum of Ethnography, Hungary

What seems essential is the art of placing value on the ground-level actions that are often issues of good sense. This draws attention to the importance of these acts.

National Museum of Folk Arts and Traditions,

The project did indeed create a spirit of participation ... In the first place, during ... the preliminary meeting at the museum in 1999 conservators and registrars spoke about the merits and demerits of the level of preventive conservation at the moment. The sense that every department struggled with more or less the same problems resulted in a high-spirited mood in which people were willing to act immediately.

Royal Netherlands Army and Arms Museum

In the long term it is clear that the entirety of personnel has not completely transformed its state of spirit but the concept of preventive conservation is today indispensable and it allows faster decisions and transforms some bad habits. Preventive conservation is no longer considered a conservator's obsession but everyone's professional duty.

National Museum of Folk Arts and Traditions,

introducing this project into the museum.

Museums that have implemented Teamwork report that the keys to building staff participation and spirit are:

- participation of all the staff during early stages of analysis and planning
- punctual follow-through from the formation of the teams to their starting work and achieving results
- commitment of the senior Administration
- contact and co-operation with other institutions.²

Most professional staff within museums feel that preventive conservation is a serious issue that is important to address. This provides an existing commitment to the work of the team. The importance of this as a starting point can not be underestimated.

Who to Involve

The key questions that need to be asked when deciding who to involve in the initial workshops are:

- Who are the people who actually handle the collections (scientists, curators, conservator-restorers, technicians)?
- Who are the people who create the physical environment for the collection (architects, engineers, cleaners, security staff)?
- Who are the people who create the administrative and human environment within the museum (Directors, financial officers, public events planners, education officers)?

Another useful question is "Who are the contributors 'outside' the museum?" Several museums that have implemented Teamwork for Preventive Conservation have drawn in professionals who are not strictly part of the staff. Some museums have a regular relationship with architects or engineers who are part of another government institute. Others have a long-standing relationship with volunteers, or education and public event specialists outside the museum. If the "outside" individuals have a regular and defined rapport with the museum, they can be important contributors and should be included in the initial workshops.

Ideally, everyone identified by these questions should be involved in the very early stages of team planning. In practical terms, experience shows that the maximum size for workshops to develop a vision for preventive conservation, identify key issues and determine objectives is between 20 to 40 personnel. Museums with larger numbers of staff usually call on a selected sub-group of staff for the intensive planning workshops, composed of a mixture of department heads and other delegates. They have used seminars, training events, site visits and study days to inform other staff of the process being carried out.

Directors: A Key Element

Commitment from the museum's senior Administration is essential to the success of the Teamwork approach to preventive conservation. Senior Administration means the Director, but also usually includes senior curators, financial administrators, board members and government officers above the level of the Director.

I can't stress enough the value that Teamwork for Preventive Conservation has for instilling amongst staff a sense of belonging, and shared concerns. The end realisation that they are all cultural custodians, carrying a social service, makes them carry out their respective responsibilities with pride.

Barcelona Museum of Contemporary Art

The most interesting technique for promoting teamwork was certainly the fact that all museum personnel participated in an early workshop, from guardians to maintenance personnel to scientific collaborators. Preventive conservation on every level of museum practice was talked about.

Leuven Municipal Museum

Without the support of the Administration, these projects are difficult to realise because they need full and complete participation. If the Administration puts the accent on the importance of this mission and also contributes to making attitudes evolve, the project has a formidable common denominator that opens the doors of inter-professional communication.

National Museum of Folk Arts and Traditions,
France

One of the most important elements of the project was the involvement of Directors and senior managers. Irrespective of how preventive conservation is undertaken within a museum, it is clear that support at this high level is essential if progress is to be made.

Ulster Museum



The Game Plan



The Director leads the charge

The idea for starting Teamwork for Preventive Conservation might originate from anywhere in the museum, but only the senior Administration has the authority to initiate it. The Director and the Administration must demonstrate their own interest and commitment from the outset, in order for other staff to give it their respect. The Director has to have a key role in the first meetings or workshop to give the necessary high profile to the Teamwork initiative. At the first meetings the staff have to be assured that after planning, action will ensue. At the same time, the Administration has to ensure that staff expectations fall within what is realistically achievable.

As Teamwork for Preventive Conservation proceeds, there must be strong rapport between teams and senior Administration, with a structure for reporting and decision-making. Ultimately, only the Administration can authorise new ways of working together, changes in staff time and the identification of resources to meet new goals. Both the staff and Administration must have confidence in the team and satisfaction with its progress.

Who Guides the Process?

A small group of people will need to work together regularly to lead and implement Teamwork for Preventive Conservation. The maximum number on this Planning Group should be 10 people, even in large museums.

The role of the Planning Group is to:

- organise the two initial workshops and all associated meetings
- set the schedule of steps for implementing Teamwork
- choose consultants or outside advisors, if necessary
- develop any partnerships with other museums or institutes

The museum Director need not necessarily be part of the Planning Group, and another staff member often serves best as the co-ordinator or Leader.

Chapter 5 provides detailed information on choosing team members and other tips and considerations for creating and maintaining a successful Planning Group and avoiding common pitfalls.

Are Outside Advisors or Partners Necessary?

The museums that have implemented Teamwork for Preventive Conservation all agree that contact with outside professionals and institutes help build commitment and change attitudes. Contacts can



Breath of Fresh Air

range from advisory or consulting services by a single professional, to co-operation agreements with other museums and institutes.

The Planning Group needs to determine whether the museum needs technical advice in preventive conservation, or advice to facilitate workshops and consultation with staff, or both.

The Planning Group should ask:

- Does the museum need technical and scientific information about preventive conservation? Does it have enough preventive conservation expertise to conduct its own assessment of the current state of affairs?²³
- Does the museum need expertise in planning and implementing workshops and in drawing out participation from all the staff? Does the Planning Team feel capable of independently organising all staff workshops and planning events?
- Is the museum in a position to hire a consultant or advisor, or would it be possible to obtain free assistance from a national institute or university?
- Is it possible to work in tandem on the Teamwork project with one or more other museums, exchanging experts between the museums and using other forms of co-operation?
- Does the museum want to develop co-operation in areas such as training, public programmes, advisory services or disaster preparedness teams?
- Does the museum want to use alliances with other museum and institutes to raise government or public support for preventive conservation?

The answers to these questions will determine the skills and knowledge to look for and whether to work with a single professional or whether to develop a broader-scale partnership or alliance with other museums and institutions.

Whatever the functions and skills of outside advisors, their impartiality will assist in developing communications.

The Czech National Museum used external professionals and partner institutions throughout the Teamwork project. To start, the museum organised a one-day seminar for all staff. Guest speakers and conservator-restorers from other professional spheres and institutions formed the most successful feature of the event. The information and experience they brought was new and beneficial for all the museum participants. The workshop reinforced the importance and significance of preventive conservation care. The Workshop included visits to two other museums. A scientist from a national conservation institute continued as a technical advisor during a series of subsequent assessment and planning meetings. Several of the participants from the Workshop eventually assisted in editing a basic training manual in preventive conservation. Mutual co-operation when preparing the manual, workshop and professional excursions helped to create a spirit of participation. The external advisors and colleagues from the other institutions contributed their broad experience and unbiased criteria to the conservation initiatives.

The Museum of Ethnography in Budapest chose two advisors who provided a mixture of preventive conservation and teamwork experience. The advisors assisted the staff to select assessment methods and survey the storage and exhibition rooms. They made suggestions of how to solve problems, provided bibliographies and references, and coached and advised on the initial workshops. The museum also developed an exchange programme with museums in the Netherlands.

The involvement of external advisers was undoubtedly the most beneficial aspect. A 'neutral' voice will always speak much louder than one with a vested interest. They also offered a source of advice and encouragement and acted as 'sounding boards' when needed. ... Adherence to timetables and deadlines was facilitated by staff awareness of their overseeing role.

Ulster Museum

The external advisors had obviously tested the process elsewhere and were familiar with some of the reticence it would face amongst the staff; this reticence was overcome by these advisors with surprising ease.

The Director
Barcelona Museum of Contemporary Art

The external advisors helped assess the conservation needs and led the workshops with all the staff. They had techniques of involving everyone that were very new to the museum. They were a big part of our success with getting respect and participation from outside the museum. We organised a well-publicised one-day meeting on preventive conservation with the advisors, participants from the city government, Ministry of Culture, Superintendence of Archaeology and museum representatives from other regions of our nation. This helped plan an outreach project to schools in our neighbourhood and assemble a committee. It also helped get funding for some storage problems in the museum and build up our co-operation with the regional superintendence of culture, which is our main source of conservation advice and assistance.

Participating museum

Discussing the same problems, seeing the solutions, results, and getting in touch with colleagues in other institutions was very useful.

The Barcelona Museum of Contemporary Art used advisors primarily for their ability to facilitate a teamwork approach, not for their knowledge of preventive conservation.

Museum Directors gain as much as staff from co-operation and contact between institutions. In addition, museum Directors may be able to use the prestige of outside advisors to gain support for the museum's objectives. One of the participant museums in the Teamwork project used the participation of outside expert advisors to attract significant attention to the museum.

Whatever the role and source of outside advisors and partners, the parameters of the co-operation must be clear. The museum Planning Group and the advisor or partner(s) must:

- discuss and agree on the aims and context of working together
- specify clear objectives, schedules and responsibilities for all parties
- confirm the agreement in writing
- hold to the agreement or renegotiate it if it is no longer appropriate or further elements of co-operation are justified.

At the end of this first step in the Teamwork process the Preventive Conservation Planning Group should have been established and be aware of the importance of engaging all staff in the work ahead.



A shared vision

*Instead of thinking "object" think "collection".
 Instead of thinking, "room" think "building".
 Instead of thinking "individual" think "team".
 Instead of thinking "short term" think "long term".
 Instead of thinking "professionals" think "public".
 Instead of thinking "trade secrets" think
 "communications".
 Instead of thinking "how" think "why".*

From the opening address by Gael de Guichen
 for a Workshop at the National Museum of
 Folk Arts and Traditions, France:

*Preventive Conservation is the economical means
 to prevent damage and preserve the real objects. It
 takes the constant application of common sense,
 science and practice by all staff in all areas.*

Statement by the Director, following a
 Workshop at the National Museum of Ancient

*Our goal is to preserve our collections for
 future generations: systematically evaluating
 risks, identifying needs and forming a plan for
 prevention. All staff and administrative officials
 are involved, working in teams and with the
 public.*

From a Workshop group at Birmingham
 Museums & Art Gallery, United Kingdom

*The aim of preventive conservation is to reduce
 the deterioration and maintain the integrity of
 museum collections in an affordable manner and
 to ensure their availability to society now and in
 the future.*

Definition by a Workshop of Directors from
 seven museums, organised by ICCROM.

3 Building Participation: Agreeing on a Vision and Identifying Key Issues

A Shared Vision

A shared vision⁴ is essential to ensuring that everyone in the museum is working towards the same goals. The second step to Teamwork is the development of a shared vision for preventive conservation, and the identification of the key issues that need to be addressed to achieve this vision. These are the themes of the first Workshop.

The four key issues to explore during this Workshop are:

- What are the risks to the collections?
- What potential actions can reduce these risks?
- How will the process be improved by co-operation and planning?
- What are the benefits to the museum and its public if collections care is improved and collections made more accessible?

