INTEGRATED RISK MANAGEMENT IN MUSEUMS

PAST LESSONS, FUTURE WAYS

PAULA MENINO HOMEM (ED. COORD.)

2023

U.PORTO
FLUP FACULDADE DE LETRAS
UNIVERSIDADE DO PORTO

INTEGRATED RISK MANAGEMENT

IN MUSEUMS

PAST LESSONS, FUTURE WAYS

PAULA MENINO HOMEM (ED. COORD.)

2023

U.PORTO
FLUP FACULDADE DE LETRAS
UNIVERSIDADE DO PORTO

TITLE

Integrated risk management in museums. Past lessons, future ways

EDITORIAL COORDINATION

Paula Menino Homem

EDITION

Faculty of Arts and Humanities, University of Porto | Faculdade de Letras, Universidade do Porto (FLUP)

Department of Heritage Studies | Departamento de Ciências e Técnicas do Património (DCTP)

PLACE OF EDITION

Porto, Portugal

YEAR OF EDITION

2023

ISBN

978-989-9082-15-1

DOI

https://doi.org/10.21747/978-989-9082-15-1/int

HOUSED IN

FLUP Digital Library

THIS PUBLICATION HAS BEEN SUBJECT TO SCIENTIFIC REVIEW.

Contents

Preface

Homem, P. M. (2023). Preface. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. *ix-x*). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/int_int

Preface

This publication is part of the dynamic of interests that led to the scientific meeting that took place on the 27th and 28th of June 2022, organised by the Research & Development Unit CITCEM - Center for Transdisciplinary Research «Culture, Space and Memory» and by the Faculty of Arts and Humanities, University of Porto, Portugal: International Meeting Integrated Risk Management in Museums. Past Lessons, Future Ways[1].

The meeting gathered groups integrated in different thematic lines of research and dedicated to the preservation and legacy of cultural heritage, by different agents, strategies and in different contexts. Naturally not forgetting the others, the context in which we are most interested in focusing is that of museums.

Facing times of change, museums reflect and discuss how to efficiently adapt and evolve, considering their role in resilience, development, sustainability, and quality of life of the twenty-first-century society.

Despite risk management being in the order of the day for several years, especially due to the climate emergency, unfortunately not accepted by everyone, different sectors of society embrace it at different times and with different perspectives. Tendentially, museums, and globally the cultural sector, don't lead the race, almost always full of obstacles.

The lack of strategic political investment in the sector is, globally, the biggest obstacle, despite the dynamics of academia and professional associations, the dedication and effort on the part of human resources in their education and training and in the development/capture of research applied to the context. Many and very serious losses to cultural heritage have been recorded, with also very serious negative effects on society.

Managing risk in museums is a cha(lle)nging process, especially when the perspective we defend is that of an integrated management, and not compartmentalised as is so often

[1] Website: https://citcemnews.wixsite.com/irmm22

observed. A perspective that has to attend to the diversity of contexts and their specificities and to integrate different agents and competencies. A perspective that defends the need for a change of mentality, a change in the institutional management model, where risk must be considered transversally to the policies and practices to be adopted, where the procedures inherent to the different museological functions to be performed must be harmoniously articulated to promote its integrated management. It is a complex process, without a doubt, but so is reality, and if we must face it to survive and evolve, we must also face such complexity and the uncertainty associated with it. The precious contributions made by the authors who were able to participate in the publication confirm, very clearly, the need for this change and how challenging it is.

Much has been learned from past mistakes, ours and others, getting to know other realities, gaining new sensitivities and adopting new ways of thinking and proceeding. Inclusive and diverse teams enhance better results. Sharing experiences and discussing their results, both good and not so good, in a friendly environment, are crucial for joint learning, scientific enrichment and for more informed and sustained decision-making. This is what it's intended to promote.

The future forces us to, finally and truly, take a path towards an interdisciplinary, inclusive, transparent, and responsible approach. An approach that promotes the strengthening of international cooperation ties between professional, scientific, and educational communities.

The path is long. We still have a long way to go, but the technological resources that facilitate integrated risk management are there to be applied and improved. The education and training of professionals is good and consistent, but it has to adapt. Policy for the sector is crucial. Let us raise awareness among politicians and decision-makers. Let us consciously take on the difficult and long path. It is important for the longevity of museums and for facilitating their mission in society!

Paula Menino Homem (FLUP - DCTP & CITCEM), 2023

JONATHAN ASHLEY-SMITH

Freelance teacher and consultant | jashleysmith@btinternet.com

Risk management and uncertainty:

How wrong can you get?

Ashley-Smith, J. (2023). Risk management and uncertainty: How wrong can you get? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 1-22). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta1

Abstract

This paper traces the author's involvement in the developing field of risk management which started during the last decade of the twentieth century. The author's ideas about risk and uncertainty have continued to evolve up to the present day. The concept of the museum has also evolved as the importance of collections has given ground to the museums' greater association with wider society and global subjects such as sustainability.

Some of the ideas about risk and decision-making in museums that were developed in the book Risk Assessment for Object Conservation are now seen as too narrow and inward-looking. Museum activities may be a better subject for risk assessment than museum collections. The interaction of politics and society with the museum business and the subsequent effect on values is briefly explored.

Keywords

Risk; Uncertainty; Environment; Society; Value.

Ashley-Smith, J. (2023). Risk management and uncertainty: How wrong can you get? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 1-22). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta1

Introduction

The title of this collection of papers is “Integrated Risk Management in Museums: Past Lessons, Future Ways”. The obvious interpretation of the title is that the overall subject concerns activities taking place in museums. It is assumed that to achieve certain strategic goals within each institution, these activities must be interlinked and must all incorporate an awareness of risk. The second half of the title suggests that the theory and practice of risk management have changed in the past and will continue to change in the future.

This paper deals with my personal experience with the development of the field. As this account is somewhat personal and anecdotal, it seems reasonable that much of it is presented as a first-person narrative, even though the format of an academic publication will be maintained as far as possible. The paper will be about my past involvement with the study of risk and my current interest in the study of uncertainty. The abstract that I originally supplied to the conference organisers placed ‘risk’ firmly within the area of decision-making. The ideas behind the words “How wrong can you get?” were summarized as my intention “to point out sources of uncertainty in risk management, and to suggest actions that help steer a path through the complex causal network, so that the outcome of your decision is not too wrong to be considered right”.

1. Still going strong

I began to be aware of the subjects of this paper (risk assessment, uncertainty and ‘things going wrong’) during the last decade of the last century. They are still obviously highly relevant today. It is worth noting that there are other aspects of museum activity that have changed over the past few decades. For instance, the currently

common terms ‘collections management’, ‘preventive conservation’ and ‘risk assessment’ were virtually unknown when I started working in a museum in 1973.

At the 1994 IIC (International Institute for Conservation of Historic and Artistic Works) Congress in Ottawa, the conservation world was exposed to the development of ideas about collections risk that had been taking place at the Canadian Museum of Nature and the Canadian Conservation Institute (Waller, 1994; Michalski, 1994). I had just signed a contract with Butterworth-Heinemann to write a book about risk. What I learned in Canada meant that I had to substantially modify the structure of the proposed book. Risk Assessment for Object Conservation was eventually published in 1999 (Ashley-Smith, 1999).

Nearly a quarter of a century later, the subjects of risk management and risk assessment are still going strong. There are currently two papers in the top ten all-time downloads from the UK (United Kingdom) Journal of Conservation website that deal with the topic. The papers are “Collection management using preservation risk assessment” by Anna E. Bülow (Bülow, 2010) and “The Quiskscan – a quick risk scan to identify value and hazards in a collection” by Agnes W. Brokerhof and Anna E. Bülow (Brokerhof & Bülow, 2016). Both have been downloaded several thousand times, and that number continues to rise every week.

The Quiskscan paper contains a discussion of the strengths and weaknesses of the system, saying that it necessarily involves the acceptance of large uncertainties. I wrote a paper with the title “Developing professional uncertainty” for the IIC Congress in Melbourne, in 2000 (Ashley-Smith, 2000). In it, I advanced the idea that members of the conservation profession should recognize and embrace the uncertainties in their work. A fascination with uncertainty is obviously still going strong. In September 2022, the University College London Institute for Sustainable Heritage (UCL ISH, 2022) in London advertised a two-day course to teach leaders in the heritage field how “to act in the face of uncertainty”. Asking how wrong things can get also has a long history. I wrote the paper “Environments for artefacts: How wrong can you get?” in 1995

(Ashley-Smith, 1995). This was a year after I had given a talk about environments at the 1994 IIC Congress with the title "Let's be honest" (Ashley-Smith et al., 1994) and around the time that the Smithsonian Institute was shocking the conservation world by suggesting that environmental specifications had become unnecessarily strict (Erhardt & Mecklenburg, 1994). So, at that time, "How wrong can you get?" was a question about how relaxed environmental specifications could become without causing damage. The paper ends with the conclusion that if you ask the wrong question, it can lead to the wrong answer. If you ask what is the best or what is the ideal environment, you push people towards strict numerical answers. In this paper, the question has been revived with the suggestion that it may not always be possible to get precise or accurate data to help with decision-making. How far can you diverge from some deceptively certain ideal and still be able to make a decision with confidence?

2. My life of pie

My life and work to date can be divided into three chunks of time. I was born in 1946, and 27 years later, I joined the conservation department at the V&A (Victoria and Albert) Museum. About 26 years later, my book on risk was published, and my most cited paper on uncertainty was published the following year. At the time of writing, I am 76 years old. You could show this division of my life and career as a pie chart (Fig. 1). Here, we have a clear representation of my life. It is easy to see at once the relative distribution of years between the three major sections of my life. This visual clarity is why the pie chart has found a role in risk assessment.

During my study of uncertainty, I have developed several simple guiding principles. One is that generalizations can be misleading. Another is that things are never just black and white. There are at least 49 shades of grey. These principles can be summarized in the slogan, "It's never that simple".

The pie chart in Fig. 1 appears so simple and straightforward because a huge amount of important detail is missing. For instance, my role as a manager; I was head of the conservation department from 1977 to 2002, overlapping with both the 'conservation' and the 'risk and uncertainty' sectors. Take the stream of events, starting with my first chemistry set, my degrees and post-doctoral work in chemistry, through to my involvement with the Climate for Culture research project which ended in 2014. I have worked as a scientist in several chunks of time, which overlap all three sectors. The pie chart looks less clear now (Fig. 2). If it included other important activities, such as my intermittent ventures into conservation ethics between 1982 and 2020 or my concerns about the loss of practical skills from 2016-2019, it would not be at all easy to interpret.

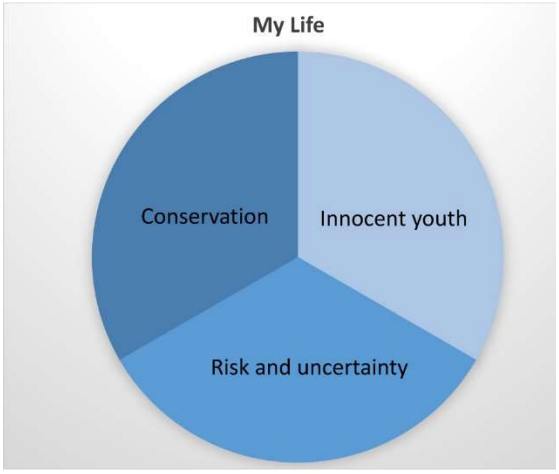


Fig. 1 - Dominant interests and activities during the author's life.

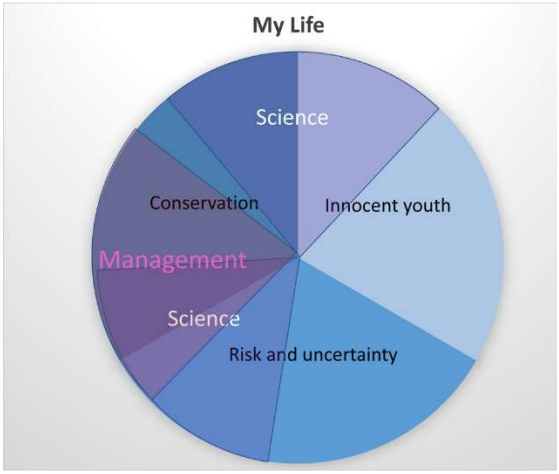


Fig. 2 - Further interests and activities, such as science and management, overlaid on Fig. 1.

It is possible that the pie chart is not always an appropriate tool for describing dynamic multilayered properties. In the excellently comprehensive guide to risk assessment, "The ABC method", Michalski and Pedersoli Jr. take 16 pages to explain how simple and straightforward the pie chart is for representing values (Michalski & Pedersoli Jr, 2016). In the uncertain use of the language used in conservation discourse, the word

'value' is one that is difficult to define and is used by different speakers to mean different things at different times.

3. Nothing stays the same

Risk assessments ask that you make predictions over long periods. You must predict the behaviour of one object or one collection over decades, assuming that everything else remains unchanged. Yet, nothing ever remains unchanged.

The main building of the V&A Museum, where I worked for 31 years, is a very solid permanent-looking building. But it wasn't there two centuries ago. It is likely to be underwater by 2080. During my time there, I worked for five different directors. The UK was governed by six different prime ministers. The museum stopped being part of a government department and became independent. The departments concerned with fundraising, publicity and public outreach grew dramatically. By the time I was made redundant in 2004, the post of the head of conservation had been downgraded, and I was no longer a part of the museum's senior management team. The building that seemed so very solid did not house a stable organization.

Even the concept of what a museum is seems to be changing. 15 years ago, the ICOM (International Council of Museums) definition of a museum described something familiar:

> A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment (Lehmannová, 2020).

This describes a place where collections risk management can happily find a home. A new definition was proposed in 2019, which stressed the relationship of the museum to society and its social and political role:

> Museums are democratising, inclusive and polyphonic spaces for critical dialogue about the pasts and the futures. Acknowledging and addressing the conflicts and challenges of the present, they hold artefacts and specimens in trust for society, safeguard diverse memories for future generations and guarantee equal rights and equal access to heritage for all people.
>
> Museums are not for profit. They are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world, aiming to contribute to human dignity and social justice, global equality and planetary wellbeing (ICOM, 2019).

Collecting and preserving are still in there. But the active role in righting social wrongs is greatly emphasized. But if you put more effort into a new direction, you can no longer put effort where you used to. Although it was rejected at that time and a new definition was adopted in 2022 (ICOM, 2022), the 2019 proposal reflects what a number of people who work in museums actually feel. These views were expressed in the book “The participatory museum” by Nina Simon (Simon, 2010), which presents museums as spaces for relationship-building and dialogue, not just storage and display.

In July 2022, the views of three museum professionals were presented in a recent discussion in the online newsletter of the UK Museums Association. Typical of the comments are: “A museum isn’t a building, it’s a community. It is not about objects, but stories”; “Imagine a space for truth and healing that we call a museum”; “A museum listens to and responds to the needs of the communities it serves”.

The conception of a collection as something to be conserved is changing. In mid-September 2022, Tate organised a conference to mark the finish of a three-year

project. Looking in particular at time-based media, performative, live and digital art, the research focussed on "works that unfold over time, that question the boundaries between the artwork, the archive and the record, and that have complex social or technological dependencies within networks outside the museum" (Tate, 2022).

Public views on what constitutes a museum also put less stress on historic collections. Lonely Planet's list of top 12 museums in Europe gave some examples where the emphasis was on hands-on learning or splendid modern architecture, or a spectacular scenic environment (Naylor, 2022). The Museum of the Future (MOTF, 2022) in Dubai does not feature collections at all but promises a journey through possible futures. It's all electronic and computer-driven, but you have to visit this specific location to get the experience.

4. Risk assessment for object conservation

The focus is on risk management. Risk assessment is only one part of that. The book I wrote about risk assessment was published in 1999. The book is still available on Amazon, now in three different formats (hardback, paperback, and Kindle). It still fetches ludicrous prices in the second-hand market. You can get useful insights about value from this range of prices. The 'thing' that is 'the book' doesn't exist physically; it is instantiated in a range of physical forms that have a range of values judged by a willingness to pay. So, a book has some of the elements of performance or conceptual art where the ideas are what need to be preserved rather than the physicality.

The contents of the book have been criticized, most recently by Stefan Michalski (Michalski, 2018), for not outlining a specific methodology for risk assessment. In reply to these critics, I would say that I merely wanted the reader to be able to think about the subject, which is why I included the New Yorker cartoon on the last page of the text. A young boy says to his teacher, "I don't have an answer, but you've surely given me a lot to think about".

Between 2003 and 2008, I gave a series of 2-day courses around Europe on risk assessment. Some of these were graced with the title 'masterclass'. I used the same approach of stimulating thought, encouraging investigation rather than imposing a direction. I wanted the students to use their eyes and ears. To look for weaknesses and barriers in the physical building and the institutional protocols. The students seemed happy and attentive. The feedback was good except where anyone had also been on a course run by Rob Waller or Stefan Michalski. Those students wanted to know why I was not teaching a specific methodology, why I didn't teach the authorized version.

5. Relationships

One thing in my book, that I was very proud of at the time was a relationship diagram, outlining inputs and outputs of the museum. In this scheme, resources such as people and money are inputs which can be allocated to actions such as modifying the environment of the object, treating the object, and using the object. All these things might have an effect on the state of the object, which in turn may affect its value as a museum object. The use of the object is what generates a benefit outside the museum. But how wrong can you get? Given the current view of museums and the relevance of collections, it can be seen that this model is rather limited.

The complexity of the system can be seen in Fig. 3. The red box in the bottom right-hand corner shows what goes on within the museum, where different activities can affect the state and value of objects. This box delineates the museum where the objects spend time and decisions are made. But the museum does not exist in splendid isolation. It is subject to politics, on a global, national, and local scale. It has an increasingly important role in relation to society.

This may look complicated, but that's because 'it's never that simple'. All of these entities involve people and their decisions to some extent. But global politics and global climate are affected by things that are really beyond human control. For

example, the Sun's radiation, the Earth's orbit, and spin affect present and future climate patterns. The Earth's current seismic state, the distribution of elements in the Earth's crust, the composition of the atmosphere and the rate of population growth all affect the ambitions and activities of politicians on a global scale.

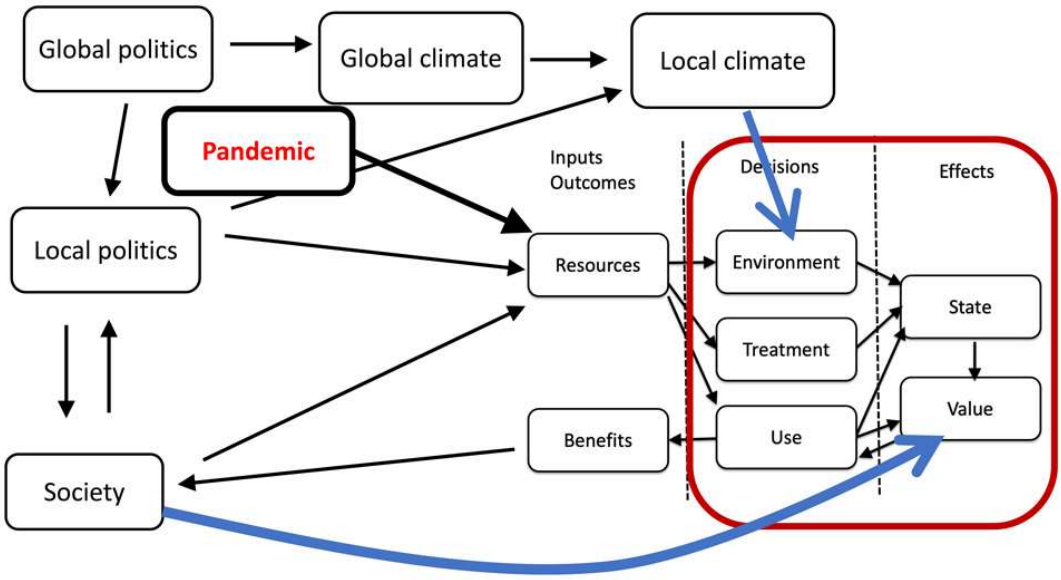


Fig. 3 - How events outside the museum can affect decision-making within the museum walls. Most of these external factors cannot be directly influenced by individuals working in the museum.

6. Decisions

Another thing I was very happy with in my book was my exploration of decision-making, especially with my new knowledge of the decision tree. A simple decision can be modelled as a choice between doing something and doing nothing (Fig. 4). For both courses of action, there may be external factors that, with different probabilities, may affect the outcome. What seemed a simple decision could have, at least, four possible results, some of which are not what you had hoped for. Decisions made will necessitate further decisions to bring the business forward (Fig. 5).

Each decision may, in fact, have more than two options and more than four possible outcomes. The final outcome of one decision chain may be identical to that from

another chain. Thus, the model of multiple consecutive decisions may resemble the 'complex causal network' mentioned in the introduction.

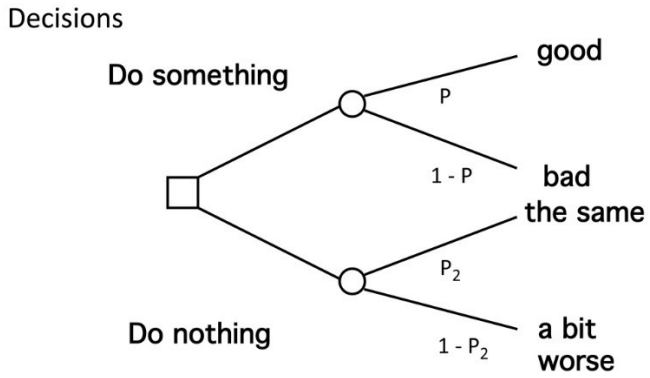


Fig. 4 - Four different possible outcomes from the decision to do something or do nothing.

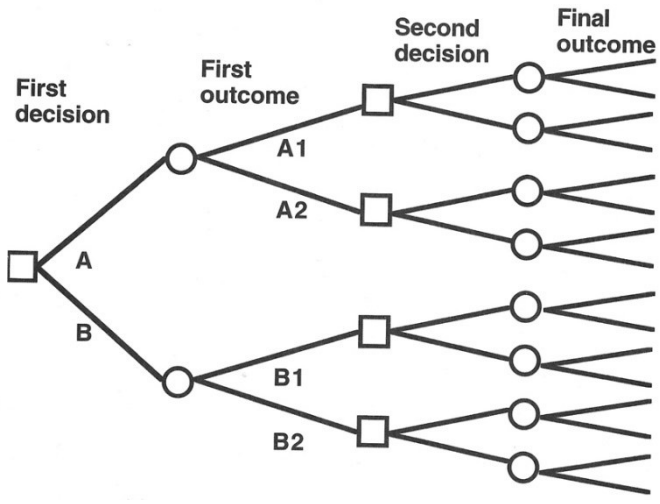


Fig. 5 - The sixteen possible outcomes from two successive decisions. The outcome following one branch may be very different from the outcome following another. The two outcomes may be vastly different, or they may be identical.

7. Stuff *versus* activity

Risk assessment in museums has usually been concerned with risks to physical collections rather than museum activities. But as collections lose their supreme position, it is the actions of staff and stakeholders that should be the focus. This can be summed up as 'risks to business'. If you ask what you need to run a museum business,

then collections still figure, but so do buildings and hardware such as showcases, computers and HVAC (Heating, Ventilating and Air Conditioning) systems. Staff are necessary, as is their specialist knowledge and the protocols to organize them. The humans need collection-related and administrative data on paper and electronic carriers. The institution needs a range of communities; physical and virtual audiences. There must be means of access for physical visitors and for information seekers on the Internet. Above all, there must be income streams from the audiences and, hopefully, local, and national governments. This can be summarised in a list of things (Tab. 1) essential to running a museum business that are at risk but need to be protected and sustained.

Tab. 1 - Essential things to run a museum, at risk and in need to be protected and sustained.

Collections	Community	Documentation
Buildings	Income streams	Means of communication
Staff	Hardware	Means of physical access
Specialist knowledge	Systems	

8. Scientific certainty

Risk management begins with risk assessment, that is the identification and quantification of events and circumstances that might harm your business. To assess risks, you need to predict future events and assess their impact. It is generally assumed that using a scientific approach, using scientific knowledge, numbers, and equations will add to the certainty of the prediction. It will also give ways of estimating the uncertainty of your guesses.

Science is not obsessed with certainty. The journal Scientific American recently celebrated 175 years of production. To make an assessment of progress over that period, it analysed the frequency of particular words appearing in the journal, year by year. The word 'certainty' appeared twice as often in 1850 as in 2019. The word 'uncertainty' did not make much of a showing until the 1950s. The uncertainty principle, formulated in the 1930s, does not appear to have had any effect on word frequency. In 2019 'uncertainty' reached the same frequency as 'certainty' had shown in 1850 (Stefaner et al., 2020).

Published uncertainties to do with environmental monitoring and damage functions (equations that link rates of change in objects with levels of humidity, temperature, and pollutants) can shake one's faith in the certainty of current measurements and predictions of future states. For instance, if the relative humidity in a conditioned exhibition space can vary between 55% and 65% in different parts of one gallery, and the temperature varies by 2°C (Camuffo & Bertolin, 2016), what can we say about the rate of degradation? The conditions are likely to be reported as single numbers for each gallery, but that hides rates of deterioration that vary by 50 -100%.

But how wrong can you get? Risk assessment scores are generally logarithmic. A risk score of 4, using the Michalski ABC method, indicates rates of damage ten times higher than a score of 3. In the example above, the worst case was only twice as bad. There is a whole range of bad behaviour that can be tolerated without moving from one risk score to a higher or lower one.

9. Society and value

It is difficult to talk about risk without introducing value. As mentioned previously, value is a very uncertain concept, difficult to define or quantify. In Fig. 3, the use of objects within the museum (through display, handling by visitors and scholarly examination) provides benefits to society outside the museum. It is also possible for

events in society to influence the value of objects safe inside the museum building (indicated by the long blue arrow). For instance, the Black Lives Matter movement gave extra publicity and emphasis to the ongoing decolonization of collections. By understanding that there are different histories and value systems that need to be recognized, when they may have been ignored or suppressed before, the relative worth of different collections and individual objects can be changed, sometimes dramatically.

Public statues of prominent historic figures can suffer radical changes of value in the estimation of some vocal members of society. One recent example was the case of the statue of Edward Colston, 1636-1721, in Bristol. He had a statue in his honour as he was a local member of parliament and philanthropist who endowed a number of public buildings and schools. He was a merchant specializing in fruits, wines, and textiles from the Iberian Peninsula. Sadly, he also successfully dabbled in transporting humans from Africa to America (Edward Colston, 2022). A group of 21st-century white people thought that the wrongs of the slave trade could be righted by toppling the sculpture, daubing it with paint, rolling it through the streets and throwing it into Bristol harbour. No one was prosecuted for this act of vandalism. Presumably, 'Society' deemed that no damage (loss in value) had taken place, since the branding of Colston as a slave trader had already reduced the statue's worth to zero. The sculpture is now in a museum where the conservators must ponder which parts of the history of the object are sufficiently valuable to be conserved.

10. Condition and value

We can see from the previous section that value can be altered without any intervention or physical change to an object. Yet, where there is a measurable change in state, there may be an acknowledged change in value. It is necessary to make a prediction of future changes of state, and hence value, in order to carry out a risk evaluation.

There are numerous models that link the effects of time to change in value (Waller, 2003). One that I favour for its logic and simplicity is shown in the graph in Fig. 6.

Fig. 6 – Idealised curve derived from the change in published book value predicted for different condition ratings of plastic action figures.

I derived this from the quoted book values of plastic action figures in various states from pristine to 'only good for spare parts'. A small amount of damage has little effect on the asking price. Then there is a range where the value drops steeply with increased damage. Finally, there is a flat region where further damage has no effect on the very low value. The same shape of curve was derived by Agnes Brokerhof using a tomato as an example. Slight changes in appearance do not affect the desire to eat it, but after much deterioration, it looks inedible. The desire to eat the tomato does not change further, yet the rotten fruit still continues to degrade.

When I discussed the relationship of condition and value with Dr Martin Pracher, expert in art appraisal and damage assessment (Martin Pracher, n.d.), he said that during his extensive work on values, he had never come across any evidence of this form of relationship.

11. When stuff is not stuff

If risk assessment can consider the activities of the museum business rather than the contents of the museum, it can surely be applied to other activities that have cultural significance. For instance, things like theatre, dance, video installations and web-hosted artworks that exist as concepts but have no unique, permanent, or stable physical instantiations. Considering such phenomena, Joel Taylor and Hélia Marçal have proposed a challenging new approach to risk assessment (Taylor & Marçal, 2022). They reappraise the role of value in the calculation of risk. They maintain that when considering how to sustain values, the emphasis must move beyond merely putting value into an equation but must make provision for the dynamic and complex nature of values. They argue that risk management has developed techniques that are focused on sustaining something desirable. However, these precious items may change or evolve as part of their nature or role, for instance, time-based media artworks. In all forms of cultural heritage, change is what may need to be sustained. The prediction of the future changes inevitably involves an acceptance of uncertainty.

Final considerations

I wrote Risk Assessment for Object Conservation in the late 1990s. Around that time, the question “How wrong can you get?” would have related to how far one could deviate from an accepted norm without causing damage to physical objects. Since then, intangible heritage has attained greater importance, and museums have adopted a stronger political role, engaging more directly with society and issues such as sustainability. Now that uncertainty plays a greater role in my current thinking, the question needs to be considered in a different light. Given incomplete knowledge of the current situation, given the uncertainties about future developments, how comfortable can you be that you will make sensible decisions? You can remain happy if

you choose an adaptive management style, staying alert and altering tactics and strategy as events unfold (Care, 2020).

Risk assessment is intended to provide a sense of priority and a sense of proportion. It is meant to prevent rather than promote a sense of panic. Risk assessment is not a once-only adventure, nor should it become a boring, repetitive chore. Constantly appraising anew what is important and what can be tolerated allows adaptive risk management to be carried out in a calm, considered fashion, a natural part of the structure and strategy of the museum enterprise.

References

Ashley-Smith, J., Umney, N., & Ford, D. (1994). Let's be honest - Realistic environmental parameters for loaned objects. In A. Roy, & P. Smith (Eds.), *Preventive conservation: Practice, theory and research. Preprints of the contributions to the Ottawa Congress, 12-16 September 1994* (pp. 28-31). International Institute for Conservation of Historic and Artistic Works.

Ashley-Smith, J. (1995). Environments for artefacts – How wrong can you get? In M. McParland (Ed.), *Preserving the cultural heritage: An holistic approach. Post-prints of a seminar held in the National Gallery of Ireland* (pp. 3-14). International Institute for Conservation of Historic and Artistic Works in Ireland.

Ashley-Smith, J. (1999). *Risk assessment for object conservation*. Routledge. https://doi.org/10.4324/9780080938523

Ashley-Smith, J. (2000). Developing professional uncertainty. In A. Roy, & P. Smith (Eds.), *Tradition and innovation: Advances in conservation. Contributions to the Melbourne Congress, 10-14 October 2000* (pp. 14-17). International Institute for Conservation of Historic and Artistic Works.