The term preventive conservation has been used for 30 years and almost everyone in the museum will be aware of some of the measures taken to protect the collection. Some people will have been directly involved in certain tasks. It is unlikely, however, that everyone will have a shared view of what risks and responsibilities are involved. It is more likely that either:

- a small number of staff in the museum have a high level of knowledge about preventive conservation, but it is not shared throughout the organisation, or
- museum staff have very little or no knowledge of preventive conservation

By covering each of the four key issues, all staff, regardless of their existing level of knowledge, will be able to reach a common base of understanding.

Both the vision of preventive conservation and the key issues that need to be addressed should be formalised in writing by the end of the workshop. Debating and approving a written statement ensures that everyone has the same understanding of the vision and the key issues.

At the end of the first Workshop the museum's staff should have:

- a common and long-lasting vision for preventive conservation that they can refer to and share with future staff
- a list of agreed issues for action that will form the basis of a mid-term preventive conservation plan

The vision for preventive conservation needs to be specific to each museum. It should be written as a short statement that imparts the importance of preventive conservation for the collections, and the need to implement it in a way that enables increased access to the collection, now and in the future.

The Director's Role

As highlighted in Chapter 2, commitment from the museum's senior Administration is essential to the success of the Teamwork approach to preventive conservation. The Director must make one of the opening presentations at the workshop, explaining why the museum has decided to focus on preventive conservation and adopt a teamwork approach. The Director's personal commitment is critical to the development of the entire staff's vision.

The museum's Administration also needs to provide staff with the framework for the Teamwork project. The presentation should convey the Administration's commitment to assigning the responsibilities and resources needed to undertake the project. It should also outline the timeframe within which results will be visible throughout the museum.

The Planning Group's Role

It is the role of the Planning Group, appointed in Step 1, to organise the workshop. They should use the criteria outlined in Chapter 2 to identify who will be involved in the workshop, either as a presenter or as an attendee. This includes the identification of museum staff and any external advisors that may be required.

The Planning Group should also determine what workshop format would be most effective for their museum. The workshop is being held to promote participation, draw out the staff's existing knowledge and create a base of understanding throughout the museum, so that a shared vision for preventive conservation can be developed.⁵ The format for the core of the workshop needs to encourage open communication. It should include techniques like brainstorming and small group work.

Short lectures can be incorporated for the sections of the workshop that are designed to impart information or update the existing knowledge of the staff.⁶ Information gathering techniques (such as visits to other museums) can be incorporated during, before or after the workshop, to illustrate problems or present possible solutions that have been implemented in other institutions.

The decisions about what combination of techniques would best suit each museum will be influenced by the:

- size and structure of the museum
- number of people to be included
- existing staff culture
- museum's experience in organising staff meetings and brainstorming.

Museums with large staff numbers or complex staff structures can organise special sessions for all staff, while a smaller group, representative of all of the key areas in the museum, will be involved in the Workshop. Large open sessions are especially useful for the presentation by the Director, to announce the project, to inform on actions and time schedules, to report on results and to provide general information and knowledge. For large open sessions, lectures are the most appropriate communication technique.

The experience of the museums that participated in ICCROM's Teamwork for Preventive Conservation project indicates that whatever the format, the first Workshop should take a minimum of one day and a maximum of two days.



A Shared Starting Point

Lectures and Guest Speakers

All staff need to have the opportunity to learn about current approaches to preventive conservation, regardless of their existing levels of knowledge. In this way, everyone starts on a shared footing. Even professional conservator-restorers need to continue to adopt new ideas, attitudes and technical approaches.

Lectures can be useful in museums where:

- the majority of staff members have a limited understanding of the techniques and benefits of preventive conservation
- only a small number of staff have had the opportunity for mid-career training in preventive conservation
- staff responsibilities are separated and hierarchical

If teamwork is a new management technique, there can be a risk that its relatively informal style will seem improper. The Planning Group might want to initiate the process with a lecture that will provide a fairly formal learning environment and prepares people for the move to more informal discussions and exchange.

Guest speakers can be used successfully to inform the museum staff of current approaches to preventive conservation. In museums that have a conservation section, both their conservator-restorers and guest speakers should be involved. The involvement of the museum's conservators-restorers right from the beginning of the Teamwork process includes them in the transition from preventive conservation being their sole responsibility to one that is the responsibility of a multi-disciplinary team.

The involvement of guest speakers helps reduce the risk of the staff feeling that the museum's conservator-restorers are the sole authorities on preventive conservation. This is important in ensuring that staff feel comfortable participating openly in the Workshop and in the on-going Teamwork for Preventive Conservation process.

Guest speakers are most effective when they can talk about real situations in museums, rather than just theory. They should include case studies and examples of actual problems and solutions. It may be useful for them to discuss some of the problems with the staff prior to the Workshop, to provide information pertinent to the museum. If this is the case, the Planning Group should organise an advance visit by the guest speakers or advisors, to enable them to familiarise themselves with the situation in the museum.

During the Teamwork for Preventive Conservation project, the Brescia Civic Museum of Natural Science found that the most important contribution to the start of the Teamwork approach was a discussion between external conservators and the internal staff about the general problems of preventive conservation.

A mixture of external and internal specialists was successfully used by the Czech National Museum. In this museum, an initial study day was held where approximately 50 museum staff met with the conservator-restorers from their own museum, as well as some of the most active researchers and practical innovators from other professional spheres and institutions in the country. Lectures were given by the museum's Administration staff, its conservators, and by guest speakers.

In the Teamwork for Preventive Conservation project, the Czech National Museum followed up the first Workshop with staff visits to two other museums that had demonstrated cost-effective and resourceful approaches to preventive conservation.

Czech National Museum



Identifying Risks

Visits to Other Museums

This approach provides an open environment for informal discussions between staff from different professions. It promotes long-term links outside the museum and provides contacts with future sources of advice and training. Seeing successes elsewhere can be very inspiring. Staff can see highly practical ideas to apply in their museum.

Brain-Storming and Small Group Tasks

The Planning Group should organise the workshop in a way that stimulates communication, self-expression, problem solving and creativity. Workshop techniques that require individual participation ensure that everyone's knowledge is included and participants have the satisfaction of contributing their point of view, suggestions and concerns. Long-standing problems are frequently identified. This is an excellent result, but also one that must be kept under control to avoid returning to old conflicts and rigidity. The workshop should be structured so that everyone has the chance to speak up, but no one has the opportunity to monopolise. The natural reserve of some individuals should be respected, but should not prevent them from participating.

Brainstorming and group work, incorporating a mixture of written work and discussions, function very well in producing the vision and key issues for preventive conservation in the museum.

Asking each person to write a few words ensures that everyone participates. Discussion then allows the braver individuals and natural leaders to speak more fully and lead the group to completion of a task. Reporting back from small groups in writing ensures that the task is completed according to specifications and that the results are available for immediate use and future reference. These tasks familiarise staff with future roles as team members, in liaising with the Administration and as active participants.

During the Teamwork for Preventive Conservation project participating museums found the following techniques successful:

Writing a vision for preventive conservation

- Every participant in the workshop writes two or three key words on a card to answer the question: "What does preventive conservation mean to you?"
- The cards are gathered at the front of the workshop and one or two facilitators (perhaps assisted by several workshop participants) quickly sort them into rough groups. The facilitators encourage discussion between the participants to help collate the comments meaningfully.
- The workshop is then broken up into a maximum of three or four small groups. Each has a short time to produce a definition or vision statement of a maximum length (say 50 words). The small groups then report back to the entire workshop.
- The Planning Group, or any assigned workshop reporters from each group, meet briefly to complete a single draft statement, which is reported back to the entire workshop, and discussed before final agreement on wording.

Broadening the vision of who is involved in preventive conservation

- Individuals identify the different staff positions that take part in preventive conservation, either orally or in writing. A facilitator moderates, summarises and comments on the discussion, encouraging wide participation.
- This task can be adapted to the museum's needs by using variations of the question given to the participants: What staff positions already take part in preventive conservation? Which staff positions could assume a role? Who is involved in preventive conservation 'inside' the museum? Who is involved, or could be involved, from 'outside' the museum (architects, advisors, specialised technical services, museum visitors, children, funding agencies, government representatives)?

Bringing new ideas (and old problems) into the open

- All the workshop participants write one or two cards that answer a question such as: What are the two greatest problems related to preventive conservation that you encounter in your day-to-day work?
- Facilitators gather the cards and sort them roughly into groups, encouraging discussion from all the participants.
- The results are used as the basis of further work to define and agree upon the key issues to address.

Identifying risks to the collection.

- Small groups are asked to identify the risks of damage to the collection, based on their personal experience. Each small group is assigned a different area: risks arising from a museum function (exhibits, storage, transport and handling, building management) or risks arising from particular sources (light, incorrect temperature and relative humidity, fire, flood, theft, vandalism, insect pests, etc.).
- The small groups use cards to record their discussion and report back to the entire workshop to assemble the overall picture of risks. Each group must provide a verbal commentary on the meaning of their findings.

Identifying key issues to address

- All the workshop participants write one or two cards that state (within a word limit) the key issues that they feel should be addressed.
- Facilitators gather and sort the cards into groups, using help from all the participants.
- The entire workshop agrees on a maximum of four to six key issues.
- This exercise leads well into small group work to describe the issues more clearly and to add background explanations. The workshop participants can volunteer for the group and the issue that interests them most, as long as they agree to approach the issue in a positive way.

The facilitators should clarify that the participants in the small groups will not necessarily become team members assigned to that issue.

ICCROM Preventive Conservation Indicators

The ICCROM Preventive Conservation Indicators are a tool designed to assist staff to identify the main preventive conservation

issues that face their museum (refer to Appendix B). They also assist to broaden the vision of staff because they provoke discussion about a wide range of issues.

The Indicators are 35 questions with yes/no answers, divided into seven topics:

- 1 Constitutional framework of the museum
- 2 Finance and Plans
- 3 Personnel and Teams
- 4 Collection
- 5 Building
- 6 Environment
- 7 Public Involvement

- To encourage discussion, a large workshop should be broken down into groups with a maximum of 10 members. Each group should include a cross-section of professions and employees, such as administrative officers, curators, exhibit designers, technicians, architects, security personnel, guides and staff for educational services and public events.
- Answering the questions will promote considerable debate. Each group should appoint a workshop recorder to note the answers and comments of the group. After completing all of the questions, each group should identify three to six key issues, generated by the discussion of all the Indicators. The chart at the end of the Indicators helps summarise the group's conclusions.
- Workshop recorders then report back to the entire workshop summarising their analysis and giving a short synopsis of the four to six key issues that they feel the museum should address by taking a Teamwork approach to preventive conservation. The workshop participants discuss the lists from each group and determine what the final key issues are for the museum.

Whichever combination of the techniques covered in this chapter is used, at the end of the first Workshop the staff should have:

- developed a shared vision of preventive conservation for the museum
- identified the key issues that need to be addressed to achieve this vision

The Preventive Conservation Planning Group should then consult with the museum Administration to ensure their agreement with the vision and key issues, and then report the approved results to the entire staff.

The museum can now start the following step in the Teamwork for Preventive Conservation process – developing objectives to address the key issues that have been identified.

4 Targeting Preventive Conservation: Assessments and Writing Objectives

From Issues to Objectives

The third step in the Teamwork process is the development of clear objectives with verifiable results. This step is critical to ensuring that teams can work effectively towards a common goal.

To develop the objectives, it is necessary to undertake an assessment of the overall preventive conservation situation in the museum and of each key issue identified in the first Workshop.

Following the first Workshop, the museum Administration and the Preventive Conservation Planning Group must discuss and agree on a schedule outlining how and when this assessment will take place, when the objectives need to be formulated and the team(s) appointed. There should be no more than a six-month gap between the first and second Workshops.

The objectives of the second Workshop are:

- To complete the assessment of the current preventive conservation situation in the museum
- To identify verifiable preventive conservation objectives that address the key issues.

This chapter outlines assessment and Workshop techniques. In some cases they require preparation prior to the final workshop, such as consultation with outside experts, research by individuals or meetings of preliminary teams. The gap between the two Workshops provides the time for the Planning Group to undertake these steps and plan for the second Workshop.

It is the role of the Preventive Conservation Planning Group to organise the second Workshop. As with the first Workshop, this will require the identification of who should attend, both from within the museum and any external advisors.

It will also require the identification and selection of the most appropriate assessment method and some training in writing clear objectives.

An external advisor can be used to advise the Planning Group on which assessment method would be best suited to their museum.



Assessment

Assessment Methods

The museums that participated in ICCROM's Teamwork for Preventive Conservation project used six different workshop assessment methods:

- Working Groups
- All-staff risk assessments
- Central Committees and Teams
- Individual research

- Consultants' reports
 - Standards and Benchmarks
- Some museums used a single assessment method, while others combined more than one technique.

Working Groups

Any assessment and objective setting method that involves all the staff has the advantages of building co-operation and drawing on their entire body of knowledge. However, unless the staff is very small, eventually the detailed objectives will need to be developed by smaller groups.

Some museums addressed this problem by holding an all-staff meeting that outlines a working group approach, with each working group studying one of the key issues, assessing the museum situation more fully, and proposing objectives. All staff then have the opportunity to volunteer to be part of one of the working groups.

This technique has the advantage of assigning staff members to subjects that interest them, encouraging participation and constructive interchange. It can have the disadvantage of unbalancing working groups with unequal numbers of participants and a poor representation of a cross-section of professions. So, it is essential that the museum Administration and any Workshop facilitators use their judgement in the final approval of the working-groups to ensure that they each have a balance of interests, professions and responsibilities.

Each Workshop group should have specific questions to assist their assessment discussions, and preventive conservation assessment models can be successfully used and adapted for this purpose (refer to Further Reading).

All-staff Risk Assessments

For the Teamwork for Preventive Conservation project, the entire Leuven Municipal Museum staff participated in the Workshop to assess risks to the collection. The Workshop was based on techniques first developed by the Canadian Museum of Nature and Canadian Conservation Institute.⁷ For two days, the staff learned the risk assessment techniques and worked in small groups to identify and examine every possible risk to the entire collection.

Risk assessment is an effective method to quantify the problems facing a collection. It helps identify objectives that make the best use of scarce resources. The Workshop technique at the Leuven Municipal Museum also had the advantage of bringing all the staff together and drawing on their knowledge. However, the risk assessment methods must be simple enough to learn and complete within the Workshop time available. Either in-house conservator-restorers or external advisors can develop tailor-made Workshops for each museum, based on internationally recognised techniques.

Central Committees and Teams

Some museums have opted to assign the responsibility for assessment and planning to a central committee at the end of the first workshop.

This approach works well in museums where:

- staff already have good experience in preventive conservation and/or teamwork, and feel ready to set objectives
- Workshop facilitators believe staff will react better to more intensive assignments and formal meetings rather than to all-staff

brainstorming and group work

These committees or central teams should have no more than ten members, drawn from a wide cross-section of museum departments. Each member is responsible for assessing and reporting on the current preventive conservation situation in his or her own area of expertise. The committee then compile the results in the second Workshop, when the committee chair is responsible for leading the committee towards a consensus on objectives. An external advisor or a museum conservator-restorer can be used to assist the committee, with an objective voice or with technical expertise.

Individual Research

Some museums have found it useful to have individuals report on the conditions, risks and problems in their sectors of the museum, then to use this information as the basis for the Workshop discussion when the final objectives are agreed. The responsibility to contribute at an individual level usually creates a spirit of participation, commitment and satisfaction.

Consultants' Reports

Consultants' reports can also be successfully used at this stage of the Teamwork for Preventive Conservation process. The Preventive Conservation Planning Group can commission consultants to provide reports on conditions and risks, along with recommendations of potential objectives. The consultant may be directed to examine a specific risk area or could be asked to conduct an overall assessment. The results are then used as the basis for the workshop discussion, when the final objectives are agreed.

Some consultants now use risk assessment and planning matrixes similar to those by Waller and Michalski.⁸ Another approach is to discuss the risks and problems to the collection resulting from each museum function: exhibits, storage, research and public access. *The Conservation Assessment Program Handbook for Assessors* and *The Conservation Assessment: A Tool for Planning, Implementing, and Fundraising*,⁹ provide a basic format for such a consultant's report. It is up to the museum Administration and the Planning Team to commission the type of assessment and report that will best suit their needs (refer to Further Reading).

Standards and Benchmarks

Some museums may require a more objective assessment method to be used, where the results will indicate how the preventive conservation work of the museum compares to that of other museums. In this case museum standards or benchmarks form the basis of the Workshop assessment method.

The ICCROM Preventive Conservation Indicators lead up to standards or benchmarks in that they require they ask the user to describe and discuss the entire current range of conservation activities in the museum. Standards and benchmarks go one step further in that they stipulate specific measures of achievement and targets for results. They generally specify levels of relative humidity and temperature, lighting, storage design, policy preparation, pest control and so on. Standards are levels of achievement that are required or imposed by a funding agency, a government administration or another museum offering to lend artefacts. Benchmarks are optional measures of

achievement that a museum may use to assist in planning and self-improvement.

In this case, the standards and benchmarks are completed as part of the workshop and the results are used as the basis for the development of the final objectives (refer to Further Reading).

Assessment Models

There are a range of preventive conservation assessment models that have been developed and used by museums throughout the world. The Further Reading section in this guide provides details on models that were used by museums that participated in ICCROM's Teamwork for Preventive Conservation project. It should be noted that preventive conservation assessments are an area that is continually developing and any museum planning to undertake the Teamwork for Preventive Conservation process should check what additional models are available.

Writing Clear Objectives

The fundamental aim of the second Workshop is to assess the preventive conservation situation in the museum, characterise each key issue and then use this information to develop clear objectives outlining how each issue will be addressed.

The need for clear objectives and verifiable results is so important to the success of Teamwork that it is recommended that a session on "How to Write Objectives" be included in the second Workshop. The session should cover the points outlined in the following "Guidelines for Writing Objectives". Learning to write objectives was found to be invaluable during ICCROM's Teamwork for Preventive Conservation Project. It will be new information for some workshop participants, while acting as a useful refresher for others. Examples of the Key Issues and Objectives developed by three of the museums that participated in ICCROM's Teamwork for Preventive Conservation project are included in Appendix C.

At the end of the second Workshop, clear and verifiable objectives should have been written, stating how each key issue is going to be addressed.



Objectives 1, 2, 3, 4.

Be clear about objectives and outcomes for the project, how these will be measured and evaluated.

Guidelines for Writing Objectives

Key elements to include:

Result: Name the expected product or result.

Performance: Describe the action the team or the institution is to do.

Conditions: Describe the important conditions under which the performance is to occur, such as the time schedule and the limits on staff and funds.

Standards: Wherever possible, describe the standards that will make the performance acceptable, such as the quantity of results and the characteristics of the product expected.

When stating objectives, use verbs that suggest specific changes or products:

- To produce
- To identify
- To sort
- To construct
- To build
- To document

Avoid verbs that are open to many interpretations:

- To assist
- To aid
- To improve

Avoid verbs that focus on means rather than ends:

- To study
- To promote
- To co-ordinate
- To guide
- To discuss

Make sure that the wording:

- is clear and short
- avoids describing changes that cannot be verified

5 Building Teams and Keeping on Track



Teamwork

It wasn't an easy task. Suspicion and fear of loss of authority and areas of responsibility had to be overcome.

Barcelona Museum of Contemporary Art

Principles of Teamwork

This fourth step in the Teamwork process is to create the team or teams that will start work on achieving the objectives that have been determined.

The information in this chapter applies to the creation of both the Preventive Conservation Planning Group and any specific Preventive Conservation Teams.

There is a general perception that teams are positive things, and that people will be willing and able to work together in a team approach. Teamwork, however, is not necessarily so easy.

As most managers or supervisors are aware, forming a group of people who have different specialisms, skills and personalities into a cohesive work unit is not easy, and rarely happens automatically. This is particularly the case within 'profession-heavy' institutions such as museums.

The main reason that teamwork fails is poor preparation before the team is established. There are five key areas that require thorough thinking and planning before people can successfully be brought together to work as a team.

Identify Outcomes

According to the set objectives, how will success be measured? What outcomes will be achieved? What visible results?

What is a reasonable timeframe to obtain such results?

Determine team structure

How many teams will there be? Who will be on the team(s)? Who will be the team leader, and what are their responsibilities?

If the museum has conservation staff, what is their role? How will they be involved?

Determine reporting system

How will the team(s) report to the museum's Administration? How often?

Who will be responsible for reporting on the team's work?

Specify resources and team authority

What funds are available to the team?

What equipment and materials are available? What technical advice might be required and where can it be sought?

How much time can team members actually spend working with their team?

How much authority will the team have to make decisions, to use the available funds, and to modify other staff's current work programmes?

Determine training and information needs

How will team members increase their knowledge of preventive conservation? How will they improve their teamwork skills? How can all staff awareness in preventive conservation be developed?

Identifying Outcomes

The process of identifying the outcomes has already been started during the two Workshops. The Workshops produced a shared vision for preventive conservation, a list of key issues and a set of written objectives. The museum's Administration now needs to determine a realistic timeframe for the team(s) to meet the objectives and how the success of the team will be measured.

Being a small museum with limited staff turned out to be an advantage in implementing the philosophy of preventive conservation. Almost everyone is in daily "contact" with the collection and sees the need for good collection management. They were easily convinced of the importance of preventive conservation and willing to become involved in the project.

Leuven Municipal Museum



Small Museum

Two teams were established, one for each of the two areas the museum wanted to tackle - public education and environmental conservation.

Barcelona Museum of Contemporary Art

Following the establishment of a project team comprising representatives from all disciplines or departments, we formed a series of working groups to look at those preventive conservation issues which we considered important: handling and movement of objects, environmental monitoring, environmental control, object housings and support materials, cleaning and materials testing and case construction.

Ulster Museum

Determining Team Structure

Deciding on the number of teams

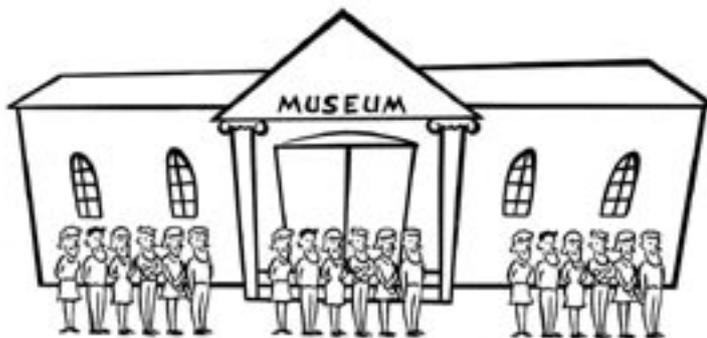
The museum's overall aim and objectives for preventive conservation and the size of the museum will be the main factors in determining how many teams will be set-up.

Three different approaches were used by museums participating in ICCROM's Teamwork for Preventive Conservation Project.

In some cases, the museum created a single team that was responsible for meeting all of the objectives. This approach best suits small museums whose preventive conservation aims and objectives are broad and require participation from a wide cross-section of the museum staff.