Brokerhof, A. W., & Bülow, A. E. (2016). The QuiskScan—a quick risk scan to identify value and hazards in a collection. *Journal of the Institute of Conservation*, *39*(1), 18-28. https://doi.org/10.1080/19455224.2016.1152280

Bülow, A. E. (2010). Collection management using preservation risk assessment. *Journal of the Institute of Conservation*, *33*(1), 65-78. https://doi.org/10.1080/19455220903509960

Camuffo, D., & Bertolin, C. (2016). Unfavourable microclimate conditions in exhibition rooms. *Journal of Palaeontological Techniques*, 15, 144-161.

Care (Ed.). (2020). *Listen carefully. Tread lightly. Adapt quickly. CARE's approach to adaptive management*. CARE. https://www.care.org/wp-content/uploads/2020/06/cares_approach_to_adaptive_management_final.pdf

Edward Colston. (2022, October 21). In *Wikipedia*. https://en.wikipedia.org/wiki/Edward_Colston

Erhardt, D., & Mecklenburg, M. (1994). Relative humidity re-examined. In A. Roy, & P. Smith (Eds.), *Preventive conservation: Practice, theory and research. Preprints of the contributions to the Ottawa Congress, 12-16 September 1994* (pp. 32-38). International Institute for Conservation of Historic and Artistic Works.

ICOM. (2019, July 25). *ICOM announces the alternative museum definition that will be subject to a vote*. https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/

ICOM. (2022). *Museum definition*. https://icom.museum/en/resources/standards-guidelines/museum-definition/

Lehmannová, M. (2020). *224 Years of defining the museum*. ICOM Czech Republic. https://icom.museum/wp-content/uploads/2020/12/2020_ICOM-Czech-Republic_224-years-of-defining-the-museum.pdf

Martin Pracher. (n.d.). *Home*[LinkedIn page]. LinkedIn. Retrieved October 21, 2022, from https://www.linkedin.com/in/dr-martin-pracher-02130325/?originalSubdomain=de

Michalski, S. (1994). A systematic approach to preservation: description and integration with other museum activities. In A. Roy, & P. Smith (Eds.), *Preventive conservation: Practice, theory and research. Preprints of the contributions to the Ottawa Congress, 12-16 September 1994* (pp. 8-11). International Institute for Conservation of Historic and Artistic Works.

Michalski, S., & Pedersoli Jr, J. L. (2016). *The ABC method: A risk management approach to the preservation of cultural heritage*. CCI & ICROM. https://www.canada.ca/en/conservation-institute/services/risk-management-heritage-collections/abc-method-risk-management-approach.html

Michalski, S. (2018). Does Jonathan Ashley-Smith believe in a transparent method for risk assessment? *Journal of the Institute of Conservation*, *41*(1), 71-78. https://doi.org/10.1080/19455224.2017.1418208

MOTF. (2022). *Where the future lives*. https://museumofthefuture.ae/en

Naylor, C. (2022, May 16). *12 of the best museums in Europe: From historic to quirky and everything in between*. Lonely Planet. https://www.lonelyplanet.com/articles/best-museums-europe

Simon, N. (2010). *The participatory museum*. Santa Cruz: Museum 2.0. http://www.participatorymuseum.org/read/

Stefaner, M., Daston, L., & Christiansen, J. (2020). The language of science. How the words we use have evolved over the past 175 years. *Scientific American*, *323*(3), 26-33. doi:10.1038/scientificamerican0920-26.

Tate. (2022). *Reshaping the collectible: Learning through change. Online conference, 14, 15 and 16 September 2022*. https://www.tate.org.uk/whats-on/online-event/reshaping-the-collectible-learning-through-change

Taylor, J., & Marçal, H. (2022). Conservation in the performative turn. *Studies in Conservation*, *67*(S1), 260-266. https://doi.org/10.1080/00393630.2022.2067717

UCL ISH. (2022). *New social futures from heritage. 22 September 2022–23 September 2022*. https://www.ucl.ac.uk/bartlett/heritage/events/2022/sep/new-social-futures-heritage

Waller, R. (1994). Conservation risk assessment: A strategy for managing resources for preventive conservation. In A. Roy, & P. Smith (Eds.), *Preventive conservation: Practice, theory and research. Preprints of the contributions to the Ottawa Congress, 12-16 September 1994* (pp. 12-16). International Institute for Conservation of Historic and Artistic Works.

Waller, R. (2003). *Cultural property risk analysis model. Development and application to preventive conservation at the Canadian Museum of Nature*. Acta Universitatis Gothoburgensis.

Ashley-Smith, J. (2023). Risk management and uncertainty: How wrong can you get? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 1-22). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta1

Notes on the author

Jonathan Ashley-Smith studied chemistry to post-doctoral level at the Universities of Bristol and Cambridge. He worked as a metalwork conservator and analytical scientist from 1973-1977 at the Victoria and Albert Museum (V&A) London. Between 1977 and 2002, he was Head of Conservation at the V&A.

In 1994 he was awarded a Leverhulme Fellowship to study risk methodologies, resulting in the book Risk Assessment for Object Conservation, published in 1999. In 2000, he was awarded the Plowden Medal for his contribution to the conservation profession.

Jonathan Ashley-Smith was Secretary-General of the International Institute for Conservation (IIC) 2003-2006. He was Visiting Professor in the Conservation Department of the Royal College of Art, London from 2000-2010. Between 2009 and 2014, he was project leader for the damage and risk assessment module of the EC research project “Climate for Culture”, looking at risks to collections and interior decoration arising from climate change.

In 2020 he helped organise a conference on philosophy and ethics with David Scott. His presentation was about his concept of ‘bespoke codes of ethics’ and the publication by the Institute of Conservation of the document Guidelines for creating a personal statement of ethical practice.

ISABELA STIEGERT [1]

& YACY-ARA FRONER [2]

[1] Federal Institute of Education Science and Technology of Minas Gerais, Brazil | isabelastiegert@gmail.com

[2] Federal University of Minas Gerais, Brazil | yacyarafroner@gmail.com

Accessibility risk management in Brazilian museums.

Stiegert, I., & Froner, Y. A. (2023). Accessibility risk management in Brazilian museums. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 23-36). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta2

Abstract

Museums and cultural spaces must be democratically accessible throughout society, including people with disabilities and reduced mobility, who represent a large part of the world's population. In Brazil, accessibility in museums is still moving at a slower pace compared to the world, which occurs for several reasons, among them, the constant and growing cut of resources for investment in culture in the country. The Brazilian Institute of Museums (IBRAM) developed a risk management program in museums that was launched in 2013, and updated in 2021, which still does not address accessibility within risk management and fails to direct greater care to this public in risk management, which interferes with the safety of these people and the safety of museum spaces.

Keywords

Accessibility; Risk management; Inclusive museums; Disability; Reduced mobility.

Stiegert, I., & Froner, Y. A. (2023). Accessibility risk management in Brazilian museums. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 23-36). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta2

Introduction

According to the World Health Organization (WHO), in its latest report World on Disability, more than a billion people around the world live with some form of disability, among which approximately 200 million live with more serious functional difficulties. Around the world, people with disabilities have worse health prospects, lower levels of education, lower economic participation in society and higher poverty rates than people without disabilities. Regardless of the differences between the world's territories, in part, these inequalities occur because people with disabilities face barriers in accessing services that are guaranteed to others, such as health, education, employment, transportation and information, whose gaps are exacerbated in poorer communities. The tendency for the coming years is that the concern with the subject will increase because the incidence of disability in populations has increased due to world ageing (and consequent increasing risk of disability in people of advanced age), and due to the global increase in chronic diseases, such as diabetes, cardiovascular disease, cancer, and mental disorders (World Health Organization, 2012; Cambiaghi, 2017).

Corroborating with the expectation of the WHO about world ageing, the United Nations (UN) agrees that the world's population is ageing in every country in the world and estimates that the number of elderly people, aged 60 or over, will double by 2050 and more than triple by 2100, from 962 million in 2017 to 2.1 billion in 2050 and 3.1 billion in 2100. Also, on a global scale, the number of people aged 80 or over is expected to triple by 2050, from 137 million in 2017 to 425 million in 2050. For the UN, world ageing is about to become one of the most significant social transformations of the 21st century, with implications for all sectors of society, such as the labour market, the demand for goods and services, social protection, and family structures and intergenerational ties (United Nations, 2022). In the Brazilian context, according to the Brazilian Institute of Geography and Statistics (IBGE), the result of the 2010 Census indicated 190,732,694 people for the Brazilian population on August 1st of the same

year, with an estimated 145,084,976 people do not have any of the disabilities questioned (hearing, mental/intellectual, motor, and visual).

During the UN General Assembly on December 14, 2020, in Geneva, it was declared that the period between 2021 and 2030 will be the Decade of Aging Healthy, and its Resolution of this assembly expressed concern that, despite the science of global aging, the world is not sufficiently prepared to respond to the rights and needs of elderly people. In addition, studies on the pandemic of the disease associated with the new Coronavirus (SARS-CoV-2), the Corona Virus Disease (COVID-19), record that several functional impairments are caused in infected people and that they impair their ability to perform activities of daily living and functionality, alter their professional performance and make social interaction difficult. Although sequelae after recovery from COVID-19 are more representative in patients who developed the disease in a severe form, those who had it moderately (and without hospitalization) may also have some degree of functional impairment. Therefore, strategies are needed for the physical-functional recovery of these people and their social reintegration (Santana et al., 2021).

Another point we would like to highlight is that the concern for the quality of life of people with disabilities and reduced mobility, including the elderly, pregnant women, infants, obese people, and children, is included in the Sustainable Development Goals (SDGs) of the UN 2030 Agenda. The UN General Assembly of September 2015 generated discussions that fed the 2030 Agenda, a document (and a commitment) of the signatory countries, of objectives that will stimulate actions to be carried out by nations by 2030 in favour of sustainable development (SD) by next 15 years in areas of critical importance for humanity and the planet. The 2030 Agenda was published on October 21, 2015, and consists of 17 SDGs. For each SDG, goals were set that guide actions in the three dimensions of sustainable development: economic, social, and environmental. The 169 global goals indicate the paths to be followed and the measures to be adopted to promote the achievement of the SDGs. We understand

Stiegert, I., & Froner, Y. A. (2023). Accessibility risk management in Brazilian museums. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 23-36). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta2

that the 17 SDGs work in a holistic and integrated way and that they are all part of and seek (directly and indirectly) social inclusion and universal accessibility.

1. Inclusion and accessibility in Brazilian museums

Cambiaghi (2017) highlights that inclusion and integration are different concepts, so integrating presupposes that PwD (Persons with Disabilities) and PRM (Persons with Reduced Mobility) need to adapt to situations already pre-established by a world of people without disabilities is a one-way street. Inclusion, on the other hand, concerns a change of perspective on the world, in which diversity is seen as a value and in which all people live in conditions of equality, thus, a two-way street. In exclusion, certain groups do not have any kind of access, and no solutions are offered to connect or between them, while in segregation, previously excluded groups are brought together independently of the social whole. When there is integration, these groups are included in the whole in a different and still isolated way. Finally, in inclusion, the excluded groups are diluted in the whole and begin to occupy the role of subject on an equal basis with the others.

As an extremely broad, complex, and diverse theme and reality, social inclusion needs to include economic, social, gender, sexual orientation, race, ancestry, language, territory of origin, religion, political or ideological convictions, education, and economic situation, among other humanitarian constraints. As in an extremely complex algorithm and related to the geographical, territorial, and cultural location of the being, the unique and personal combination of these questions in each individual places him in a place of greater or lesser acceptance and belonging in the world.

Corroborating this current scenario is the fact that the Brazilian Constitution provides that all are equal before the law, and the State must promote access to culture and the social and community integration of PwD and PRM and facilitate their access to collective goods and services, with the elimination of architectural obstacles and all

forms of discrimination (Constituição da República Federativa do Brasil, 1988 & rev. 2020). The Brazilian Inclusion Law (LBI) of July 2015 makes it clear that people with disabilities and/or reduced mobility have the right to culture, sport, tourism, and leisure on an equal basis with other people (Lei 13.146, 2015) and that their access to cultural goods, places of cultural importance and cultural activities must be in an accessible format.

Accessibility is a relatively recent topic in Western societies, which formally structured the topic only in the second half of the 20th century. In Brazil, we noticed that the theme began to be treated institutionally after the Brazilian Federal Constitution (from 1988) and the Federal Law number 10,098, of December 2000, which establishes general norms and criteria basic elements for promoting accessibility for PwD or PRM, and makes other provisions, regulated by Decree number 5296, of December 2004.

The Brazilian standards (NBRs) of the Brazilian Association of Technical Standards (ABNT) for the promotion of accessibility of built environments, especially ABNT NBR 9050, whose first version was published in 1985 (reformulated and published with updates in the years 1994, 2004, 2015 and 2020) and the Normative Instruction (NI) number 01/2003 of the National Historical and Artistic Heritage Institute (IPHAN, 2003), which provides for accessibility in immovable cultural assets safeguarded at the federal level complement the treatment of the subject at the federal level.

Museums, as cultural memory spaces, according to the Brazilian Institute of Museums (IBRAM), are regularly frequented by people with disabilities and reduced mobility. They visit cultural spaces through family groups (when a family member has a disability), school audiences, groups of companies or public bodies, spontaneous regular audiences, and specialized visitors, such as journalists, writers, and opinion makers (Escola Virtual. Gov., 2020).

For the promotion of accessibility and greater inclusion of these groups of people in museums, we have legislation and regulations in Brazil that are still very recent and face a lot of resistance from society, in general, to be put into practice. In addition, the

technical regulation on accessibility in Brazil has a deep level of detail, which in many situations makes it impossible to promote accessibility in spaces effectively.

Starting from the aspect of social assistance and extending it to the other spheres of sustainable development (environmental and economic), we are able to envision that providing accessibility in museums contributes to the sustainable permanence of these spaces in the urban territory. The lack of free access can also impact the environmental and economic spheres since it reduces local enjoyment, permanence, and varied consumption in these spaces, which may, in the future, make their permanence even more difficult.

In addition to social issues already mentioned so far, another sphere of exclusion happens recurrently in environments built in the past: the lack of universal accessibility and the difficulty of meeting this issue by guarded spaces. Aside from the immediate thought that they were clearly built without regulatory support for accessibility purposes, most of the theoretical basis that we use for the protection of these spaces was structured before to think about universal accessibility in Brazil and in the world.

Discussions on universal design, accessibility and social inclusion began on a global scale in the 1970s and in Brazil in the 1980s; that is, for thousands of years of built environments that we seek to preserve, there are less than fifty years of accessibility discussions and universal inclusion, which have not yet reached basic spaces for human dignity and the right to the city, who will say when it will fully serve cultural heritage spaces.

The inequality of social access in Brazilian museums is, in a way, a more subjective filter. After all, in many cases, the barriers are, in a certain way, form, subtle, and happen, for example, by the high cost of cultural consumption, by the profile of those who frequent them, by the location of the spaces themselves and by several other subjective aspects (or not) that, sometimes, put people in their proper places in the dynamics of the city's interests.

In addition, the lack of representativeness of the image of disability in museums and the negative stereotype that the condition has historically carried feed the lack of accessibility and the distance that exists between cultural spaces and people with disabilities and reduced mobility.