Another approach was to establish a number of teams, each with their own objectives. This works best in small and medium size museums whose preventive conservation aims and objectives are very specific, but cover a number of areas of the museum's work. The objectives are of equal importance and can be carried out by separate teams working in parallel.

An alternative approach was to establish an overall co-ordinating team, with sub-teams responsible for meeting different objectives.



Large Museum

This works best in large museums where the overall aim for preventive conservation is broad, with a number of more specific objectives. The co-ordinating team oversees the work of the sub-teams, and ensures that all of the work being undertaken meets the museums overall preventive conservation aim.

Choosing Team Members

There are three criteria that need to be considered when choosing members of a team. Each museum should select the one that most suits its existing working culture.

Team members can be chosen because of their positions and responsibilities within the museum. This ensures that the team draws effectively from the museum's existing organisational structure. It means that the hierarchy of the museum is not disrupted, avoiding the potential unease of staff who have authority in their position and feel that it should be respected. If positions rather than people are assigned to the team it also means that being on the team becomes part of the job and if staff leave, the next position holder will continue the work. This approach was successfully used by the Ulster Museum during the Teamwork for Preventive Conservation project.

Team members can also be chosen based on their individual personalities. This is especially important if the culture of the museum has not included much teamwork in the past. Choosing staff whose personality means they are happy working in groups, and outside of their normal duties, will reduce the risk of conflict within the team and facilitate that results be produced quickly and efficiently. This will act as a demonstration to other staff, who may initially be resistant, that teamwork can be a productive approach.

This approach was successfully used by the Museum of Ethnography in Budapest during the Teamwork for Preventive Conservation project. In this museum, the team included a young scientist who was relatively new to the staff and a conservator-restorer nearing retirement. They both had a personal interest in the area of preventive conservation, and their working styles and knowledge complemented each other. The team also included a group of technicians who previously had little input into planning but were enthusiastic about being involved in the project and the opportunity for growth it allowed them.

Team members can also be chosen because they have the right technical skills and knowledge to meet the preventive conservation objectives. This consideration is most important if the objectives are very specific, like re-organising a storage system. Then the team needs a significant core of members who have skills and responsibilities directly impacting on the storage area. This might mean that exhibition and design staff are not included on this team. Again, choosing skills-based staff for a very specific objective will produce results more quickly and act as a demonstration to other staff that teamwork can be an effective approach.

If the museum has its own conservation staff, consideration needs to be given to the role they will have when the team has been established. The aim of introducing teamwork as a method for improving preventive conservation is to ensure that all staff are aware of the risks to the collection and are in a position to minimise them. However, in-house conservator-restorers will continue to be the most knowledgeable on the factors of deterioration and the overall care of the collection. As outlined in Chapter 2, their continued involvement in the team-based approach is critical to ensuring a smooth transition from an activity that might have been perceived as their responsibility to one that is the team's.

The Team Leader

The importance of the leader cannot be over emphasised. The size of the museum, and the presence or absence of internal conservation staff, need to be considered when deciding who will lead the team.

The first decision is whether the leader will be chosen by the museum's Administration when setting up the team, or chosen by the team once it has been established. If a high degree of autonomy is desired for the team, then allowing it to choose the leader from its membership will reinforce this message. If the team does have the authority to choose the leader, then the museum's Administration should inform the team of what kind of responsibilities the leader should have.

If, however, the team leader is to be chosen by the museum's Administration, there are three possible approaches that can be taken.

If the museum has its own conservation staff, the team leader could be a conservator-restorer. This will provide continuity between their existing work and the work of the team.

It can also be decided to select a "non-conservator-restorer" based on their position, personality and team skills. This will ensure that the team is well run and managed from the beginning and emphasises the importance of specialisms outside the conservation section.

Another choice for team leader is a representative from the museum's management. This will provide a direct link to those running the museum. It will also reinforce the importance that the museum's Administration has placed in the team and its success. This is an important message for the other team members and the rest of the staff. Direct management involvement in the team will highlight the status of the team to everyone.

Determining the Reporting System

Once the team is operating, it must report to the museum's Administration on progress, receive feedback and, at times, gain approval about their work and recommendations. A mechanism for the team reporting to management needs to be established so that this can happen smoothly and not hold up the work of the museum or the team.

The size of the museum, and the relative seniority of the team members, will determine how the team will fit into the museum's existing reporting systems.

In small museums, with limited staff numbers, the museum's Administration is already likely to be directly involved in all areas of the museum's work, and will often be in charge of key projects. In these situations, an additional formal reporting structure is not needed. The team will simply report directly to the museum's Administration, in the same way that the progress on exhibitions or other team-based projects might be reported.

Medium to larger museums, with staff working in separate branches or divisions, will need to look at where each of the team members is positioned with the museum. The team should report to a management level higher than that held by any of the team members, and senior enough to make decisions relating to the team's work. This should include approval for recommendations made by the team and authority to spend money. In most cases, this reporting link is likely to be at the level where branch or division heads meet.

The person who reports on the team's work to the Museum Administration is usually the team leader. If the Administration want direct involvement in the team without necessarily running it, then an alternative approach is to include a management representative on the team and give them the task of reporting to the museum's Administration.

Specifying Resources and Team Authority

The final areas that the museum's Administration needs to consider when establishing the team are the resources that can be made available and the amount of authority the team is to be given. Along with the aims and objectives themselves, these decisions will impact directly on the amount of work that the team can realistically do and how quickly results can be achieved.

Neither the project team nor the working groups were provided with any additional resources to carry out their remits. However, as a result of their efforts, a certain amount of 'redistribution of wealth' took place within the Museum such that funding was better targeted towards specific preventive conservation needs.

Ulster Museum

All teams will require resources (budget, materials or equipment) to be able to undertake their work. Will the team's resources be found from elsewhere, or is there a risk that they will be taken from existing museum areas, such as the conservation section? The impact of such redistribution of resources on both the museum's existing work and the smooth running of the team needs to be assessed.

The team may have a budget at its disposal. If this is to be the case, how big will it be, where will the money come from, and are there to be any constraints on its use?

In some situations the museum may need to gain additional external funds for the project. If this is the case it may be necessary for the team and the museum's management to work together on a fund-raising plan.

The team may be given decision-making powers. If this is to be the case, what authority will the team have and when will it have to get approval from the museum's Administration? Thought also needs to be given to whether the team will have any authority over the work of other museum staff. Will the team be able to direct other staff, or will recommendations have to be made to the museum's Administration and then directed down to the staff through their line managers?

Once aware of these resources and levels of decision-making, the team will be able to determine what it will be able to achieve and when.

Determining Training and Information Needs

The aim of introducing teamwork as a method for improving preventive conservation is to ensure that all staff are aware of the risks to the collection and are in a position to minimise them. Although the level of preventive conservation knowledge of all staff will have been refreshed or increased in the first Workshop, it is likely that the team members will require additional information and training in some areas of preventive conservation. Team members may also need training in the skills required for teamwork, particularly if this type of group-work has not been tried in the museum before.

As outlined in Chapter 2, external advisors can be used to assist the team and provide training and information on preventive conservation and teamwork skills.

As the preventive conservation knowledge of the team increases, ways of continuing to raise the awareness of all the museum's staff

More practically, we regard the establishment of Preventive Conservation Resource Centre as having been successful in both raising awareness and providing advice: the contents of the Centre (books, videos and equipment) continue to be regularly borrowed and used by other museums and museum-related organisations for training and other purposes.

Ulster Museum



Resource Centre

Other institutions dealing with cultural heritage protection participated in the workshop and opened their depositories and premises for excursions. The staff of each institution prepared lectures and took part in compilation of a manual on preventive conservation, which was published within the National Museum program.

Czech National Museum



To Do List

should be worked out and implemented by the team itself. One of the fundamental tasks for all of the museums undertaking the Teamwork for Preventive Conservation project was creating a climate within the museum where learning about preventive conservation was encouraged and supported.

Most museums introducing a team approach to preventive conservation need to develop some form of preventive conservation 'information centre'. The museums that participated in the Teamwork project created small libraries and files of articles or added a new focus to the existing museum library. At least one museum has created its own web page on preventive conservation with copies of articles and with translations into the national language.

Museums also developed their own preventive conservation manuals and guidelines. Once again, assistance from outside advisors was found to be invaluable, and can be used to create a product with use not only to your museum, but also to neighbouring museums or museums in other countries.

Troubleshooting

As mentioned earlier, ensuring that a group of people with different skills, specialisms and personalities work together as a team is not easy to achieve. The formal planning that has been summarised in this chapter will help overcome many, but not all, of the problems that can occur.

The size and culture of the museum may create other problems and it is important to be aware of them. The three most common are problems are when staff:

- feel overloaded with work
- feel their concerns are not being taken seriously
- are resistant to change

A museum implementing Teamwork for the first time noted "*we had problems starting up teamwork. It seemed we did not have the habit of this kind of work and we let things go back to their original ways. It is hard to change when we have spent so many years working in another way*".

In museums of all sizes, staff finding the time to be part of the team and involved with its work will be a problem. All museum staff have high workloads and introducing another area of responsibility may seem daunting and unrealistic to some staff. The experiences of the museums that participated in the Teamwork for Preventive Conservation project showed that the amount of extra work required due to involvement in the team was rarely acknowledged. This caused problems with teams in which workload issues were not addressed by the team leader and museum Administration. This is an area that needs particular attention after the team has been established and has been working together for a while.

A museum implementing Teamwork for the first time noted that "*People were enthused and they are still more active but it is very hard to respond to keeping everyone involved, amongst their other schedules*".

In larger museums, where staff usually work in very specialised fields and where teamwork has not traditionally been used, specialist staff can find the transition to teamwork especially difficult. This is particularly the case when they are only required to work this way when the team meets and for the rest of the time the staff continue to work in their own specialist area. If staff are having difficulty making the transition

Preventive Conservation is at the same time something absolutely common place and something that can have enormous consequences, and that demands practical and scientific information in all areas. It has been, and it is, extremely difficult to attract the attention of officers and specialists who already have their time enormously filled, in an institution that has an ever-ageing and ever-diminishing body of personnel. To say it in a word, it is very difficult to make teamwork enter into the priorities of the museum. The problems are daily, the urgencies, the exhibitions, etc. and above all the fact that to be a small central museum the teamwork is very often, too often, superimposed on the continual work of the groups. Still, the diffusion of basic notions, and even the idea of the urgent necessity to diffuse preventive conservation has been made, and there is therefore an awareness and also an effort to transform this conscience into a positive and permanent routine of our work.

National Museum of Ancient Art, Portugal

I would encourage them to make it an ongoing process, establishing new goals as preceding ones are fulfilled.

Barcelona Museum of Contemporary Art



Encore

to teamwork, they will tend to spend the time in the team meetings talking only about the requirements of their own professional area, rather than discussing the wider issues of preventive conservation. This can slow the work of the team down and demoralise the rest of the team. This problem is likely to continue until each team member begins to feel that the work of the team will address some of their professional concerns. This is an area that should be focussed on in the early team meetings.

In any museum where teamwork is being introduced as a new technique, there will be some resistance to this change in working practice. This is likely to be strongest in staff who have been working at the museum for a long time. They will have established work patterns that they feel comfortable with and want to continue. As with potential problems of staff not feeling that their concerns are taken seriously, this resistance is likely to create difficulties until the team specifically addresses it. Isolating staff who may prefer other ways of working will only alienate them. It will also mean that their knowledge and skills are not accessible to the team and reduce the effectiveness of its work. People will become supportive of change only when they can see that it will be an improvement to what went before. This requires a serious acknowledgement of their concerns and seeing the new approach of Teamwork for Preventive Conservation achieving results.