Digitally, we identified another problem, referring to the use of technologies by PwDs and PMRs, which are inferior in quantity and quality in relation to other citizens in museums. With the pandemic of the disease associated with the new Coronavirus (SARS-CoV-2), the Corona Virus Disease (COVID-19), this distance from remote access by PwDs and PMRs to cultural spaces has increased negatively.

In addition, we immediately list one last problem, referring to the budget federal for culture. We are living in Brazil an expressive decrease of federal budget available for culture, which fell 46.8% between 2011 and 2021. According to the Siga Brasil platform, from the Federal Senate, in 2011, the defunct Ministry of Culture by the current federal government had an annual budget of 3.33 billion reais. In 2021 and 2022, the amount authorized by Law Annual Budget (LOA) was 1.77 billion reais, with only 4.3% of this amount being transferred to historical, artistic, and archaeological heritage.

The format of the federal budget currently does not allow for filtering by accessibility; that's why we filter the cultural budget, because it includes the budget of IPHAN, the institution that oversees the good at the federal level. Among the 4.3% of the amount passed on to historical, artistic, and archaeological heritage, 44.41% of this composition, that is, 19.1 million reais, comprises IPHAN's budget for the year 2022. Compared to budget cuts of 46.8% for Culture, IPHAN was even more affected, with a reduction of 56.6% in relation to the budget of 10 years ago.

With the COVID-19 pandemic, there was a loss of budget execution in the culture sector, which can be understood by the impact that the sector suffered, such as the drop-in activities due to isolation and a possible political strategy of investing just

enough for spaces continue to function, as a strategy of the current government to reduce the role of the State in Culture.

2. Universal accessibility in risk management

Accessibility must be considered in all risk management of museums and takes into account whether the good and the place have minimum mobility conditions, whether in the exhibition area, administrative, staff or collection.

IBRAM assumes risk is the probability of something happening, causing different negative effects. Risk in museums is the chance of something happening, causing damage and loss of value to museum collections through the action of one or more risk agents. These are linked to factors related to the building, the territory (geographical and/or climatic characteristics) and to sociocultural, political, and economic factors of a certain region. The risk agents that threaten Brazilian museums, according to IBRAM (Santos, 2021), are physical forces, theft, vandalism, fire, water, pests, pollutants, light and ultraviolet (UV) and infrared (IR) radiation, incorrect temperature, incorrect humidity, and dissociation.

The Brazilian Institute of Museums, as manager of the National Policy on Museums, formally introduced the risk management method aimed at museum heritage in 2013, with the launch of the Risk Management Program for Brazilian Museum Heritage. Brazilian legislation points out important competences for museums in relation to the preservation and security of our museological heritage, dividing them between IBRAM sponsoring institutions, museums, technical teams, and the public.

The conceptual structure of the Program is based on the risk management process described by the technical standard ABNT NBR ISO 31000:2009 (Risk Management - Principles and Guidelines) revised in 2018; the Australian and New Zealand Technical Standard for Risk Management (AS/NZ4360:2004) and tools jointly developed by the

Canadian Conservation Institute (CCI), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and by the Dutch Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed - RCE).

The IBRAM Program (Santos, 2021) is divided into 04 (four) axes, which group themes that organize its execution, encompassing the entire risk management cycle (identify, detect, block, respond and recover) and the two fronts of action proposed by legislation current museology: preventive actions and emergency actions in museums, namely:

Axis I - Governance and articulation;

Axis II - Planning and risk prevention;

Axis III - Risk monitoring and control;

Axis IV - Responses and emergencies.

Axis I brings together the guidelines, strategies and actions for the integrated implementation of the Brazilian Museum Heritage Risk Management Program in its dialogue with all areas of IBRAM (headquarters, museums and representations), with the museological field (Brazilian museums, systems and networks of museums and professionals, teaching centres, platforms, national and international councils and committees), public safety institutions and other institutions related to museums. Axis II brings together strategies and actions regarding guidelines for planning and preventing risks to museum assets.

Axis III brings together strategies and actions for monitoring risks to museum assets, with a view to improving the efficiency and sustainability of risk control and treatment, and axis IV brings together strategies and actions for responses to emergency situations in Brazilian museums, considering the containment of loss of value of musealized assets and damage recovery.

Despite the evolution of the program, it still does not address accessibility within risk management, as provided for in the Brazilian Inclusion Law (LBI), which provides for the need for accessible escape routes and emergency exits, in its 4th paragraph, addresses more specifically, issues related to risk and emergency situations in public cultural environments. Considering that they are responsible for their visitors, museums must be able to carry out evacuation procedures for people with disabilities in an emergency situation.

Accessibility and risk management meet in two main moments. The first of them concerns the risks that may be inherent in activities in an accessible format within museums (or the absence of them in this format), and the second is about the evacuation of buildings taking into account people with disabilities and reduced mobility. For example, activities that explore senses other than vision may not pose risks if done with mediators and in safe space conditions.

In building evacuations, for example, people with disabilities or reduced mobility cannot be left behind and must follow the escape route. The Elevator, as a rule, when there is a fire alarm, automatically goes to the ground floor and is disabled. A person with a disability or with some type of limitation should never be left alone, unless it is their will and they have complete autonomy for their evacuation, without needing help from another person. Finally, it is essential that the Emergency Evacuation Plan for People with Disabilities is perfectly integrated with the Museums' Emergency Plans and the Museological Plan.

Final considerations

In addition to normative and legal compliance, the inclusion of accessibility in risk management in museums is shown to be a way to strengthen the importance of the theme among the agents of power within the institutions and to strengthen the enjoyment of the museum as a social right for all.

In Brazil, the Museum Heritage Risk Management Program represents a new paradigm with regard to preservation actions in the cultural sector, as it articulates different technical and planning perspectives, demonstrating its efficiency for managers and institutions that incorporate the widespread strategies by him. However, since its launch in 2013 and its update in 2021 by IBRAM, accessibility has not been included in risk management.

This scenario proves to be wrong in relation to international recommendations and Brazilian legislation, which demonstrates a gap that needs to be filled for the safety of people with disabilities and reduced mobility in museums and for risk management that contemplates these audiences. into a more inclusive museum.

References

Cambiaghi, S. (2017). *Desenho universal: Métodos e técnicas para arquitetos urbanistas*. Editora Senac.

Constituição da República Federativa do Brasil. (1988 & rev. 2020). http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm

Escola Virtual. Gov. (2020). *Acessibilidade em museus* [Online course, January 18-22, 2020_Lecture notes]. IBRAM. Retrieved March 12, 2022, from https://www.escolavirtual.gov.br/curso/268

Lei 13.146 (2015, 06/07). *Institui a lei brasileira de inclusão da pessoa com deficiência (Estatuto da pessoa com deficiência)*. http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13146.htm

Santana, A. V., Fontana, A. D., &; Pitta, F. (2021). Pulmonary rehabilitation after COVID-19. *Jornal Brasileiro de Pneumologia*, *47*(1), e20210034. doi:10.36416/1806-3756/e20210034.

Santos, T. V. (2021). *Programa de gestão de riscos ao patrimônio musealizado brasileiro. Diretrizes gerais, objetivos, eixos e linhas de atuação*. IBRAM.

United Nations. (2022). *Ageing*. Retrieved March 12, 2022, from https://www.un.org/en/global-issues/ageing

World Health Organization. (2012). *Relatório mundial sobre a deficiência* (Lexicus Serviços Lingüísticos, Trans.). Governo do Estado de S. Paulo (Original work, World report on disability, published 2011). https://apps.who.int/iris/bitstream/handle/10665/44575/9788564047020_eng.pdf?sequence=4

Stiegert, I., & Froner, Y. A. (2023). Accessibility risk management in Brazilian museums. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 23-36). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta2

Notes on the authors

Isabela Stiegert is an Architect and Urbanist with a PhD in sustainable Cultural Heritage and research interest mainly in the following topics: Universal accessibility, social inclusion, computational tools related to teaching and architectural design, planning, management and sustainable maintenance of public works and spaces. Currently, she works with physical accessibility in educational spaces of the Federal Institute of Education Science and Technology of Minas Gerais, in Brazil.

Yacy-Ara Froner graduated in History from the Federal University of Ouro Preto (1988), holds a master's in Social History from the University of São Paulo (1994) and a PhD in Economic History, with emphasis on cultural heritage from the University of São Paulo (2001). She is a specialist in restoration by the Centro de Conservação e Restauração-CECOR (1992) and in the conservation of collections by the Getty Conservation Institute-GCI (1995). She is also a specialist in Baroque Art and Culture by the IAC-UFOP (1992). Currently, she is a professor at the School of Fine Arts at UFMG, working with undergraduate courses in Visual Arts and Conservation-Restoration. Permanent professor of the Graduate Program in Arts at the School of Fine Arts of UFMG and of the Graduate Program in Built Environment and Sustainable Heritage at the Faculty of Architecture of UFMG, having served as coordinator between 2018 and 2020. She is a consultant and researcher in the areas of History of Art, History of Collections and Preventive Conservation, a researcher at LACICOR (Laboratory of Conservation Sciences), and she coordinates the ArCHE research group (Environments - Art, Conservation and History). Between 2015 and 2016, she was a senior postdoctoral fellow with research at ICCROM.

António Gonçalves de Carvalho [1]

& Filipa Neto [2]

[1] National Archaeology Museum, Portugal | antoniocarvalho@mnarqueologia.dgpc.pt

[2] National Archaeology Museum, Portugal | fneto@mnarqueologia.dgpc.pt

Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

Abstract

The comprehensive refurbishment project for the National Archaeology Museum in Lisbon, Portugal, financed through the Recovery and Resilience Mechanism and scheduled to take place over the next few years, involves an unprecedented intervention in the building in which the museum is housed, the Jerónimos Monastery, and the creation of an entirely new exhibition programme. The intervention requires both the protection of the architectural heritage and the conservation of the museum's collections to be ensured during the processes of closure, transfer, and maintenance, as well as the reinstallation of the cultural assets in the new space.

Faced with the inevitable imbalance in environmental conditions that the impact of the project will produce on cultural heritage, which is increasingly fuelled by the evident effect of climate change and human action, this contribution aims to highlight the strategic relevance of implementing an integrated plan for risk management as a concrete and truly effective tool in decision-making processes that ultimately aim to safeguard the cultural assets involved and their cultural value.

Keywords

Cultural heritage; Heritage safeguarding and conservation; Risk management; Planning; Preventive strategy.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

Introduction

The vulnerability of cultural heritage is also ours!

In an inspiring article, philosopher María Luísa Ribeiro Ferreira (2020), reminds us of the importance of questioning and rethinking the way we live and relate to each other in the post-Covid 19 era. In a categorical and equally astonishing way, the author sets out her thoughts using notes from Hannah Arendt on the Human Condition, from Martha Nussbaum, on the theme of vulnerability, and Emmanuel Coccia, on the fragility of humans and their biological interrelationship with viruses. In her short text, she emphasises that without a culture of compassion and solidarity in which everyone can see themselves and which helps us to accept the vulnerability that we are currently experiencing in a dramatic way, we will hardly be able to make sustainable progress. The state of human nature - eternally fragile and vulnerable - in the face of the inevitable unpredictability of the circumstances that condition it, needs to be known, but above all integrated, in order to allow for the creativity and innovation necessary for the transformation and sustainable development of the human being and their respective societies. These transformations to be realised depend on each and every one of us, the author recalls.

In fact, these purely philosophical and sociological perspectives are not far removed from the concept of heritage and the approach to its conservation and transmission, as expressed in the "Council of Europe Framework Convention on the Value of Cultural Heritage for Society", commonly known as the Faro Convention, signed on 27 October 2005 (Council of Europe, 2005). From this integrative perspective, it is understood that the materialities and immaterialities that man produces as a cultural being are the result of his inner experience manifested in the outside world. Therefore, to understand human fragility and vulnerability is to realise that cultural heritage, as a product and consciousness of man, is per se a consequently vulnerable and volatile element. The value we attribute to cultural assets is the result of a multiple interaction

of dimensions: spatial, temporal, and human, which is why the risk to its conservation is not only caused by natural hazards, which can be enhanced by the effects of climate change, but, above all, by anthropogenic hazards.

It is a fact that we currently live in a world undergoing inevitable change. The first decades of the 21st century, and particularly the last few years, have shown that ecosystems - ecological and socio-cultural - are succeeding each other and transforming at such an accelerated pace that the loss of wealth and diversity, as we know it, is becoming increasingly difficult to control and mitigate. We only have to look at documents such as The Global Risks Report (World Economic Forum, 2021) to see that the main emergencies identified as priorities to minimise on a global scale are human-made and the result of rapid changes to the status quo: a) Disruptions in social interactions; b) Increasing divides in the digital environment; c) Abrupt changes in markets and consumer behaviour; d) Geopolitical instability; e) Inequalities in education; f) Job losses; and g) Challenges to democracy and international relations.

With regard more specifically to the protection and safeguarding of cultural heritage at risk, numerous documents have been produced by various international organisations and associations – the United Nations Educational, Scientific and Cultural Organization (UNESCO); the Council of Europe (CE); the European Commission (EC); the International Centre for the Conservation and Restoration of Cultural Property (ICCROM); the International Council on Monuments and Sites (ICOMOS); the International Council of Museums (ICOM) - some of which are more than four decades old. In this sense, concerns about the need to reduce risks and minimise the negative impacts of climate change on cultural heritage are well documented, and there is no shortage of reports, diagnoses, recommendations, and conventions at international, European, or even, in some cases, local level.

Such efforts, however, have resulted in little or no action!

This is illustrated by the ineffectiveness of COP 27, organised by the United Nations Framework Convention on Climate Change, between 6 and 11 November 2022 in Sharm el-Sheik, Egypt, whose only notable outcome was the approval of a loss and damage response fund, aimed at the poorest countries most vulnerable to the effects of climate change. Everyone's commitments to fulfil the objective of increasing global temperature by 1.5°C, compared to the pre-industrial era are far from being fulfilled, and it is more likely that the increase could be 2.4°C by the end of the century, and therefore unsustainable for the world as we know it (UNFCCC, 2022).

Or the continuous warnings that the Intergovernmental Panel on Climate Change (IPCC, 2022) continues to issue through its exhaustive reports, demanding more muscular adaptation and mitigation actions from governments and communities, without any major changes in policies and behaviour.

The lack of political consensus to change course towards an uncertain and undesirably discouraging future must not be allowed to continue. Nor should we ignore the signs of public opinion, which, increasingly informed and afflicted by the effects of climate change, is discontentedly witnessing progressive environmental degradation and the consequent loss of cultural diversity and is showing the capacity to actively organise itself for the demanding of solutions.

This outpouring of feelings and concerns in favour of defending and protecting threatened cultural heritage is, however, far from being a homogeneous and conscious process in contemporary societies, occurring at various times depending on the location, type, or political agenda of governments. Raising awareness of prevention and the vulnerability of cultural heritage assets and what their loss or de-characterisation means, based on a sustained relationship between people and heritage, should be one of the concerns of future political strategies, as has happened in the area of the environment.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

1. Prevention, prevention not to remediate...

The “Krakow Recommendation on the Protection of Cultural Heritage”, resulting from the International Conference on “Cultural Heritage in the face of Contemporary Threats and Challenges. Programs and action plans”, held on 23 and 24 November 2016 in Krakow (UNESCO, 2017), highlighted lines of work for better conservation and management of cultural heritage at risk. It advocated the need to identify the multiple hazards affecting cultural heritage, such as natural disasters, climate change, armed conflicts, acts of terrorism and illegal trafficking of goods. It also stressed the need for member states to implement systems framed by appropriate legislative measures, as well as multi-level programmes and strategies (local, national, and international) and cooperation with communities, in order to develop effective protection of cultural heritage in the face of risks. Finally, the importance of creating integrated networks for collecting and sharing information on best practices was emphasised, including the creation of early warning and risk management monitoring systems.

These recommendations recalled the provisions of previous UNESCO Conventions, in particular the "Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict" together with its two protocols (UNESCO, 1954; UNESCO, 1999); the "Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property" (UNESCO, 1970); the "Convention Concerning the Protection of the World Cultural and Natural Heritage" (UNESCO, 1972).

Over the years, UNESCO has sought to sensitise governments around the world to the urgent need for a culture of prevention and concerted climate action, also involving heritage professionals. These concerns take on greater dimensions when it comes to World Heritage sites (Vujicic-Lugassy & Frank, 2010; Veillon, 2014). To this end, UNESCO's Intergovernmental Committee for the Protection of Natural and Cultural Heritage recommends that Member States include risk preparedness as one of the

elements of their management plans and professional training and capacity-building strategies (UNESCO, 2015).

These principles correlate with the "SENDAI Framework 2015-2030" (UNISDR, 2015a; UNISDR, 2015b), a strategy adopted by the Member States of the United Nations on 18 March 2015, which aims to contribute to substantially reducing the risk of disasters and loss of human life in the physical, environmental, social, and cultural dimensions of human societies. Reducing the loss of cultural heritage contributes to one of this strategy's implementation indicators (C6 - Direct economic loss to cultural heritage damaged or destroyed attributed to disasters).

And of course, we can't forget the United Nations (UN) AGENDA 2030 and the 17 sustainable development goals that generally reflect the need to prepare for the future through conscious action to reduce risks, adaptation strategies and strengthening the resilience of communities and their values (United Nations, 2015).

Focused on these objectives and programmes, over the last decade the European Commission has funded international projects to find more effective solutions and more lasting responses to the problems and risks facing humanity, in this case the cultural heritage it values. An example of this is the STORM (Safeguarding Cultural Heritage through Technical and Organisational Resources Management - 2016-2019) project, which has developed a set of proposals for methodologies and procedures based on experiments implemented in five pilot sites in five different countries (Greece, Italy, Portugal, United Kingdom, Turkey). Based on a fruitful interdisciplinary collaboration made up of heritage managers, climatologists, conservation scientists, conservators and restorers, ICT and sensor specialists, seismologists, civil protection, the STORM project proved to be an important contribution to new tools and new ways of operating. Highlights include the creation of a "Reference Glossary"; non-invasive and non-destructive technological solutions to support decision-making in the conservation of heritage sites in danger; and a "White Paper" with proposals for

improving policies in cultural heritage risk management, based on a critical survey of the regulatory and legal frameworks in the five countries (Resta et al., 2019).

There is a growing call, whether in international projects, programmes, or agendas, for the planning and management of cultural heritage sites to be carried out in an integrated, participatory, multi-level and multi-sectoral manner, with a focus on prevention, mitigation, and adaptation (Sabbioni et al., 2008; Bonazza et al., 2018).

On the other hand, it is also recognised that risk reduction, whether caused by the impacts of climate change or strictly human actions, although a process of global proportions, must be dealt with locally. And in the case of cultural heritage, this is more than evident, since it reflects and (re)lives the specificities and characteristics of the region and locality.

2. So why have a risk management plan for cultural heritage?

The practice of implementing risk management in cultural heritage has developed mainly in two areas: the preventive conservation of cultural assets, applied in a museum context; and the management of the impact of disasters on architectural heritage, applied in a safeguarding and heritage management context. However, in recent decades, risk management planning for built heritage has been implemented from a preventive conservation perspective through the creation of risk maps or environmental impact monitoring actions. This is due to the fact that the actions to be implemented, whether in the context of prevention against permanently occurring agents of deterioration or in the case of emergency preparedness, are very similar or almost identical. In fact, what differs is the intensity of the impacts caused by the different agents of deterioration on cultural heritage (Lattig 2012, in Revez et al., 2016).

Stovel (1998), from an early stage, emphasised the importance of considering risk management in cultural heritage as a more holistic process than other approaches to heritage conservation, since he believes that the changes and impacts that cultural assets can undergo require several perspectives. Looks that are for the materiality of cultural assets, but also other looks that go beyond their physical limits and refer to the environmental and cultural factors of the object/material itself. Intrinsic and extrinsic, therefore!

Thus, risk management emerges as a way of aggregating these various dimensions within the scope of Heritage Conservation, proposing that the material dimension of change be analysed in a continuum that encompasses phenomena of different intensities and probabilities of occurrence, for a more holistic view of the priorities for action that best defend the significance that is to be preserved (Revez et al., 2016).

In this sense, a cultural heritage risk management plan should be understood as a methodology that allows information to be organised and actions to be planned in order to support decision-making more effectively. Its application, carried out in an integrated manner, makes it possible to build scenarios based on chains of cause based on an intricate network of phases and possible factors (visible and invisible), to conceive possible losses or damage, to make risk assessments more rigorous (multi-risk), and to strengthen the measures for controlling these risks (Pedersoli Jr., Antomarchi, & Michalski, 2016; Michalski, & Pedersoli Jr., 2016). It implies realising that it is a cyclical process with several phases - risk assessment, prevention/mitigation, emergency preparedness, response, recovery - and that they all interconnect for a single result (Fig. 1). Ultimately, it even provides a better understanding of the institution and those involved in the processes, helping to prioritise interventions and save costs.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

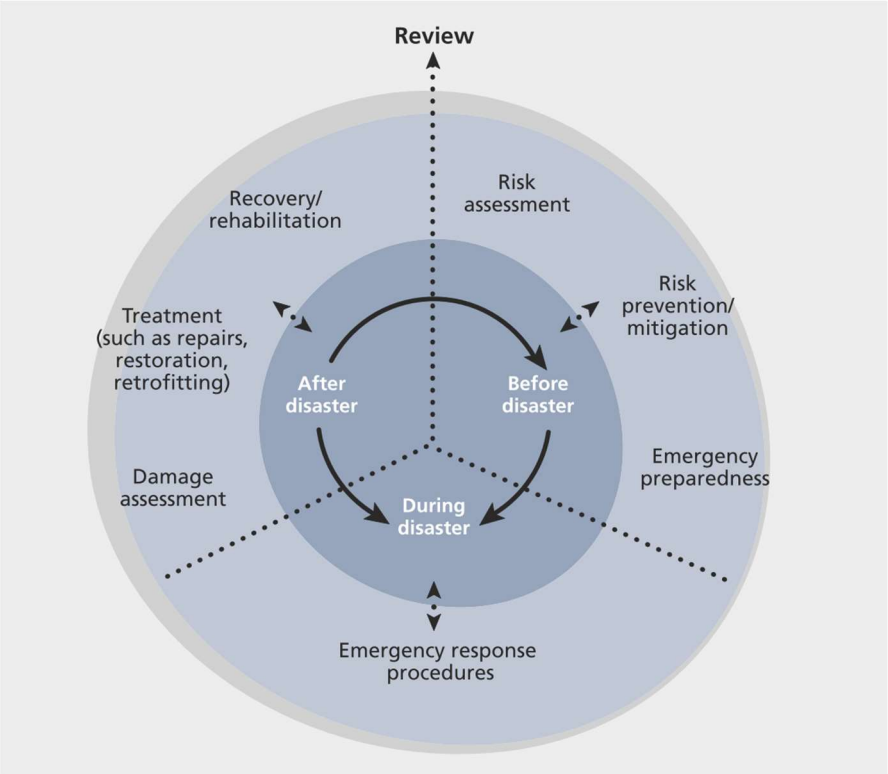


Fig. 1 - Cycle and phases of disaster risk management (Vujicic-Lugassy & Frank, 2010, p. 13).

From a general point of view, the benefits of a risk management plan are to:

- Systematise information on the threats and problems facing cultural assets;
- Record and value professionals' knowledge of the cultural assets they manage;
- Share knowledge between all those involved in the conservation and management of cultural assets and promote co-operation between teams (inside and outside institutions);
- Improve knowledge by implementing measures and monitoring them;
- Better substantiate management decisions in a clear and consistent manner;
- Enable medium / long-term planning;
- Manage costs more rationally and less expensively;
- Reduce risks and prolong the preservation/sustainability of cultural assets for longer.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

3. The case of the National Archaeology Museum in the face of the Recovery and Resilience Plan for Culture

The comprehensive refurbishment project for the National Archaeology Museum (Museu Nacional de Arqueologia – MNA) in Lisbon, funded through the Recovery and Resilience Mechanism - Regulation (EU) 2021/241, of 12 February, and which forms part of the Recovery and Resilience Plan for Culture - RE-C04-i02 - Cultural Heritage, provides for a profound transformation of the space and a new museological programme for the museum.

When carrying out a construction project of such magnitude, it becomes imperative to safeguard and control a complex number of risks to the existing cultural heritage, be it the building structures or the museum collections.

Carrying out work on a listed building that houses movable cultural objects, some of which are also classified as "National Treasures", implies greater responsibilities in the intervention.

The Framework Law for Portuguese Museums (Lei-Quadro dos Museus Portugueses – LQMP), no. 47/2004, of 19 August, lays down the principles and priorities of preventive conservation and risk assessment (articles 27 to 31), as well as the security conditions that are essential to guarantee the protection and integrity of the cultural goods it contains (articles 32 to 38).

Decree-Law no. 220/2008 of 12 November establishes the Legal Framework for Fire Safety in Buildings, as amended by Decree-Law no. 224/2015 of 9 October. This decree-law lays down the fire safety regulations applicable to all buildings and premises, divided into 12 standard uses, with "type X - museums and art galleries" and "type XI - libraries and archives" applying to the MNA.

Ministerial Order no. 1532/2008 of 29 December approves the Technical Regulations for Fire Safety in Buildings and applies to all buildings and enclosures, in accordance with the legal regime contained in Decree-Law no. 220/2008 of 12 November. Title VII, Chapters VIII and IX define in greater detail the minimum conditions required to be implemented in building types "X and XI", as well as the standards to which self-protection measures must conform in order to guarantee the safety of cultural heritage and people.

Therefore, in accordance with the above-mentioned legislation, the museum has a "Safety Plan" which is periodically reviewed in accordance with the legislation in force. This document also includes the "Self-Protection Measures" to be implemented in the event of a fire. It was drawn up in October 2015 by the Directorate General for Cultural Heritage's (Direção-Geral do Património Cultural - DGPC) Department of Studies, Projects, Works and Supervision, in close collaboration with the MNA's in-house team, considering the type of use "type X - museums and art galleries".

In compliance with the LQMP, the MNA also has a "Preventive Conservation Plan" (PCP), dated 2009, which contains useful information for the proper conservation of cultural assets and identifies some potential risks. However, due to the date it was drawn up, it fails to identify temporary and future constraints resulting from the process of preparing and carrying out the remodelling work currently planned for the building.

History has often shown that it is at times of human intervention and action on heritage assets that major catastrophes occur - just remember the recent example of Notre Dame in Paris. And Portugal was no exception. Let's remember the catastrophes that have occurred in Portugal that have destroyed a large part of our immovable and movable heritage, such as: the great earthquakes in Lisbon (1755) and Angra do Heroísmo (1980); the fires in the Palaces of Queluz (1934) and Ajuda (1974), in the Church of S. Domingos (1959), in the D. Maria National Theatre (1964) and the Natural

History Museum (1978); the 1967 floods that damaged the Gulbenkian Museum's collections at the Palácio dos Marqueses de Pombal, in Oeiras, or, in 2016, at the Santa-Clara-a-Velha Monastery, in Coimbra. All of these events had negative repercussions on cultural assets, some of them with irreparable damage.

Considering the current situation the MNA is going through, it is essential to implement a Conservation Programme for the museum's cultural assets based on a plan that integrates the principles and methods of preventive conservation and risk management for the collections and the building. Its development makes it possible to carry out a wide-ranging multi-risk assessment based on multiple hazards that can affect and cause irreversible damage to cultural assets, whether of a human or natural nature, whether of a rapid and catastrophic nature or of a slow and persistent nature, and to impose control measures to mitigate these risks. On the other hand, it enables effective decision support for heritage management and conservation processes, based on real, scientific knowledge and the implementation of appropriate, more cost-effective procedures. It is, in fact, an essential tool in defining an intervention strategy that is intended to be effective in conserving the cultural values of authenticity and integrity of cultural assets (Fig. 2 and 3).

Fig. 2 - National Archaeology Museum, 2021 (©Raquel Lázaro).

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

Fig. 3 - Comprehensive remodelling project for the National Archaeology Museum, 2021-2025 (©Arlindo Homem).

In this way, the implementation of an integrated plan for preventive conservation and risk management fits in with what the MNA considers essential, i.e. the practice of a preventive culture. Especially in this process of remodelling the museum, which is expected to take a long time, and which includes planning actions, preparing teams, identifying, and acquiring material/logistical resources, and cooperating with other services, namely the DGPC, public security forces and civil protection.

Finally, the MNA team is well aware of the fact that the complete remodelling of the monumental complex where the museum has been housed since 22 April 1906 with its responsibilities within the framework of Portuguese Cultural Heritage and UNESCO, requires a strong conceptual basis and concrete actions, translated into good practices, which should guide the work of all employees in the different phases of the process: preparation and dismantling, transfer, intervention and reassembly of the new MNA XXI.

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

References

Bonazza, A., Maxwell, I., Drdácký, M., Vintzileou, E., & Hanus, C. (2018). *Safeguarding cultural heritage from natural and man-made disasters. A comparative analysis of risk management in the EU*. European Commission. Directorate-General for Education, Youth, Sport and Culture. Directorate D — Culture and Creativity. Unit D1 – Cultural Policy. https://doi.org/10.2766/224310

Council of Europe. (2005). *Council of Europe Framework Convention on the Value of Cultural Heritage for Society.* https://www.coe.int/en/web/culture-and-heritage/faro-convention

Ferreira, M. L. R. (2020). Quando a filosofia nos ajuda a pensar na Covid-19. *Jornal de Letras.* https://visao.sapo.pt/jornaldeletras/ideiasjl/2020-07-03-quando-a-filosofia-nos-ajuda-%e2%80%a8a-pensar-a-covid-19/

IPCC. (2022). *Climate change 2022: Impacts, adaptation and vulnerability.* Intergovernmental Panel on Climate Change. https://www.ipcc.ch/report/ar6/wg2/

Martins, G. O. (2016). Património, herança e memória. In A. Carvalho (Ed.), *Participação: Partilhando a responsabilidade* (pp.18-28). Acesso Cultura - Associação Cultural.

Michalski, S., & Pedersoli Jr., J. L. (2016). *The ABC method: A risk management approach to the preservation of cultural heritage*. CCI & ICCROM. https://www.iccrom.org/sites/default/files/2017-12/risk_manual_2016-eng.pdf

Pedersoli Jr., J. L., Antomarchi, C., & Michalski, S. (2016). *A guide to risk management of cultural heritage*. ICCROM-ATHAR Regional Conservation Centre Sharjah, U.A.E. & Government of Canada, Canadian Conservation Institute. https://www.iccrom.org/sites/default/files/2017-12/risk_management_guide_english_web.pdf

Resta, V., Utkin, A. B., Neto, F. M., & Patrikakis, C. Z. (Eds.). (2019). *Cultural heritage resilience against climate change and natural hazards. Methodologies, procedures, technologies and policy improvements achieved by Horizon 2020 - 700191 STORM project*. Pisa University Press.