Monitoring Progress and Achieving Success

The museum's overall vision, key issues and objectives for improving preventive conservation will be the starting point for the team to plan its work and define a schedule. Once approved by the museum's Administration, undertaking this work will be the main task of the team. However, thought also needs to be given to forward planning. The vision and initial objectives will have been written based on the needs of the museum at that time. As the team achieves results and the situation in the museum changes, different issues will arise and need to be addressed. A program of continuous monitoring and improvement needs to be undertaken by the team. The progress on the existing schedule needs to be monitored and reported to the museum's Administration, and recommendations for addressing the new needs that are identified must be passed to management for approval before being included in the revised schedule.

In this way, the work of the team will always be addressing the current needs of the museum in a process of continuous improvement.

There should now be an awareness by the museum's Administration and the Planning Group of the key elements that need to be considered by every museum when establishing the teams for preventive conservation. It ensures that the teams can be created and set to work in an effective and rewarding way.

6 Building Preventive Conservation Networks

Forming a Unified Front

Every effort should be made to identify areas of common interest and concern such that a sense of mutual benefit can be engendered. We did achieve benefits for ourselves as well as supporting the other museums, especially a heightened profile and support and recognition of our value as well as a general heightening of services in Northern Ireland and recognition and contacts in Ireland.

Ulster Museum

It's essential that a consensus be reached on the priority to be given to the project to ensure synchronisation and meeting deadlines

Barcelona Museum of Contemporary Art

Insist on plans with agendas and responsibilities. It took a long time for us to clarify what we would do and sometimes we discovered at the last minute that we did not have the same expectations as the schools or the others in our project.

Teamwork for Preventive Conservation
participant museum

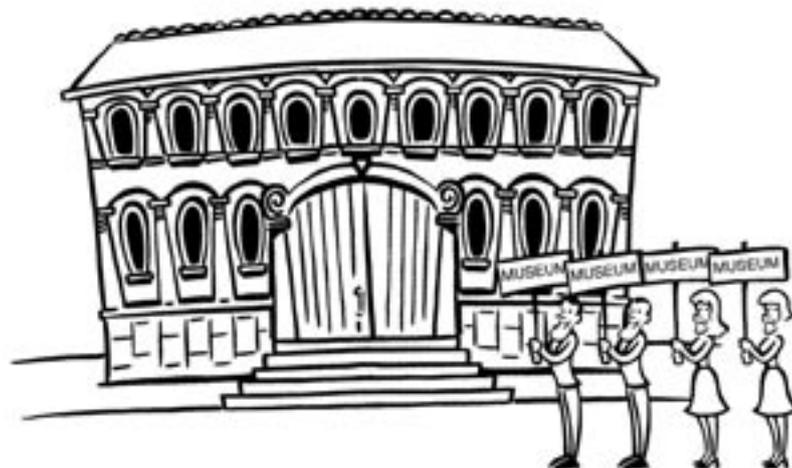
The fifth and final step in the Teamwork process is the development of networks among museums and related national institutes to provide additional support to the work of the team(s) within the museum.

Working with other institutions with related needs and interests can be very productive. If museums can identify other institutions that share similar objectives they can develop a project with a higher profile and one that is more likely to attract resources, and increase public support for their work and the work of the entire museum.

The same teamwork principles outlined in Chapter 5 apply to projects being undertaken between institutions. The team needs to include members from each participating institution. After an initial period of brainstorming and exchanging ideas, there needs to be agreement on a shared vision for the project and development of clear objectives, with defined schedules and areas of responsibility.

The museums that participated in the Teamwork for Preventive Conservation project took five different and equally successful approaches to developing external networks to provide additional support for improving preventive conservation.

- Informal exchanges and Advisory Services
- Symposiums, Congresses and joint training workshops
- National and Regional Symposiums
- Training publications
- Projects for public involvement and support



Networks

We provided lectures and published articles in national and regional museum forums as we progressed with our Preventive Conservation project. Collaboration with other heritage institutions (the national conservation institute, and the Flemish Community Department of Museums) created a network that made information about conservation and restoration more accessible.

Leuven Municipal Museum

The RNAAM helped four other military museums with preventive conservation. It focused – with help of our own staff and a consultant – on how to measure the environmental conditions and on how to improve the conditions within the museums involved. Knowledge about climatic conditions and light was conveyed to the keepers together with the use of measuring apparatus for temperature, humidity and light, which we were able to buy as a result of the shared project with the other museums. A system to distribute the measuring apparatus and needed applications was developed. Also the RNAAM began to perform the duty of an expertise centre and information point in the whole field of military museums in the Netherlands (5 larger and 24 smaller museums) for preventive conservation and also for the acquisition of conservation materials.

Royal Netherlands Arms and Army Museum

We organised a regional Symposium on “Communicating Conservation” using examples presented by speakers from the United Kingdom (Ulster Museum, National Museums of Scotland, West Midlands Museums, Manchester Museums, our own museum). In addition to providing us with valuable information, the Symposium gave the opportunity for us to put ourselves, our policies and practice under scrutiny from conservation and collection care professionals across the country.

Birmingham Museums & Art Gallery

The meeting of our staff with various experts of our own National Museum and also other conservators and restorers from other professional spheres and institutions formed a very successful feature. Interesting lectures were beneficial for all participants. Other institutions dealing with cultural heritage protection participated in the workshop and opened their depositories and premises for excursions. The staff of each institution prepared lectures and later took part in compilation of a manual on preventive conservation, which was published within the National Museum program. Mutual co-operation when preparing the manual, workshop and professional excursions helped to create a spirit of participation.

Czech National Museum

Informal Exchanges and Advisory Services

The most basic form of networking is informal exchanges between museums and other institutes. At the outset the museum may primarily be in a “receiving” role – visiting other museums for ideas and inspiration, calling for advice, asking for a volunteer speaker or meeting facilitator. Later, the museum may, in turn, take on an information-providing role for other museums as it develops more expertise in the area of preventive conservation through the Teamwork process.

If the museums can create a more formal advisory role between them it may be able to obtain funding and professional assistance that no single museum could achieve on its own.

Symposiums, Congresses and Joint Training Workshops

If training is necessary, combining the staff audience from two or more museums can help justify the expense of bringing in expert trainers, and assist with obtaining support funding.

Some museums have also organised their training events in the form of symposia and congresses. Symposia and congresses have a wider range of presenters, guest speakers and audience members. They offer more scope for the speakers or ‘trainers’ themselves to benefit, by hearing others of equal stature and engaging in debates on new directions. A practical element can be maintained by ensuring that speakers continue to deal with topics pertinent to the host museums and by planning on-site visits to institutions that have already addressed key issues.

National and Regional Symposiums

Symposiums and congresses can gain a high national profile and obtain government funding. This funding then can be used to publish the symposium proceedings.

These publications then become references for technical information. The joint participation of networks of institutions and government bodies, in both the organisation of the symposiums and the follow-up publications, can influence preventive conservation policy.

Museums participated in multi-institution projects to raise their profile and often obtained increased access to resources from private and government sources.

Training Publications

Some museums developed and published basic conservation manuals and Internet pages by working in co-operation with other museums. In this way they have produced materials specifically geared

In 2000 we organised a conference about Collection Management and Preventive Conservation with colleagues who are curators of ethnographic collections. There were about 100 colleagues taking part on the conference, and we published the proceedings with the lectures and some translations of articles with other countries about these themes.

Museum of Ethnography, Hungary

We asked one of the leading experts in conservation to compile a questionnaire for surveying storage rooms. This questionnaire (which was published in the conference proceedings) now helps a lot to carry out planning in smaller county museums. We also published a theme issue of the national museum magazine devoted to preventive conservation, which reached all of the museums in Hungary.

Museum of Ethnography, Hungary

Relative humidity caused slight damage in some of our collections last year. With the help of our Preventive Conservation team we found firms dealing with dehumidifiers and made a feasibility study of the storage rooms. We applied to the Ministry of Cultural Heritage and received a grant for buying four dehumidifiers, and testers for measuring relative humidity, light and UV. On the basis of our good co-operation, the private supplier also offered two dehumidifiers for other museums in need in the counties outside Budapest.

Museum of Ethnography, Hungary

Our main form of outreach to other museums was the production of a collections handling manual written by our staff with the help and collaboration of numerous other conservators and museums. It will be published by the Réunion des Musées nationaux, which will permit a very wide diffusion among the ensemble of museums of France and the francophone museums of the international sphere. We have also been called on to provide training in preventive conservation or as expert at Roubaix, Besançon, Avignon, Poitiers, in numerous Paris museums, and by the training service of the Direction des musées de France to develop frameworks for courses in preventive conservation. As a result of this work the conservation and storage personnel also feel more confident of their actions. The contact with other institutions gives more courage to stay active in preventive conservation. One acquires communication techniques and operations planning that are indispensable to the construction and success of projects. It is motivating not to feel isolated like Don Quixote. Internal work is favoured by external collaboration.

to their common languages, climates, buildings, collections and Administrations. These combined projects also strengthen ties with other professionals and institutes.

Projects for Public Involvement and Support

Museums throughout the world use signs, guides, and even small exhibits, to explain how the artefacts are being protected from damage and to encourage visitors to respect preventive conservation principles.

One of the museums in the Teamwork for Preventive Conservation project developed a special training program so that the exhibit guardians could learn to answer visitors' questions about lighting, handling and other conservation issues. The guardians were highly motivated and became effective preventive conservation "ambassadors". Another museum developed an educational programme for children that introduced the role of conservation in museums, linked with fascinating insights into archaeology, history, physics and chemistry.

Programmes for adults included exhibits, visits to conservation work in progress and advice on preventive conservation of personal artefacts.

The National Museum of Archaeology in Ferrara started a project with their local schools and other institutions. They formed a committee with the teachers, schools administrations, the museum volunteers, the Ferrara society for heritage preservation and the educational service of the national ministry for museums. This group planned new outreach to the community around the museum, because the museum had felt isolated. They developed museum-based activities about the collection, the Renaissance museum building and the surrounding urban landscape. The first activities with the children were "what does the museum collect, and how do they look after the collections?" The children compared the conservation problems of some of their own personal and family treasures to the museums' work. The Teamwork project was a catalyst for more contacts with the schools and the community. It went much further than conservation.

Public involvement in conservation is growing rapidly. The "Further Readings" in this guide list some of the key sources of information, with particular attention being paid to those available over the Internet, as this is the fastest growing source of information and activities for the public.

As stated at the beginning of this guide, the actions of everyone in the museum will affect the condition of the collection to some degree, in either a negative or a positive way. Involving everyone in preventive conservation through teamwork ensures that these effects are positive. The guidelines contained in this guide have outlined a five-step framework for implementing teamwork into museums and building preventive conservation networks.

Endnotes

¹Definition of preventive conservation determined by a workshop of Directors from seven museums, organised by ICCROM.

²See more details under *Lecturers and Guest speakers* (page 9) and under *Visits to other museums* (page 10).

³The Planning Group can look over ICCROM's Preventive Conservation Indicators in Appendix B and judge whether the existing knowledge of all the staff is sufficient to deal with the questions, or at least make a satisfactory start.

⁴The 'vision' could also be referred to as a 'definition', 'goal' or 'mission statement' for preventive conservation in the museum.

⁵At this stage, it is important to avoid reports by consultants that immediately set out problems and recommendations. Even when the consultant uses a technique of individually interviewing staff members this will not promote teamwork.