Revez, M. J., Delgado Rodrigues, J., Proença, N., Carvalho, J. M. L., Coghi, P., Capua, M. C., Santamaria, U., Boi, S., & Perossini, F. (2016). O risco como ferramenta conceptual de uma gestão integrada da mudança: a perspectiva do projecto STORM. In M. Menezes, J. D. Rodrigues, & D. Costa (Eds.), *Congresso Ibero-Americano "Património, suas matérias e imatérias"*. LNEC. https://doi.org/https://doi.org/10.5281/zenodo.841144

Sabbioni, C., Cassar, M., Brimblecombe, P., & Lefevre, R. A. (2008). *Vulnerability of cultural heritage to climate change*. Council of Europe. European and Mediterranean Major Hazards Agreement (EUR-OPA). https://www.coe.int/t/dg4/majorhazards/activites/2009/Ravello15-16may09/Ravello_APCAT2008_44_Sabbioni-Jan09_EN.pdf

Stovel, H. (1998). *Risk preparedness: A management manual for World Cultural Heritage*. ICCROM. https://www.iccrom.org/sites/default/files/ICCROM_17_RiskPreparedness_en.pdf

UNESCO. (1954). *Protocol to the convention for the protection of cultural property in the event of armed conflict*. https://www.unesco.org/en/legal-affairs/protocol-convention-protection-cultural-property-event-armed-conflict

UNESCO. (1970). *Convention on the means of prohibiting and preventing the illicit import, export and transfer of ownership of cultural property*. https://www.unesco.org/en/legal-affairs/convention-means-prohibiting-and-preventing-illicit-import-export-and-transfer-ownership-cultural

UNESCO. (1972). *Convention concerning the protection of the World Cultural and Natural Heritage*. https://whc.unesco.org/archive/convention-en.pdf

UNESCO. (1999). *Second Protocol to the Hague Convention of 1954 for the protection of cultural property in the event of armed conflict*. https://www.unesco.org/en/legal-affairs/second-protocol-hague-convention-1954-protection-cultural-property-event-armed-conflict?hub=66535

UNESCO. (2015). *Decision of the Intergovernmental Committee: 10.COM 15.a*. Intergovernmental Committee for the Protection of Natural and Cultural Heritage. https://ich.unesco.org/en/Decisions/10.COM/15.a

UNESCO. (2017). *Report of the Secretariat on its activities*. https://unesdoc.unesco.org/ark:/48223/pf0000259961

UNFCCC. (2022). *COP27. Delivering for people and the planet. Sharm el-Sheikh Implementation Plan*. United Nations. Climate Action. https://unfccc.int/documents/624444

UNISDR. (2015a). *Proposed updated terminology on disaster risk reduction: A technical review*. The United Nations Office for Disaster Risk Reduction. https://www.preventionweb.net/files/45462_backgoundpaperonterminologyaugust20.pdf

UNISDR. (2015b). *Sendai framework for disaster risk reduction 2015 - 2030*. United Nations Office for Disaster Risk Reduction. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development. A/RES/70/1*. Department of Economic and Social Affairs Sustainable Development. https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981

Veillon, R. (2014). *State of conservation of World Heritage properties – A statistical analysis (1979-2013)*. UNESCO World Heritage Centre. https://whc.unesco.org/en/documents/134872

Vujicic-Lugassy, V., & Frank, L. (Eds.). (2010). *Managing disaster risks for World Heritage. Resource manual*. The World Heritage Centre of UNESCO, ICCROM, ICOMOS, IUCN. https://whc.unesco.org/en/managing-disaster-risks/.

World Economic Forum. (2021). *The global risks. Report 2021* (16 ed.). World Economic Forum in partnership with Marsh McLennan, SK Group and Zurich Insurance Group. https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf

Carvalho, A. G., & Neto, F. (2023). Integrated risk management at the National Archaeology Museum in Lisbon (Portugal) in view of the intervention envisaged in the Recovery and Resilience Plan. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 37-55). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta3

Notes on the authors

Filipa Neto has a degree in History - Archaeology from the Faculty of Letters, University of Lisbon (1998), and a master's in Human Evolution from the Faculty of Sciences and Technologies, University of Coimbra (2003). In 1998, she began working at the Portuguese Institute of Archaeology (IPA), then at the Institute of Management of Architectural and Archaeological Heritage (IGESPAR) and at the Directorate General for Cultural Heritage (DGPC). She coordinated the inventory work between 2012 and 2016, including the management of digital platforms and institutional databases for heritage safeguarding. From 2016 onwards, at DGPC, she coordinated (inter)national funded projects, namely the STORM project. Between 2016 and 2020, she co-coordinated the Culture Programme of the EEA Grants Financing Mechanism and, since 2020, she works at the National Archaeology Museum.

Antonio Carvalho graduated in History from the Faculty of Social and Human Sciences, University Nova of Lisbon, in 1987 and obtained a Postgraduate Degree in Documentary Sciences from the Faculty of Arts, University of Lisbon in 1991. He joined the Cascais Municipal Council where, among other positions, directed the Condes de Castro Guimarães Library (1986 to 1996). From 1996 to 2002 he was Head of the Division of Libraries and Historical Archives and, from 2002 to 2012, Director of the Department of Culture. During these years, he was responsible for coordinating teams that created several municipal services, with emphasis on the Cascais Municipal Historical Archive, two municipal libraries, the Santa Marta Lighthouse-Museum, the Museum of Portuguese Music, and the House of Stories, by Paula Rego.

Since 1990, he has been a researcher at UNIARQ-Archaeology Unit of the Faculty of Arts, University of Lisbon, and, since 2012, at the Institute of Contemporary History at the Faculty of Social and Human Sciences, University Nova of Lisbon.

Since July 2012 he has been Director of the National Archaeology Museum.

Moana Campos Soto

Federal University of Rio de Janeiro | moanasoto@gmail.com

The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy.

(*In memoriam* Sabrina Damasceno Silva, Federal University of Bahian Recôncavo, Brazil)

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

Abstract

The paper deals with one of the recurring tragedies that have already consumed a lot of human cultural heritage, the fires, based on the example of the National Museum, in Rio de Janeiro, Brazil, fundamental institution for scientific dissemination, for national development and as the first museum experience for popular sectors. The memory of its formation and development is recovered, presenting its collections and exhibitions, and showing how the fire ended an intense museum renovation process in progress. It presents the immediate and, mainly, mediates causes of creating the environment for the tragedy. In particular, it points out how the disinvestment process is related to the neoliberal setback in a dependent country: the denial of the need for popular education and public scientific research, which was developed by this institution. Finally, it shows how this museum can recover, trusting its dedicated workers and the support and affection that the popular community of the city and the suburbs feel for the museum.

Keywords

National Museum; Fire; Neoliberalism; Memory.

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

Introduction

The flames have already consumed much human cultural heritage. Let us remember the Mouseion of Alexandria, which included its famous Library, engulfed in flames and in which thousands of papyri scrolls with priceless works of Hellenic Antiquity were lost. More recently, other museums have been consumed by fire: from the destruction of a Monet at the Museum of Modern Art in New York in 1958, to the total destruction of the Natural History Museum of India, in April 2016 (Ansa Brasil, 2018). In Lisbon, in March 1978, due to the attack by the far-right armed group CODECO (Western Civilization Defense Command), facilitated by poor security conditions, the Museum of Natural History and Science of the University was reduced to ashes (Soares & Cardoso, 2018). In that same year, in July, a fire took approximately only one hour to destroy 90% of the collection of the Museum of Modern Art in Rio, making, for example, works by Salvador Dalí, Joan Miró, Picasso, Henri Matisse René Magritte, Portinari and Di Cavalcanti disappear (Rio Memórias, 2018). Almost nothing in the library of nine thousand volumes has escaped and, in total, only 50 works survived the flames, as well as the collection of the cinema library, preserved between the concrete walls (Rio Memórias, 2018). And on June 15, 2020, a fire hit the technical reserve of the Natural History Museum of the Federal University of Minas Gerais and destroyed a large part of the museum's structure and collection (Machemer, 2020).

> On Sunday, September 2, 2018, the country was shocked by the news that the National Museum, located in Quinta da Boa Vista in Rio de Janeiro, was on fire. The first images were shocking; it was a fire of enormous proportions. The news was heartbreaking for the professionals and students of the institution, which celebrated its two centuries of existence in the same year of the disaster: the collection of 20 million pieces, invaluable for different scientific areas, such as archaeology, biology, palaeontology, anthropology physical and cultural, ethnology, history, and botany, was almost completely destroyed (Sá et al., 2018, p. 1) (M. C. Soto, Trans.).

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

To understand why there is so much commotion in relation to the destruction of the National Museum, we need to locate its importance, not only for its collection and role in national scientific development, but also for its historical trajectory and its appropriation by the population, by the community. Although it is difficult for us, involved with the institution, to address the tragedy, this is necessary not only to warn of the dangers to come, but also because it is a way of keeping it alive. Because "if ontologically death refers to non-being, it is in the memory of the living, as images arising from traces with a referent, where the dead can have existence (mnesic)" (Catroga, 2010, p. 167) (M. C. Soto, Trans.).

The epic bicentennial of creation and growth in the tropics, in a dependent country, in the Global South, of one of the largest museological institutions in the world, needs to be remembered. That is why we will tell his story. We will talk about what the exhibits were like at the time of the fire. To keep the National Museum alive and that it can reappear in its entire splendour for the people for whom it has always lived. We will talk about the National Museum that we know, the reality that we live in. We believe that with this testimony, our readers will be able to understand how this tragedy occurred and how the workers of the National Museum are organizing to recover it[2].

[2] "As the German historian Jörn Rüsen teaches, memory and history are anthropological constants, that is, consciousnesses that constitute human action for temporal orientation and the attribution of meanings, especially in times of crisis. Due to its ability to establish connections between different temporal strata, history is especially responsible for the constant defence of utopia. The future claimed here of the National Museum is possible from the disclosure of its valuable works in the past that lasted 200 years. The new institutional memory and history will not prevent trauma or mitigate loss. The museum is indeed irretrievable, but it can serve as a way to resist projects that want instead to create cultural centres that are in no way reverent to the trajectory of the House of the Birds where it all began" (Sá et al., 2018, p. 4) (M. C. Soto, Trans.).

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

1. Brief history of a bicentennial museum

At 202 years old, the National Museum was the first museological and research institution created in Brazil. It was founded by the king D. João VI, on the occasion of the invasion of Lisbon by Napoleonic troops and the transformation of Rio de Janeiro into the capital of the Kingdom of Portugal, Brazil and the Algarves. He created a complete apparatus worthy of a great metropolis, with the Bank of Brazil, the National Library, the Botanical Garden and the National Museum, previously the Royal Museum.

The National Museum stands out for its unique history as the first scientific institution in the country. Created in 1818 (Decreto de Fundação do Museu Nacional, 1818) and currently headquartered in the Paço Imperial de São Cristóvão, the former residence of the Brazilian royal and imperial family, the institution was the faithful custodian of the largest collection of Natural and Anthropological History in Latin America (with approximately 20 million objects). In addition, it is a centre of intense scientific production in the areas of Anthropology, Botany, Entomology, Invertebrates and Vertebrates, Geology and Palaeontology. The public exhibitions of natural sciences and anthropology, first inaugurated on October 24, 1821, were the best known in terms of the activities of the institution, and often served as a source of scientific information and cultural inspiration for several generations and as a source of pride for the city and the country.

This ideal of functioning of a metropolitan museum based on the model and conceptions of Natural History of Buffon and Saint Hilaire, resulted in a kind of manual called "Instrução", that is, "Instruction" (Museu Real, 1819). Different directors throughout the 19th century sought its implementation, instituting the Royal Museum as a space that receives products from the Brazilian provinces and universal collections (Lopes, 1993, pp. 42-44). These spaces created in Latin America in the 19th century can

be understood as manifestations of promoting the development of science in their respective countries, which in turn were subject to the influences of European models.

The museum had as its initial nucleus the collections established in the Decree of June 6, 1818, and was in charge of Frei José da Costa Azevedo and João de Deus de Mattos. In 1819 the ideal of operation (Lopes, 1993, p. 46) of the Royal Museum, and later Imperial and National, regarding the viability of the purpose of disseminating knowledge and studies of natural sciences in the Kingdom of Brazil, not explained in its creation document, was clarified in the “Instruction” reprinted and made available by the Royal Press. This document gave guidance to travellers and employees of the colonies on how to collect, preserve and ship natural history objects. The details contained in this guide were aimed at people not focused on this quality of studies (Lopes, 1993, p. 68) to send products to the museum.

The instructions contained in this manual indicated that the products in the Royal Museum of Rio de Janeiro should be arranged by the systems that had been adopted, clearly by families, classes, orders, genera, species, and varieties. Organized in this way, the museum should form a catalogue that would at the same time serve as an inventory of the institution, where the collection would be written in the same order and with the same number of cabinets, shelves, and individuals as those in the museum. The products would not only include their systematic and trivial names but also all the history and circumstances contained in them (Museu Real, 1819, p. IX).

Even in the metropolitan and universal character sought for this museum, the circumstance of the installation of the headquarters of the Portuguese monarchy in Rio de Janeiro generated a demand for natural products from "our islands, possessions of Asia and Africa, the Kingdom of Portugal and finally from all over the world” (Museu Real, 1819, p. XIII) (M. C. Soto, Trans.), which were sent and about which the Museum of Rio de Janeiro should have the same relationship with the governors of those places as with those of Brazil.

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

On October 24, 1821, the museum, based in a building around Campo de Santana, opened its doors to visitors. The constitution of its collections in this period was organized by its first director, Frei José da Costa Azevedo, and marked by the incorporation of the mineralogical collection acquired by the Portuguese crown at the end of the 18th century. Known as the "Werner Collection," the mineral assemblage was named in honour of Abraham Gottlob Werner, considered one of the leading names in mineralogy. In that period, the collections of the old House of Natural History were also included, composed of art objects, indigenous artifacts and products of the Brazilian flora and fauna.

Like other spaces created after the arrival of the Portuguese court, the Royal Museum, now the National Museum, represented a transposition of European models to the tropics, demonstrating adherence to European initiatives. However, such initiatives can also be analyzed as an incorporation of classic models of institutional organization, taking into account the adjustment processes that marked the institutionalization of spaces for Natural Sciences in Brazil in this period (Schwarcz, 1998, p. 68; Lopes, 1993, p. 75).

In its first decades, the National Museum maintained links with several Brazilian institutions such as the Botanical Garden, the National Library, the Academy of Fine Arts, the Auxiliary Society of National Industry, the Primary Education Society, the Court Medicine Society, the Lisbon Royal Academy of Sciences, the IHGB, and the Court Schools of Engineering and Medicine (Lopes, 1993, p. 75).

The first collections of the National Museum were objects that left Portugal, along with the court, and gifts received by the monarchs, Don João IV himself and his son Pedro I (Pedro IV in Portugal). Part of the collection was made up of research material from the Empress Leopoldina, wife of Pedro I. The empress was the first museologist in that palace, developing a work of selection and cataloguing of materials, especially of Brazilian fauna and flora.

> With the independence of Brazil from the Kingdom of Portugal, in 1822, the name of the museum was changed to Imperial and National. On that same occasion, the then Secretary of State for the Kingdom and Foreign Affairs of Emperor Pedro I, the mineralogist José Bonifácio de Andrada e Silva, taking advantage of the fact that a large number of foreign naturalists arrived in the country, proposed that these travellers could send natural history objects to the museum and, in return, offered facilities and protection on their expeditions. The museum also created, in 1824, a chemical laboratory that carried out medical and mineralogical research, and its facilities served students from the Higher Schools of Engineering and Medicine of the Court and the Pedro II College (Sá et al., 2018, p. 2) (M. C. Soto, Trans.).