⁶These lectures should be no longer than 45 minutes in length and should remain a minor part of the Workshop programme.

⁷Robert Waller, 'Conservation risk assessment: a strategy for managing resources for preventive conservation', in Ashok, R. and Smith, P. (eds.) 1994: *IIC, Preprints of the Contributions to the Ottawa Congress, 12-16 September 1994 preventive conservation practice, theory and research*, pp. 12–16. The International Institute for Conservation of Historic and Artistic Works, London.

⁸Robert Waller, 'Conservation risk assessment: a strategy for managing resources for preventive conservation', in Ashok, R. and Smith, P. (eds.) 1994: *IIC, Preprints of the Contributions to the Ottawa Congress, 12-16 September 1994 preventive conservation practice, theory and research*, pp. 12–16. The International Institute for Conservation of Historic and Artistic Works, London.

Stefan Michalski, 'A systematic approach to preservation: description and integration with other museum activities', *ibid.* pp. 8–11.

⁹National Institute for the Conservation of Cultural Property 1992: *The Conservation Assessment Program Handbook for Assessors*, Washington, NICP.

National Institute for the Conservation of Cultural Property 1992: *The Conservation Assessment A Tool for Planning, Implementing, and Fundraising*, Washington, NICP.

Further Reading: A Basic Preventive Conservation Library

Subscriptions, series and web sites for a wide range of information on preventive conservation

The web site addresses indicated in this list were consulted in March 2003.

AATA Online: Abstracts of International Conservation Literature
<<http://aata.getty.edu/NPS/>>
Los Angeles, Getty Conservation Institute.

CCI Technical Bulletins, Notes, and Newsletter
List of Titles <https://nt3.magma.ca/ci-icc/bookstore/index-e.cfm>
Ottawa, Canadian Conservation Institute.

Conservation DistList
<<http://palimpsest.stanford.edu/byform/mailling-lists/cdl/aboutcdl.shtml>>.
Stanford, Stanford University.

CoOL: Conservation OnLine
<<http://palimpsest.stanford.edu/>>
Stanford, Stanford University.

ICCROM On-Line Library Catalogue
<<http://www.iccrom.org>>
Rome, ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property).

ICOM-CC Triennial Meeting Preprints
ICOM Committee for Conservation, Paris.

JAIC Online, Journal of the American Institute for Conservation
<<http://aic.stanford.edu/jaic/>>.

Museum Practice
Museums Association, London.

North East Document Conservation Centre Technical Leaflets
<<http://www.nedcc.org/leaflets/leaf.htm>>.

SPNHC Collection Forum
<<http://www.spnhc.org/>>
Society for the Preservation of Natural History Collections.

Resource Advice and Guidance Factsheets
<<http://www.resource.gov.uk/information/advice/00advice.asp>>.
London, Resource: The Council for Museums, Galleries and Archives.

US National Park Service Conserv-o-Gram Technical Leaflets
<<http://www.cr.nps.gov/museum/publications/>>.

Standards, Assessments, Planning and Collections Management

Adcock E (ed) 1998: *IFLA Principles for the Care and Handling of Library Material*. Paris, International Federation of Libraries and Archives-PAC.

Alberta Museums Association 2001: *Standard Practices Handbook for Museums*, Edmonton, Alberta Museums Association.

American Association of Museums 1995: *Caring for collection, Strategies for Conservation, Maintenance and Documentation*, Washington, AAM.

Ashley-Smith J 1999: *Risk assessment for object conservation*, Oxford, Butterworth-Heinemann.

Cassar M 1989: *Cost/benefits Appraisals for Collections Care*, London, Museums and Galleries Commission.

Davies S 1996: *Producing a Forward Plan, Guidelines for Good Practice* London, Museums and Galleries Commission.

Harrison R 1994: *Manual of Heritage Management*, Oxford, Butterworth-Heinemann in association with the Association of Independent Museums.

Keene S 1996: *Managing Conservation in Museums*, Oxford, Butterworth-Heinemann.

Knell S (ed) 1994: *Care of Collections*, Leicester Readers in Museum Studies, London, Routledge.

Krumbein W E, Brimblecombe P, Cosgrove D E and Staniforth S 1994: *Durability and Change: The Science, Responsibility and Cost of Sustaining Cultural Heritage, Report of the Dablen Workshop*, Toronto, John Wiley.

Lord B and Lord G D: *The Manual of Museum Management*, London, HMSO.

Lord B, Lord G D and Nicks J 1989: *The Cost of Collecting: Collections Management in UK Museums*, London, HMSO.

Mackenzie G 1996: *Establishing a Preservation Programme*, Paris, International Council of Archives.

Museums and Galleries Commission 2001: *Preservation Assessment for Libraries and Archives: Users' Guide*, Museums and Galleries Commission, London.

National Institute for the Conservation of Cultural Property 1992: *The Conservation Assessment Program Handbook for Assessors*, Washington, NICP.

National Institute for the Conservation of Cultural Property 1992: *The Conservation Assessment A Tool for Planning, Implementing, and Fundraising*, Washington, NICP.

Putt N and Heyha H 2001: *European Preventive Conservation Strategy Project*, Vantaa, EVTEK Institute of Art and Design.

Resource, the Council for Museums, Archives and Libraries 2002: *Benchmarks in Collection Care for Museums, Archives and Libraries*, London. Also available at Web page <<http://www.resource.gov.uk/information/publications>>.

Roy, A. & Smith, P. (eds.) 1994: *IIC, Preprints of the Contributions to the Ottawa Congress, 12-16 September 1994 preventive conservation practice, theory and research*. The International Institute for Conservation of Historic and Artistic Works, London.

National Park Service 2000: *Museum Handbook, Part I, Museum collections*, <<http://www.cr.nps.gov/museum/publications/handbook.html>>.

Public awareness and involvement

Bachmann K (ed) 1992: *Conservation Concerns: A Guide for Collectors and Conservators*, Washington, Smithsonian Institution.

Blondé A 2000: *Youth and the Safeguard of Heritage*, Rome, ICCROM.

Canadian Conservation Institute: *Preserving My Heritage*, <<http://www.preservation.gc.ca/>>.

Chitty G and Baker D (eds) 1999: *Managing Historic Sites and Buildings, Balancing Presentation and Preservation*, London, Routledge.

CoOL, *Conservation OnLine, Conservation/Preservation Information for the General Public*, <<http://palimpsest.stanford.edu/bytopic/genpub/>>.

McManamon F P and Hatton A (eds): *Cultural Resource Management in Contemporary Society, Perspectives on Managing and Presenting the Past*, London and New York, Routledge.

Library of Congress: *Preservation: Caring for Your Collections*, <<http://lcweb.loc.gov/preserv/careothr.html>>.

Museums and Galleries Commission 1997: *Ours for Keeps? A Resource Pack for Raising Awareness of Conservation and Collections Care*, London, Museums and Galleries Commission.

Newberry E and Fecher E 1994: *In the Nick of Time, A Practical Guide to Teaching About Conservation of Objects*, London, Museums and Galleries Commission.

Pardo G (ed) 2000: *The Press and the Safeguard of Heritage*, Rome, ICCROM.

Périer-D'Ieteren C 1999: *Public et Sauvegarde du Patrimoine, Cahier de Sensibilisation à l'Intention des Guides*, Brussels, Université Libre de Bruxelles.

Pye E 2001: *Caring for the Past, Issues in Conservation and Archaeology and Museums*
London, James & James.

Preservation and Storage Division, State Library of Victoria:
Preservation and Storage: Free Conservation Information Sheets,
<<http://www.slv.vic.gov.au/slv/conservation/>>.

Schultz A W (ed) 1992: *Caring for Your Collections*, Washington,
National Institute for the Conservation of Cultural Property.

US National Park Service 2001: *Museum Handbook, Part III, Museum Collections Use*
<<http://www.cr.nps.gov/museum/publications/handbook.html>>.

Storage, Handling, and Display

AMA Conservation Briefs,
<<http://www.museumsalberta.ab.ca/publicn.html>>
Alberta Museums Association.

ARAAFU 1992: *La Conservation Préventive, ARAAFU 3rd International Symposium, Paris 1992*, Paris, L'Association des Restaurateurs d'Art et d'Archéologie de Formation Universitaire, Paris.

Australian Museums On Line AICCM Information sheets,
<http://amol.org.au/craft/conservation/conservation_index.asp>.

Ball S 1997: *Larger and Working Objects: A Guide to their Preservation and Care*
Museums and Galleries Commission, London.

Barclay R L (ed) 1997: *The Care of Historical Musical Instruments*,
Edinburgh, Museums and Galleries Commission, Canadian
Conservation Institute, ICOM Committee of Musical Instrument
Museums and Collections.

Baynes-Cope, A D 1989: *Caring for Books and Documents*, London, The
British Library National Preservation Office.

Coote K 1998: *Care of Collections*, Sydney, Committee for Aboriginal
and Torres Straits Islander Keeping Places and Cultural Centres,
Australian Museum.

Finch K and Putnam G 1985: *The Care and Preservation of Textiles*,
London, Batsford.

Forde H 1991: *The Education of Staff and Users in the Proper Handling and Care of Archival Materials*, Paris, UNESCO.

Gillies T and Putt N 1993: *The ABCs of Collections Care*, Winnipeg,
Manitoba Heritage Conservation Service.

Heritage Collections Council: *ReCollections: Caring for Collections Across Australia*,
<<http://amol.org.au/reollections/>>.

Lee L R and Thickett D 1996: *Selection of Materials for the Storage or Display of Museum Objects*, Occasional Paper 111, London, British Museum.

Museums and Galleries Commission 1992 to 1998: *Standards in the Museum Care of Collections (Archaeological Collections, Biological Collections, Geological Collections, Larger and Working Objects, Touring Exhibits, Photographic Collections, Costume and Textile Collections)*, London, Museums and Galleries Commission.

Museums and Galleries Commission 1998: *Effective Exhibitions: Guidelines for Good Practice*, London, Museums and Galleries Commission.

Northern States Conservation Center Collections Caretaker,
<<http://www.collectioncare.org/pubs/>>.

Odegaard N 1992: *A Guide to Handling Anthropological Museum Collections*, Western Association for Art Conservation.

Rose C L, Hawks C A and Genoways H H (eds) 1992: *Storage of Natural History Collections, Volume 1: A Preventive Conservation Approach and Volume 2: Ideas and Practical Solutions*, Pittsburgh, Society for the Preservation of Natural History Collections.

Sandwith H and Stanton S (compilers) 1993: *National Trust Manual of Housekeeping*, London, Penguin Books in association with the National Trust.

Society for the Preservation of Natural History Collections 1998: *Guidelines for the Care of Natural History Collections*,
<<http://www.spnhc.org/>>.

Security, Disaster Preparedness and Pest Management

Dorge V and Jones S L 1999: *Building an Emergency Plan: A Guide for Museums and Other Cultural Institutions*, Los Angeles, Getty Conservation Institute.

Florian M L 1997: *Heritage Eaters: Insects & Fungi in Heritage Collections*, London, James & James.

Heritage Collections Council 2000: *Be Prepared: Guidelines for Small Museums for Writing a Disaster Preparedness Plan*, <<http://amol.org.au/beprepared/>>.

ICOM-ICMS, Paris: *ICOM International Committee for Museum Security Newsletter*.

Liston D 1993: *Museum Security and Protection. A Handbook for Cultural Heritage Institutions*, London, Routledge, in conjunction with ICOM.

Nelson, C L 1991: *Disasters: Protecting the Past from the Natural*, Washington, Preservation Press.

Pinniger D 2001: *Pest Management in Museums, Archives and Historic Houses*, Archetype Publications, London.

Pinniger D and Winsor P 1998: *Integrated Pest Management*, London, Museums and Galleries Commission.

Selwitz C and Maekawa S 1998: *Inert Gases in the Control of Museum Insect Pests*, Los Angeles, Getty Conservation Institute.

Stovel H 1998: *Risk Preparedness: a Management Manual for World Cultural Heritage*, Rome, ICCROM.

Standards and Control of Temperature, Relative Humidity and Light.

Appelbaum B 1992: *Guide to Environmental Protection of Collections*, Connecticut, Sound View Press.

ASHRAE 1999 Museums, libraries, and archives. In *ASHRAE Handbook*, Atlanta, American Society of Heating, Refrigerating and Air-Conditioning Engineers, 20.1-20.13.

Canadian Conservation Institute 1997: *Fabric of an Exhibition: An Interdisciplinary Approach – Preprints of Textile Symposium 97*, Ottawa, Canadian Conservation Institute.

Cassar M 1994: *Environmental Management: Guidelines for Museums and Galleries*, London, Routledge.

Child R E (ed) 1993: *Electronic Environmental Monitoring in Museums*, London, Archetype Publications Ltd.

Illuminating Engineering Society of North America 1996: *Museum and Art Gallery Lighting, a Recommended Practice*, New York, Illuminating Engineering Society of North America.

National Institute of Building Sciences 1993: *Bugs, Mold & Rot II: A Workshop on Control of Humidity for Health, Artifacts and Buildings*, Washington, The National Institute of Building Sciences.

Ramsay-Jolicoeur B A and Wainwright I N M, (eds) 1990: *Shared Responsibility. Proceedings of a Seminar for Curators and Conservators, co-hosted by the National Gallery of Canada and the Canadian Conservation Institute, October 1989*, Ottawa, National Gallery of Canada.

Thomson G 1993: *The Museum Environment*, London, Butterworth-Heinemann.

Appendix A: Museums in ICCROM's Teamwork for Preventive Conservation Project

Municipal Museum 'Vander Kelen-Mertens', Belgium

This is the major museum of the city of Leuven, Belgium. The museum's collection numbers no less than 46,000 historical and archaeological objects and is very diverse. Good collection management is viewed as essential, given the many diverse responsibilities of the staff (25 full-time personnel, without a full time conservator). The staff includes a substantial corps of guides, who also provide tourist services and protection for collections at the nearby Saint Peter's Minster church.

Czech National Museum, Czech Republic

Founded in 1818, Czech National Museum shelters almost 14 million items in the areas of natural history, history, arts, music and librarianship, located in tens of buildings throughout the Czech Republic. It includes four major sub-museums and numerous historic sites. The beautiful central museum palace is one of the most prominent buildings in Prague. The Teamwork project focussed on the central museum, museums of ethnography and music, and the collections storage centre. The museum conservation programme is implemented with advice from the State Institute for the Care of Historical Monuments.

National Museum of Folk Arts and Traditions, France

The National Museum of Folk Arts and Traditions is part of the network of national museums of France, and has been one of the pioneers of preventive conservation since the 1970s. During the Teamwork project it had a staff of 100 and a collection numbering 765,000 items, including paper and photographic materials, posters, puppets, circus artefacts and furniture. The museum is now amalgamating with other museums and relocating from Paris to the city of Marseille.

Museum of Ethnography, Hungary

The Museum of Ethnography, one of the national museums of Hungary, is located in Budapest's original early 19th century supreme courts building. It takes an active role in museums associations and among regional ethnographic and community museums, and obtained the support of the Ministry of Culture to participate in the Teamwork for Preventive Conservation project. One of its objectives for the project was to capitalise on the knowledge of its substantial corps of collection technicians, bringing them together with curators and conservators.

Brescia Civic Museum of Natural Science, Italy

The Brescia Civic Museum of Natural Science in Italy works in close co-operation with the city administration and schools. At the time of the Teamwork for Preventive Conservation Project it was involved in a major programme of exhibit upgrading and new children's education services. Teamwork was viewed as essential given the small staff (15 personnel including three curators) and the lack of a full-time conservator. The main collections consist of several hundred thousand items in the areas of zoology, botany and insects.

National Museum of Archaeology (Ferrara), Italy

The National Museum of Archaeology (Ferrara), Italy is located in the renaissance house of Ludovico il Moro, in a residential quarter of old Ferrara. It has two curators and an additional staff of 15. The collection concentrates on archaeological collections from the remains of a nearby Etruscan settlement. The museum viewed the Teamwork for Preventive Conservation project as an opportunity to plan improvements for its storage areas, located in several areas of the renaissance house, and develop ideas for improved ties to the community.

Royal Netherlands Army and Arms Museum, Netherlands

The Royal Netherlands Army and Arms Museum, located in Delft, has a collection of 460,000 items ranging from motorcycles and armoured personnel carriers to uniforms, musical instruments, books, photographs and documents. The museum took part in the Teamwork project to address a serious backlog in collection management. The museum team intended to make the most of its existing storerooms and personnel, while also preparing plans for a move to a new museum building. It also wanted to strengthen its informal network with 4 other Netherlands military museums.

National Museum of Ancient Art, Portugal

Housed in a 17th century palace, the National Museum of Ancient Art in Portugal, was opened in 1884 to hold pieces coming from monasteries and churches that were becoming State property. It was one of the "oldest" museums to participate in the Teamwork for Preventive Conservation project. The heart of the museum is the collection of European art, including paintings, sculpture, jewellery, furniture, ceramics, textiles and other decorative arts from the Middle Ages to the 20th century. The museum has a staff of approximately 80.

Barcelona Museum of Contemporary Art, Spain

The Barcelona Museum of Contemporary Art, Spain is a relatively young museum, housed in a building by the architect Richard Meier. The administration viewed the Teamwork project as a means to address unique issue of conservation of contemporary art with the backing of a network of other museums and advisors, and to introduce the idea that art preservation can be a shared objective and concern of all the staff members.

Birmingham Museums & Art Gallery, United Kingdom

The Birmingham Museums & Art Gallery, in the United Kingdom, includes the main museum of fine and applied arts, antiquities, local history and world cultures and six other historic buildings, ranging from a grand Jacobean 17th century mansion to a Jeweller's factory. Part

of the collection is housed in 3 off-site stores. The 200 staff members are organised in 3 divisions: Curatorial Services, Museums Services, and Community Museums. The museum undertook the Teamwork project recognising the need for a more holistic and preventive approach to conservation within the museum service.

Ulster Museum, United Kingdom

During the Teamwork for Preventive Conservation project, the Ulster Museum had a staff of 145 and was one of two national museums in Northern Ireland. Both have since been amalgamated with a third museum to form the National Museums & Galleries of Northern Ireland. Preventive conservation is viewed as an essential component of the museum's business, requiring staff involvement at all levels: Teamwork was viewed as opportunity to explore how this might be achieved. The Ulster Museum collections comprise over 800,000 objects across a range of disciplines: Fine and Applied Art, Archaeology, Ethnography, History, Botany, Geology and Zoology.

Appendix B: ICCROM Preventive Conservation Indicators

Original version by Cristina Menegazzi and Neal Putt 1998, Revised November 2002.

INTRODUCTION

The *ICCROM Preventive Conservation Indicators* are a self-evaluation tool to assess the status of preventive conservation in museums, a checklist of 35 questions with yes/no answers. The indicators are a measure, a means of promoting staff discussion and debate, and a tool for planning and team formation.

Using the *Indicators* requires drawing on the staff that knows the museum, inside and out. A multidisciplinary group should answer the *Indicators*, including administration, curators, exhibit designers, technicians, conservators, security personnel, and staff for educational and public services. Several teams or a single team, always of mixed staff will generally find it possible to answer the questions without help from outside specialists. (However, the process will also identify gaps in knowledge, where the museum could search for advice and information!)

The summary table at the end of the *Indicators* will help visualise the situation of preventive conservation. The *Indicators* results will allow the administration and staff to take the next step of identifying key areas where improvements should and can be made. The process will create a greater shared awareness of preventive conservation, and an increased potential to work together. Administration and staff can move on to setting objectives, with teams, work schedules, and budgets.

The *Indicators* are divided into seven topics:

- Topic 1 Constitutional framework of the museum*
- Topic 2 Finance and Plans*
- Topic 3 Personnel and Teams*
- Topic 4 Collection*
- Topic 5 Building*
- Topic 6 Environment*
- Topic 7 Public Involvement*

Answering the questions will promote considerable debate. A recorder should note the answers and comments of the group so that the results can be understood and used well into the future, potentially as a measure of progress over the coming years. The summary chart at the end of the indicators helps visualise the overall situation.

There is no “correct” method of answering the *Indicators*. Museums should keep notes of how they interpreted the questions. Instead of answering with a simple yes or no, the staff may wish to qualify their answers, in a manner such as “we have a disaster response plan for fire, but not for flood”. Especially in these cases, a written note will help the museum redo the indicators in the future, and check its progress using the same standards.

By reviewing the debates and results from each topic and the entire summary chart, the *Indicators* can generate consensus on key issues that the staff and administration feel are most important to address. It should be possible to go on to identify objectives that address key problems and are truly feasible to reach.

DEFINITION

In this document, “preventive conservation” means an agreed plan of action to slow the rate of deterioration and reduce risks for museum collections. The focus is on the surrounding of the collections, thus actions could range from building maintenance, to control of staff practices, influencing public attitudes, climate control and legislation. Preventive Conservation is conceived and implemented by a all museum staff with support from external professionals, organisations and public. Preventive conservation is intended to increase public access and benefits derived from the collections.

TOPIC 1 CONSTITUTIONAL FRAMEWORK OF THE MUSEUM

	YES	NO
1.1 Does the museum have a written statement of its purpose and its goals including its commitments to preventive conservation?	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Does the governing body of the museum (the board of directors or responsible government department) regularly check on the implementation of preventive conservation?	<input type="checkbox"/>	<input type="checkbox"/>

TOPIC 2 FINANCE AND PLANS

	YES	NO
2.1 Does the museum have a 3 to 5 year preventive conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Does the museum budget indicate a group of expenses for preventive conservation? (Note the details of the budget assigned to preventive conservation, for future reference...)	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Does the museum prepare an annual funding plan for preventive conservation and review its strategies and success in obtaining the funds?	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Does the museum research sponsors that could support preventive conservation, documenting their mandates, criteria for awards, contact persons, etc.?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

TOPIC 3 PERSONNEL AND TEAMS

	YES	NO
3.1 Do staff members (such as conservator-restorers, curators, directors, educators, guardians, maintenance staff and technicians) have job descriptions that include preventive conservation responsibilities?	<input type="checkbox"/>	<input type="checkbox"/>
3.2 Is there a team composed of the leading staff members mentioned in point 3.1 that meets at least every six months to plan and review implementation of preventive conservation?	<input type="checkbox"/>	<input type="checkbox"/>
3.3 Are members of staff designated in writing as responsible for documentation and inventory of collections?	<input type="checkbox"/>	<input type="checkbox"/>
3.4 Does the museum have a team and practices to prevent and respond to disasters (e.g. fire, flood, earthquake, theft, malicious damage, etc.)? Does the museum have other teams for specific preventive conservation objectives?	<input type="checkbox"/>	<input type="checkbox"/>
3.5 Does the museum ensure that staff has access to the necessary training to implement the museum's preventive conservation plan (for example via university training, short courses, visits to other museums, congresses)?	<input type="checkbox"/>	<input type="checkbox"/>
3.6 Does the museum maintain a resource centre of information about preventive conservation (books, articles, web sites, etc.) and offer advice to staff, volunteers and researchers?	<input type="checkbox"/>	<input type="checkbox"/>
3.7 Does the museum provide any written guidelines about preventive conservation to staff, volunteers or researchers?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