Pedro II inherited his mother's interest in science and frequently declared that if he had not been emperor, he would have been a teacher. Among other objects, he acquired the Egyptian collection, the largest and most important in Latin America, as well as part of Empress Thereza Cristina's dowry, the Pompeii, and Herculaneum Collection. Even with the end of the monarchy, this collection remains under the tutelage of the State, its headquarters is no longer in the building in Campo de Santana but in the former official residence of the emperor, the São Cristóvão Palace, where it is located today. From the Monarchy to the Republic, the institution grew, diversified, and became one of the most important museums and research centers in Latin America in the areas of Natural and Anthropological Sciences. The National Museum begins to display a very important collection not only for Brazil, but also for the world.

> With the Proclamation of the Republic in 1889, the museum was renamed the National Museum and, in 1892, its headquarters and collection were finally transferred to the Quinta da Boa Vista, including the pieces that royal and imperial families had gathered in the Palace São Cristovão. In 1899, the operation of a Botanical Garden was regulated, and, at the beginning of the

> century, the exhibitions were open to visitors on Thursdays, Saturdays, and Sundays (Sá et al., 2018, p. 3) (M. C. Soto, Trans.).

An important step in the development of its function as a space for educational and scientific outreach was the creation, during Edgar Roquette Pinto's tenure as director of the National Museum, on October 15, 1937, of the first educational service in Brazilian museums, the Teaching Assistance Section. This was created to help formal school education. "With an abundant sample of didactic guides and posters, which summarized topics for the classroom and scientific films, he intended to make the institution a school museum" (Sá et al., 2018, p. 4) (M. C. Soto, Trans.). This first educational service is still inserted in the perspective of a traditionalist museum, an institution that only serves to preserve and safeguard the national heritage. Education was understood only in its school dimension, so it is not for the museum to educate, but to contribute, offering alternative tools, to formal education.

The Paço de São Cristóvão was part of the first group of monuments listed by SPHAN in 1938 during the administration of Heloísa Alberto Torres, confirmed as director by Getúlio Vargas a year earlier. Before assuming this position, he was head of the Anthropology and Ethnology Section between 1926 and 1931, maintaining dialogues with national and international museum institutions. She was deputy director between 1935 and 1937, when she assumed the position until 1955. At that time, the contributions of the National Museum in the elaboration of discursive formations about the nation became the consolidation of an official heritage that included the discourses constructed during the government of Vargas.

Since 1946, after the end of the Estado Novo, the government decided to incorporate the largest museum in the country into the University of Brazil (currently the Federal University of Rio de Janeiro - UFRJ). Such incorporation, however, never eliminated its character as a National Museum, as is recognized to this day in the statute of the UFRJ. During this period, there was an exponential growth in the collections, both in number

and variety of objects, due to the even greater link with scientific and academic research.

The contributions to national economic and scientific development and to the promotion of scientific and cultural dissemination in the country date back to the beginning of the 19th century, with the constitution of its main collections, the opening of scientific exhibitions and the offering of public courses. The National Museum and its researchers were responsible for Brazilian participation in many of the major international exhibitions that lit the path of international development in the second half of the 19th century.

The assignment and reception of collections of extreme scientific and cultural relevance thus accompanies the history of the institution, from the Werner Mineralogical Collection, brought from Portugal by the Royal Family to the incorporation of materials from the extinct Fauna Museum and the recent loan of part of the collection of the extinct Museum of the First Kingdom, always with the intention of ensuring the preservation, research, and public access to cultural and natural assets.

The museum's commitment to scientific dissemination is evident considering that the "National Museum Archives" is the first serial scientific publication in Brazil. Its educational action was continuously reinforced and expanded, from the first public sessions, held in the presence of Emperor D. Pedro II, to the current action of its Teaching Assistance Section, directly focused on assisting schools, with the preparation of specific materials for distribution, teacher training and attendance at visits.

In formal education, the museum is responsible for six stricto sensu graduate programs: social anthropology, archaeology, botany, linguistics and indigenous languages, zoology, and geosciences. It teaches three regular lato sensu specialization courses: quaternary geology, generative grammar, and studies of cognition and indigenous languages. It welcomes more than 500 students per year in its facilities.

Obviously, the destruction of the museum has harmed training and these activities, but they remain alive within this new reality.

Special scholarship programs guarantee the participation of middle and high school students in ongoing research in the institution's six departments, as well as in the technical areas of museology, teacher assistance, and the conservation/restoration of cultural and scientific assets. In addition to the formal study plans, the museum also offers extension courses, in the most diverse topics and varied cultural activities.

2. Steady expansion before destruction

The National Museum has more than 90 professors, 210 technicians and various lines of research. Before the tragedy, it had a scientific, bibliographic, and documentary collection that exceeded 15 million objects and continued to grow, making it one of the largest museum institutions on the planet. Its headquarters, the Paço de São Cristóvão, had enormous historical significance because it was the residence of the Royal and Imperial Family, the only one in Latin America, and the place where the first Constituent Assembly of the Republic was held. The growth of the museum was no longer able to cover the diversity of the activities carried out, and since 1970, new buildings began to be built around the Botanical Garden of the National Museum, which today houses the Historical Library (more than 530 thousand volumes), the Department of Vertebrates and the Department of Botany, in addition to other smaller facilities, linked to education, research and custody of collections. This expansion ended up saving part of the collection, even though some departments have completely lost their collection.

In the same way, despite the budgetary restrictions that have existed for a long time, the commitment of the museum team has made possible a response to the demand imposed by the diversity of the institution's collections and their specificities, by the

expansion as well as new teaching and other adequate facilities to protect the collections, guaranteeing, however, good conditions for preservation and access to national and foreign researchers. The challenges of the growth of the institution and the security of its collections led the National Museum to seek solutions to guarantee the continuity of its activities, its regular expansion and the quality of its exhibitions and educational activities.

In 1995, the "Strategic Development Program" was formalized with the aim of restoring its facilities, controlling its collections, and updating its exhibitions. This program also provided for the construction of buildings for academic and technical-administrative activities, freeing the palace for the exhibition area. Of the public exhibitions at that time, those of natural sciences and anthropology, initially opened in 1821, constituted the best-known activities of the institution and were important sources of scientific and cultural information. Under the direction of Luiz Fernando Dias Duarte, between 1998 and 2002, temporary and long-term exhibitions were valued, starting a process of reformulating the exhibition circuit with the opening of these new events.

As the ancient Egyptian exhibition occupied three small rooms on the exhibition floor and began to occupy a large room, a partial restructuring of the circuit was necessary, which resulted, at the end of 2001, in ten recovered rooms, corresponding to the Archaeology collections. Brazilian, indigenous, and foreign Ethnology, since the exhibition of ancient Egypt continued.

With the publication of two volumes of the Technical-Scientific Office, one that refers to the architectural part and the other to the conceptual part, the National Museum / UFRJ finally had proposals for the relocation of collections and scientific departments and courses of postgraduate, leaving the three floors of the building completely free to be occupied by long-term exhibitions, based on two thematic axes developed in collaboration with the Museum's researchers: "Planet and Life", where the Bendegó

meteorite would be inserted, and "Human Culture ” – which would include all the collections of the institution.

After the launch of the project, due to the impossibility of implementing it all at once, the administration of the institution, in partnership with the Museology Section, opted for the strategy of reformulating the exhibitions in stages, in parallel with the construction of the adjoining buildings. Currently the first building for the Botany department is finished and is already fully occupied. New projects were developed, and new exhibitions were inaugurated in the long-term circuit. At the time of the fire, the institution had a commission established to review the revitalization project published in 2002, with the aim of developing and coordinating strategic actions and continuing to implement the points considered essential for the National Museum Revitalization Project, seeking to highlight the 200 years that the institution would complete in 2018, the year of the fire.

3. The announced tragedy of the fire in a country in rupture

The National Museum was in full swing and transformation. But, unfortunately, and although with inflections in certain areas, the financing of the National Museum has always been less than necessary throughout successive governments, regardless of their position on the ideological spectrum, since they were always marked by strong budgetary restrictions due to the neoliberal economic framework. For investments, it barely had the help of some parliamentary amendments obtained by congressmen committed to the institution, and attracting through public calls, specific methods to guarantee all institutional needs.

This required a lot of creativity. We carried out a guerrilla museology (Ferreira & Soto, 2018): maintenance and assembly of exhibitions in minimal conditions. The management of the National Museum offered us everything possible to work with. It

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

was an emergency museology, a tireless struggle to keep the museum open and running smoothly.

And when we talk about lack of funds, the university is immediately held responsible for an alleged poor transfer of funds. However, it is necessary to know that the structure of UFRJ is the biggest and best university in Brazil, growing despite a very small budget. In 2014, the UFRJ budget was R$ 434 million; in 2018 it was R$ 388 million. And the investment funds (new equipment, buildings) fell in the same period from R$ 52 million to R$ 6 million. The National Museum received what was possible.

Three main objectives were established, as already mentioned: the structural renovation of the building, including fire prevention; the construction of new buildings for the displacement of all the laboratories, administrative activities; and the use of the entire area of the palace for a new exhibition. Neither the then Ministry of Culture (MinC), currently incorporated as Secretary of State in the Ministry of Tourism, nor the Ministry of Education (MEC) contributed with funds. It was only through the work of the museum administration with the parliament that a bank amendment of R$ 20 million was achieved, but the government of that time did not release the funds.

Part of the work we did in the Museology Section was to produce projects that could be advertised in public publications and enrol in the famous Rouanet Law. The same private initiative that defined a series of absurd rules after the fire, such as the resignation of the rector (from the progressive field), to help the National Museum, had previously had little interest in sponsoring any of the initiatives.

We know the reason for this disinterest. Our public surveys indicated that it was people in income classes C and D who frequented the museum the most. To speak of Quinta da Boa Vista is to speak of access to the train, of the public from the outskirts. Exactly for this reason, it was never of interest to private initiative, nor to the federal government itself. What was happening there was a process of popular education and non-profit scientific research, aimed at all people and the poorest, part of a free public

university, accessible to all, UFRJ. This was what turned the National Museum into a space incorporated into the lives of the cariocas (the inhabitants of the city of Rio de Janeiro), as well as the residents of the surrounding outskirts.

The first experience in museums for many was in the National Museum, creating an emotional bond with that space. Despite being a collection that a priori would not dialogue with the average Brazilian, the experimental process allowed an identification of the collection that gave it a new meaning and allowed an unexpected appropriation. This is the beauty of museums: new and unsuspected meanings can be constructed through objects, sewing affects and connections. Thus, in this way, the work of scientific dissemination is produced and mediated exactly by this affectivity, the objects see their value truly recognized, they gain meaning, they gain life. The beings of the past revive in the eyes of those who see them.

Therefore, in the absence of a national development project, these research and teaching institutions will not be necessary. And in the early hours of September 2, 2018, almost like a representation of the period in which we lived, and the even worse period that awaited us, the National Museum, the former Royal Museum, the first museum in the Americas and which had just completed its bicentennial as one of the ten largest collections in the world, it burned down. As a reflection of the lack of preparation of the State and the lack of permanent investment, there were no minimum conditions to fight the fire, which turned the palace into ruins and practically consumed almost its entire collection.

> The museum's extensive natural history collections, meticulously amassed over more than two centuries, documented the change in species identity and distribution over time, recorded the culture and native languages of South Americans, and archived the origin and historical progress of a nation. The magnitude of this loss is impressive, not only for Brazil, but for the world. Scientific advancement is based on the building blocks of the past, and without these building blocks, scientists are left without reference points.

> Museum collections are the foundation on which we recognize cultural and scientific novelty as we strive to understand and improve the human condition, to advance our understanding of how pieces of nature arose and fit together, and even to predict the future ecological and evolutionary of the planet's biodiversity. [...] There is some hope among the ashes. Many of the biological collections, including vertebrates, most marine invertebrates, and plants, as well as rare books were saved because they were in different buildings (Lack, 2018, p. 1323) (M. C. Soto, Trans.).

4. Future perspectives

Unfortunately, as we have seen, doing guerrilla museology, doing science during precariousness, was a situation present in the daily lives of the workers at the National Museum. The cuts, the policy of destroying culture and science, disinvestment in universities, explain the reasons for the tragedy. However, the historical capacity of the museum's workers to guarantee its operation, despite all these limits, this museology of urgency and guerrilla warfare, will be a fundamental aspect for the reconstruction of the museum.

We believe that a museum is people, is much more than a collection, than a building. For this reason, despite all the losses, the National Museum is still alive (even this is the motto of the museum today). The people who have always worked in the midst of scarcity are those who have more conditions, more baggage, technical and emotional, to rebuild a museum. It means knowing how to live with precariousness and, from there, draw strength, daily, to do the best. And we are having such a good result that people do not believe in what circumstances all this has been done.

We thank the colleagues and friends of the National Museum who remain in the fight, in the battle, to build the museum. We are very proud to have worked at the National

Museum, although it was not easy. But we learned a lot. An institution like this does not pass in our lives without leaving a mark. We are sure that the museum will rise, although it will no longer be the same. And this is already a preview of the future.

> The resilience of the scientists at the National Museum is impressive. [...] The Central Library of the National Museum and its rare works were not touched by the fire. Entire departments escaped unscathed thanks to institutional actions that ensured the protection of scientific collections amounting to a few million copies. In less than 15 days, the Teaching Assistance Section was already promoting an event that presented pieces to the public and in three weeks, curators from various departments were already participating in an event at the Spring of the Museum held in Rio de Janeiro with hundreds of activities for the present public. [...] The secretariats of the postgraduate programs have returned to work and the first postgraduate dissertation defense after the fire has already been carried out, emblematically addressing integrative taxonomy methods, uniting traditional methodologies with new molecular research methods. The donations of committed citizens, the support of universities and research institutes and the contribution of significant figures from the international community demonstrate the affection and empathy that the institution arouses (Buckup, 2018, p. 5) (M. C. Soto, Trans.).

Finally, for this process to be successful, a continuous long-term effort is not enough. It is necessary to rebuild the country on new bases, breaking with the neoliberal logic, which created the entire environment that exploded on that fateful day and ruined two hundred years of history. The museum was just a symbol of the deconstruction process of a country. If the ongoing process of national destruction is not reversed, new tragedies will continue to occur in various institutions and, due to the neglect of culture and science, will certainly occur again in museums.

References

Ansa Brasil. (2018, September 3). *Incêndio Museu Nacional. Confira incêndios que destruíram outros museus pelo mundo*. R7. https://noticias.r7.com/internacional/confira-incendios-que-destruiram-outros-museus-pelo-mundo-03092018

Buckup, P. A. (2018). O Museu Nacional vive, mas o Brasil precisa cuidar de seu futuro. *Informativo Sociedade Brasileira de Zoologia*, 126, 4-5. http://sbzoologia.org.br/uploads/1540318823-bol126set2018.pdf

Catroga, F. (2010). O culto dos mortos como uma poética da ausência. *ArtCultura*, *12*(20), 163-182.

Decreto de Fundação do Museu Nacional. (1818). *Seção de Memória e Arquivo do Museu Nacional/UFRJ (SEMEAR)*. Pasta 1, Doc. Mus. Nac. 2.

Ferreira, C. S., & Soto, M. (2018). Apontamentos para uma Museologia Marxista: a exposição Linha de Frente. *Cadernos de Sociomuseologia*, *55*(11). https://doi.org/10.36572/csm.2018.vol.55.04

Rio Memórias. (2018). *Incêndio do MAM-RJ: Uma cidade que se apaga*. https://www.riomemorias.com.br/memorias/acervo-do-mam

Lopes, M. M. (1993). *As ciências naturais e os museus no Brasil do século XIX* [Doutorado na Faculdade de Filosofia, Letras e Ciências Humanas, Universidade de São Paulo].