TOPIC 4 COLLECTIONS

	YES	NO
4.1 Is there a single written inventory listing each item in the museum collection?	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Does the inventory indicate the location of each item?	<input type="checkbox"/>	<input type="checkbox"/>
4.3 In the last five years, has the museum checked that each entry on the inventory corresponds to an artefact and each artefact has an entry in the inventory?	<input type="checkbox"/>	<input type="checkbox"/>
4.4 When needed, can an object always be found within 5 minutes? (This question should be answered by a test of finding at least 15 randomly chosen objects from the inventory.)	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Has the museum ever conducted a survey to assess the conditions of its collections and their preventive conservation needs?	<input type="checkbox"/>	<input type="checkbox"/>
4.6 Has the museum identified the objects that need special preventive conservation because of their importance or vulnerability?	<input type="checkbox"/>	<input type="checkbox"/>
4.7 Has the museum practised its disaster response techniques and tested its plan within the past five years?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

TOPIC 5 BUILDING

	YES	NO
5.1 Does the museum have plans indicating the present distribution and use of the space in its building (e.g. locations and percentage of space assigned to storage, shipping, exhibits, public functions, and offices)?	<input type="checkbox"/>	<input type="checkbox"/>
5.2 Does the museum have a plan and schedule of improvements for facilities that will better protect the collection (reduce movement of collections, improve public and staff access, allocate space for special functions, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
5.3 Is the museum building structure and mechanical systems inspected at least annually, as a guide for maintenance and a measure to protect against risks to collections (e.g. foundation, walls, roof, windows and doors, plumbing, heating, air conditioning and electrical systems)?	<input type="checkbox"/>	<input type="checkbox"/>
5.4 Does the museum have a plan to provide sufficient storage space for objects that will be added to the collection over the next 10 years?	<input type="checkbox"/>	<input type="checkbox"/>
5.5 Is the collection storage area separated from other potentially damaging museum functions, such as storage of building and cleaning materials, or exhibit construction?	<input type="checkbox"/>	<input type="checkbox"/>
5.6 Does the storage area include shelving and cabinets suitable for the museum collections, with access to adjacent tables and equipment for reference, handling and packing?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

TOPIC 6 ENVIRONMENT

	YES	NO
6.1 Does the museum have a programme for monitoring lighting and achieving satisfactory levels?	<input type="checkbox"/>	<input type="checkbox"/>
6.2 Does the museum have a monitoring programme for relative humidity and temperature, and plans to address problems?	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Does the museum monitor any air pollutants (e.g. dust, nitrous or sulphur oxides) and does it have plans to address problems?	<input type="checkbox"/>	<input type="checkbox"/>
6.4 Does the museum select materials for containers, mounts, and cabinets, to avoid chemical damage to collections (e.g. by referring to advice from publications and advisors, or by conducting testing)?	<input type="checkbox"/>	<input type="checkbox"/>
6.5 Does the museum have an integrated approach to pest management (prevention, monitoring, isolation of infestations, and extermination)?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

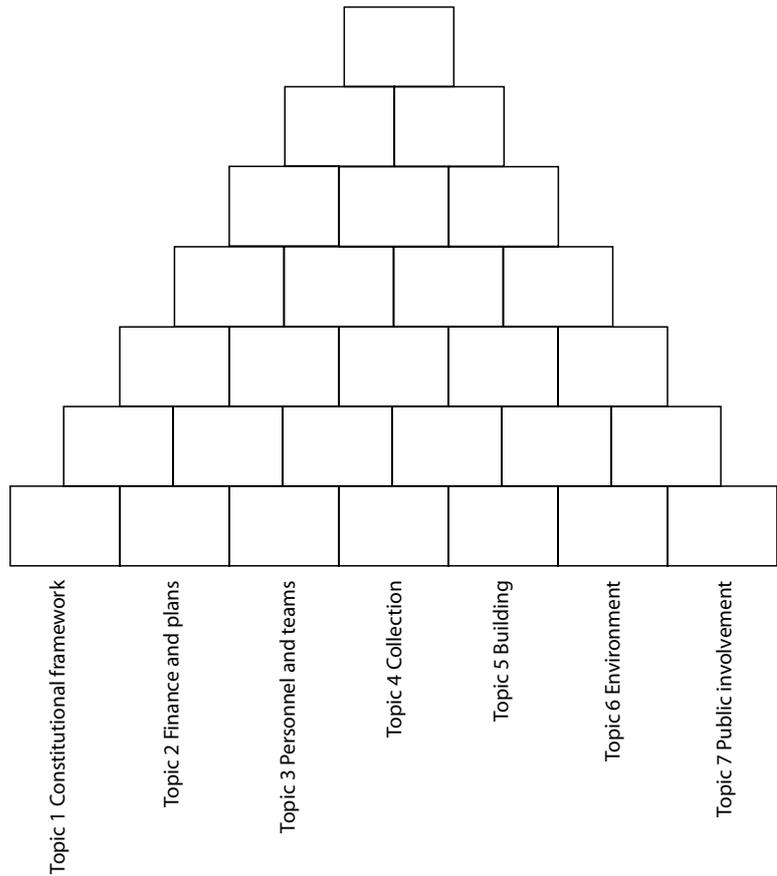
TOPIC 7 PUBLIC INVOLVEMENT

	YES	NO
7.1 Does the museum have a programme to inform the public about preventive conservation (e.g. explanatory panels, exhibits, publications, demonstrations, web site)?	<input type="checkbox"/>	<input type="checkbox"/>
7.2 Does the museum take steps to involve the public, such as by providing advice for personal collections, seeking consultation on museum decisions, or encouraging participation in special events and projects?	<input type="checkbox"/>	<input type="checkbox"/>
7.3 Does the museum take measures specifically designed to inform and involve children?	<input type="checkbox"/>	<input type="checkbox"/>
7.4 Does the museum take measures specifically designed to advocate preventive conservation via news media, contacts with government and other decision makers?	<input type="checkbox"/>	<input type="checkbox"/>

Comments, potential key issues:

SUMMARY CHART

To get a glimpse of the status of preventive conservation in the museum, shade one cell for each “yes” answer.



Comments:

This chart suggests some fairly obvious conclusions. A blank column suggests a weakness to be addressed. A complete column suggests accomplishments to be celebrated!

The entire process of answering and charting the *Indicators* can generate consensus on three to six key issues that the staff and administration feel are most important to address. Because of the interdisciplinary approach to self-assessment, the museum should then be in a strong position to develop a preventive conservation plan that integrates with the needs of the entire museum.

Appendix C: Examples of Key Issues and Objectives

Key Issues and Objectives: Ulster Museum

The Ulster Museum created a Preventive Conservation Team during the first workshop. This Team examined thirteen potential preventive conservation issues and selected seven as the top priorities.

In the second workshop the Team identified smaller Working Groups and an objective for each priority area:

- **Handling and moving of objects:** To identify and improve practices for handling and movement of Ulster Museum collections.
- **Environmental monitoring:** To establish a systematic approach to environmental monitoring throughout the Ulster Museum.
- **Environmental control:** To reduce deterioration of Ulster Museum collections by improving methods and practices for environmental control.
- **Object housing and support materials:** To identify and use appropriate materials for safe storage housing and support of Ulster Museum collections.
- **Cleanliness and tidiness:** To reduce deterioration of Ulster Museum collections by improving cleaning methods and practices.
- **Materials testing and case construction:** To reduce deterioration of Ulster Museum collections on display by using suitable materials and methods for case construction.
- **Awareness training:** To support actions in all priorities by means of seminars for small multi-disciplinary groups of all museum staff.

Each Working Group developed detailed objectives and schedules in conjunction with the overall project Team and museum administration. Each Working Group included efficient staffing, minimised costs and establishment of standard procedures as part of their objectives.

Key Issues and Objectives: Brescia Civic Museum of Natural Science

At a first workshop, the Brescia museum identified three key issues and began discussing potential objectives. Teams were identified to complete the objectives:

Issues and Ideas for Objectives	Potential Timeframe	Team
Lack of training. Ideas for objectives focussed on a workshop to train all the personnel.	Begin within two months.	All staff.
Lack of storage space. Ideas focussed on reorganising library collections and verifying if the climatic conditions of unused ground floor areas were compatible with storage needs.	One year	3 curators, 1 librarian, director, 1 architect from the city.
Computerisation of collections management. Ideas focussed on adding up to 10 entries in the collections database, such as categorising environmental needs for each object, identifying priority for attention during emergencies, identifying health risks....	Establish the entries within 5 months, and begin data entry.	3 curators, director, and 1 data base consultant.

The museum used two subsequent workshops to complete the objectives. By the end of the workshops there had been numerous refinements and changes from the first ideas. For example, rather than starting with organising training events at the museum, the objectives focussed first on a cheaper, more essential solution – to establish a bibliography and collection of resource materials and web sites.

Objective	Completion	Team/Resources
Bibliography: Establish a basic bibliography on preventive conservation for natural history collections by taking the following steps: Contact 3 other natural science museums and ask for their bibliographies Subscribe to 3 journals/newsletters and find 2 pertinent web sites Monitor the journals and web sites to start a file of technical information and identify publications to purchase. Use the journals and web sites to identify potential training events. Propose a library budget and a policy and budget for training to the municipal council.	Within 1 month.	All professional staff, coordinated by Curator of Botany. The initial budget was minimal, met by existing museum funds.
	Within 6 months	
	Monthly basis.	
	Monthly basis.	
	After 1 year.	

Key Issues and Objectives: National Museum of Folk Arts and Traditions, France

At a first workshop, the staff grouped all of their ideas and concerns under three headings: Administration, Collections and Communications. During the subsequent 6 months a further workshop and meetings were used to identify the teams and objectives for each heading. The teams were drawn from the departments of administration-budget, conservation-restoration, computer services, documentation, curatorial services, museography, security and education. Each objective had a time schedule.

Collections Objectives (To be implemented by the teams: Storage, Loans and Handling, Exhibits, Building and Security)
Develop rules for artefact loans
Add the item "conservation status" to the computerised inventory for each object
Complete a report on the storage conditions: <ul style="list-style-type: none"> Analyse each collection and its storage area Quantify types and number of objects Draw plans of floor space and indicate types of shelving equipment Indicate percentage of floor space and shelving in use Evaluate environment, equipment and shelving techniques according to criteria agreed with external advisors.
Propose and initiate upgrading of the existing storage of the following priority collections: <ul style="list-style-type: none"> Musical instruments Dolls Circus art Urban ethnography
Propose rearrangement of storage areas: <ul style="list-style-type: none"> Identify a suitable location for a quarantine room Propose relocation of collections within the existing spaces Propose location and characteristics of new storage space and equipment
Prepare a manual of preventive conservation: <ul style="list-style-type: none"> Document the standard preventive conservation practices already in place Recommend further standards in consultation with external advisors Edit the standards into a single manual Seek funding for publication of the manual
Complete a basic survey of preventive conservation in the permanent exhibits: <ul style="list-style-type: none"> Establish a standard record sheet to be used for every exhibit Complete the record sheet for each exhibit Propose improvements for a specific number of test show cases.