Machemer, T. (2020, July 6). Second Brazilian museum fire in two years sparks calls for reform. Authorities are assessing the damage caused by a June 15 blaze at the Natural History Museum and Botanical Garden in Belo Horizonte. *Smithsonian Magazine*. https://www.smithsonianmag.com/smart-news/brazil-natural-history-museum-destroyed-fire-180975249/

Museu Nacional. (1971). Regimento do Museu Nacional. *Imprensa Nacional*, 5-6.

Museu Nacional. (2014a). *Seção de Museologia. Egito antigo*. Rio de Janeiro. http://semumn.blogspot.com.br/2014/06/egito-antigo.html

Museu Nacional. (2014b). *Exposições: zoologia: acervo: entomologia*. Rio de Janeiro. http://www.museunacional.ufrj.br/exposicoes/zoologia/acervo/entomologia

Museu Real. (1819). *Instrução*. Imprensa Régia. Rio de Janeiro.

Rüsen, J. (2001). *Razão histórica. Teoria da história: os fundamentos da ciência histórica*. Brasília: Editora da UnB.

Sá, D. M., Sá, M. R., & Lima, N. T. (2018). O Museu Nacional e seu papel na história das ciências e da saúde no Brasil. *Cadernos de Saúde Pública*, *34*(12). https://doi.org/10.1590/0102-311X00192818

Schwarcz, L. K. M. (1989). *Os guardiões da nossa história oficial: os institutos históricos e geográficos brasileiros*. IDESP, Instituto de Estudos Econômicos, Sociais e Políticos de São Paulo.

Soares, M. G., & Cardoso, R. (2018, September 3). O dia em que o fogo destruiu a Faculdade de Ciências de Lisboa, um desastre que todos sabiam que ia acontecer. *Expresso*. https://expresso.pt/sociedade/2018-09-03-O-dia-em-que-o-fogo-destruiu-a-Faculdade-de-Ciencias-de-Lisboa-um-desastre-que-todos-sabiam-que-ia-acontecer

UFRJ. (2014). *Estatuto da Universidade Federal do Rio de Janeiro*. Retrieved December 12, 2014, from http://www.ufrj.br/pr/conteudo_pr.php?sigla=ESTATUTO

Soto, M. C. (2023). The National Museum, in Brazil, lives: Memories and perspectives that the flames do not destroy. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 56-75). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta4

Notes on the author and *in memoriam*

Moana Soto is a consultant in museum education, expography and development of museum projects, through Sociomuseology. PhD candidate and Master in Museology from the Lusófona University of Humanities and Technologies, specializing in Education and Museums from the European University Miguel de Cervantes and a degree in Pedagogy from the Pontifical Catholic University of Rio de Janeiro. She is Visiting Professor at the Master in Museums: Education and Communication at the Zaragoza University; coordinator of the Study Group Sociomuseology + Paulo Freire; fellow of the UNESCO-ULHT Chair in Education, Citizenship and Cultural Diversity; associate researcher at the Fundão Territory, Mobility and Heritage Studies Center; researcher at Grupo Salamanca de Investigación en Museos y Patrimonio Iberoamericano - GSIM; researcher at the Systematization of Community-Based Cultural Policies group of the IberCultura Viva program; Museologist and researcher at the Division of Institutional Memory at the UFRJ and coordinator of the EducaMuseu project. Winner of two Ibermuseus Education Awards (2018 and 2020). She is a member of the International Movement for a New Museology - MINOM-ICOM; the Paulo Freire Portugal Institute; the Portuguese Association for Culture and Permanent Education - APCEP; and the Latin American and Caribbean Campaign in Defense of Paulo Freire's Legacy.

Sabrina Damasceno Silva (*in memoriam*) had a Post-Doctorate in Museology at the Graduate Program in Museology at Federal University of Bahia, a PhD in Information Science IBICT/UFRJ (2015), a Master's in Museology and Heritage, at Federal University of the State of Rio de Janeiro (UNIRIO)/Museum of Astronomy and Allied Sciences (2010), and a degree in Museology from the UNIRIO (2004). Since 2005, she had been part of projects to renovate the long-term exhibition circuit of the National Museum/UFRJ, where, in 2010, she became a museologist and Head of the Museology Section. She was an Adjunct Professor at Federal University of Bahian Recôncavo. She coordinated the Collegiate of Museology (Bachelor of Museology). She was a Professor at UNIRIO.

LEONOR SÁ

Judiciary Police Museum (MPJ) - Institute of Judiciary Police and Criminal Sciences, Portugal | leonor.sa@pj.pt

A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways?

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

Abstract

This paper describes the first interdisciplinary crime prevention project for the protection of cultural heritage created and coordinated by the Portuguese Judiciary Police Museum, the National Catalogue of Stolen Artworks from Portuguese Public Collections. Formally approved in 1995 by the Ministries of Justice and Culture, it was dedicated to the prevention of thefts in museums, following international practices. It counted with the participation of several departments of the Portuguese Judiciary Police (including Interpol office) and two external partnerships: the now extinguished Portuguese Institute of Museums and the Geira Project, which united two universities - the University of Minho and the University of Trás-os-Montes and Alto Douro. However, what seemed relatively simple - gathering and publishing photos and minimal information on cultural assets stolen from Portuguese public museums for their dissemination and recovery (as well as deterring theft), ended up implying a series of retroactive structuring procedures, including a national questionnaire to all Portuguese public museums concerning thefts from their collections in the period 1980-2000. It had less than 50% responses. Nevertheless, its results provided unprecedented and therefore valuable information in this field. In spite – or precisely because - of its incompleteness, this pioneering project can be assumed as a past lesson for future ways.

Keywords

Museum thefts; Security; Portuguese public museums; Questionnaire; Statistics.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

Introduction

The first of three interdisciplinary crime prevention projects for the protection of cultural heritage created and coordinated by the Portuguese Judiciary Police Museum (Museu de Polícia Judiciária - MPJ), under the tutelage of the Institute of Judiciary Police and Criminal Sciences (Instituto de Polícia Judiciária e Ciências Criminais - IPJCC)[1], started at the end of 1996. Initially, intended to simply produce a National Catalog of Stolen Works of Art from Portuguese Public Collections with the aim of identifying and recovering stolen cultural goods and deterring theft in museums. It ended up largely surpassing this initial scope.

Initially, the project pretended to correspond to a request of the Northern Directorate of the Judiciary Police (Polícia Judiciária – PJ) to create proven effective tools for the Works of Art Brigades of the Portuguese Judiciary Police. It implied partially replicating procedures used e.g. in France (Munck, 1991), consisting of seemingly simple tasks: compiling, publishing, and disseminating photos and minimal data concerning cultural goods stolen from Portuguese public museums. The internet was not common yet and so the chosen disseminating format consisted of a Dossier, because it was permanently updatable (we could add or remove the sheets according to the occurrence of new thefts or recoveries).

Formally approved in 1995 by the Ministries of Justice and Culture, the project had, at an internal institutional level, the participation of several PJ unities, including all its territorial directorates, the Portuguese Interpol Office and the Central Information Registration and Criminal Prevention Department (Departamento Central de Registo de Informações e Prevenção Criminal - DCRIPC). Externally, the project counted on the following partnerships: the now extinguished Portuguese Institute of Museums

[1] The designations of this Institute (a) and its museum (b) changed several times, even during the period of this project, as registered in the respective publications and as follows: a) National Institute of Police and Criminal Sciences (Instituto Nacional de Polícia e Ciências Criminais - INPCC); Higher Institute of Police and Criminal Sciences (Instituto Superior de Polícia e Ciências Criminais - ISPJCC); b) National Criminalistics Museum (Museu Nacional de Criminalística - MNC); Judiciary Police Historical Archives and Museum (Museu e Arquivos Históricos de Polícia Judiciária - MAHPJ).

(Instituto Português de Museus – IPM), depending on the Ministry of Culture, and two universities - the University of Minho and the University of Trás-os-Montes and Alto Douro - both united by the Geira Projet. However, the desired interdisciplinarity – in our view an essential structural trait of this project – resulted in heavy bureaucracy and communication problems, which, together with scarcity of means, created innumerable obstacles and delays from the beginning.

1. Methodological development of the project

1.1. Readjustments and new structure

At the very beginning of the planned procedures, the MPJ/IPJCC team confronted itself with a completely unexpected situation: the necessary information concerning cultural goods stolen from public museums was not systematically compiled or even centralized. Furthermore, there was no official or unofficial list of Portuguese public museums, which could make it possible to convey a questionnaire about thefts in their collections.

Faced with this unforeseen status quo, there were two possibilities: giving up the project all together or embarking on a series of complex and time-consuming retroactive structuring questionnaires and procedures at national level. The MPJ/IPJCC team chose the second path not only because of the importance of the original objectives, but also because it offered new possibilities of enlarging the project's initial scope and aims. The new project, intitled Cultural Heritage Safeguarding Project (Projecto de Salvaguarda do Património Cultural) now involved two questionnaires and an unprecedented statistical study in Portugal concerning thefts in public museums, whose potential was considered very relevant and useful in terms of security for museums and the police. This idea was not entirely original, as the mentioned French example also included some statistics.

In consequence of this decision, and despite very limited resources to accomplish the new objectives, the procedural steps of the new project were the following:

A. Basic questionnaire about Portuguese public museums ensuing the following: Elaboration of a list of Portuguese public museums' tutelages followed by a request to them for lists of the respective dependent museums.

B. Elaboration of a systematic compilation of all public museums thus obtained.

C. Launching a national questionnaire to all public museums concerning thefts occurred a twenty-year period, since 1980. This methodological tool involved the complex elaboration of a specific form for the museums to fill in, which concerned not only public information to disseminate - photos and characteristics of the stolen artifacts for identification purposes - but also confidential information for statistical purposes (detailed information about the thefts and the museums where the thefts occurred).

D. Treatment and publication of the results in two separate volumes.

   D.1. The public information about the stolen artifacts was published under the title Catálogo Nacional de Obras de Arte Furtadas de Colecções Públicas Portuguesas (National Catalog of Stolen Artworks from Portuguese Public Collections) in 1999 in the updatable Dossier format, and later, with the collaboration of the Geira Project and the previously mentioned universities, also on the internet at http://www.geira.pt /inpcc/ (website now disabled).

   D.2. The confidential information about the thefts and the museums where the thefts occurred was statistically treated and the results published in 2002 under the title: Inquérito sobre Bens Culturais Furtados de Colecções Públicas Portuguesas 1980-2000: Apresentação de Dados Estatísticos (Survey on Stolen Cultural Goods from Portuguese Public Collections 1980-2000: Presentation of Statistical Data).

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

1.2. Description of the various developmental steps

- Step 1 – A. Basic questionnaire about Portuguese public museums.

  A.1. Elaboration of a list containing all Portuguese public museums' tutelages: IPM and Portuguese Institute of Architectural Heritage (Instituto Português do Património Arquitetónico - IPPAR) (both belonging to the Ministry of Culture, and both extinguished today), public universities, municipalities, public enterprises, etc.

  A.2. Official written letters sent to the above listed tutelages of Portuguese public museums requesting lists of the respective dependent museums.

- Step 2 – B. Elaboration and publication of a list of all Portuguese public museums.

  In fact, the unprecedented systematic compilation of all Portuguese public museums (and similar entities holding public collections) made possible by step 1, although not perfect (it wasn't possible to thoroughly check the received information), was considered most useful and important at a national level - and not only for the project. Therefore, it was published in 1998 by the MNC/INPCC (today MPJ/IPJCC) with the title Listagem de Museus Públicos e Entidades Similares Detentoras de Colecções Públicas Portuguesas (List of Public Museums and Similar Entities Holding Portuguese Public Collections) (Fig. 1) and distributed at a national level to public and private museums' tutelages, public libraries and archives, universities, municipalities, etc. Later the Portuguese Institute of Museums also used it as a complementary basis for a more thorough national survey (Silva et al., 2000).

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

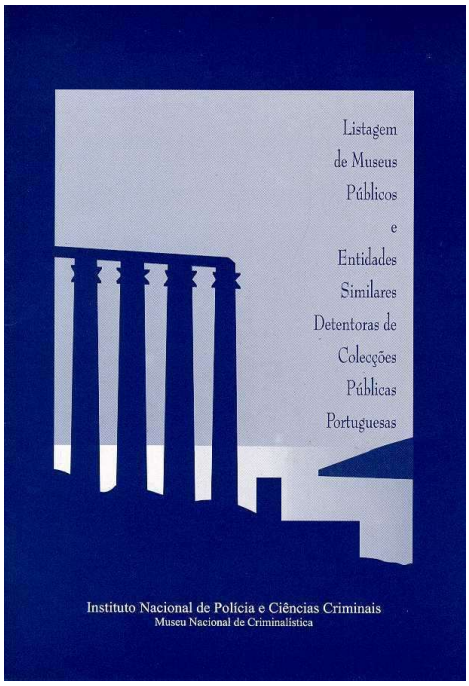


Fig. 1 – Front cover of the *List of Public Museums and Similar Entities Holding Portuguese Public Collections*, published in 1998.

At the end of step 2 we had a list of public museums we could officially address to get information about thefts in museums.

- Step 3 – C. Questionnaire concerning thefts in Portuguese public museums 1980-2000.

  First, a data collection form (Appendix) was elaborated and adapted from the long and complex CRIGEN/ART forms created by INTERPOL to fight international traffic of cultural goods. Instead of different forms for different types of cultural objects used by INTERPOL, however, the elaborated form for this questionnaire was unique and adapted for all kinds of stolen cultural artefacts. This simplification did not give up rigor and intended to facilitate and encourage the response of museums. The resulting five-page form was divided into 3 parts:

  I – Data about the museum where the theft occurred (confidential);

  II – Detailed data about the stolen object (public);

  III – Data about the theft (confidential).

The questionnaire was sent to all Portuguese public museums in 1998 and concerned thefts occurred from 1980 on. In fact, although the period covered by the questionnaire initially pretended to start in 1974 (year of the revolution after a 48-year long dictatorship, followed by a politically unstable period), it changed to 1980 for practical reasons. This change was negative in terms of very important information that was not collected (concerning a period during which formal and informal control suffered important changes), but positive in terms of making it easier for museums to access information and answer.

Unlike the French project (Munck, 1991), the data about the inquired museums were confidential. In fact, the team considered these data were not at all necessary for identifying and recovering stolen objects and its publication could have perverse effects and/or lead to unsubstantiated hasty conclusions.

- Step 4 – D. Treatment and publication of the results.

  D.1. National Catalog of Stolen Artworks from Portuguese Public Collections, 1999 (Fig. 2 and 3).

  Because the project budget was very limited, only 1000 copies in form of a Dossier were distributed among circa 50 entities[2] considered the main points of the cultural goods' circulation net in terms of trade,

[2] - PJ, PSP (Polícia de Segurança Pública), GNR (Guarda Nacional Republicana, DGA (Direcção Geral da Alfândegas); SEF (Serviço de Estrangeiros e Fronteiras); IGAE (Inspecção Geral das Actividades Económicas).
- IPM (Instituto Português dos Museus); IPPAR; IPA (Instituto Português de Arqueologia); ADCR (Associação para o Desenvolvimento da Conservação e Restauro); Instituto José de Figueiredo; APOM (Associação Portuguesa de Museologia); ICOM (International Council of Museums); Comité Nacional do ICOM; Centro Cultural de Belém; Culturgest; Fundação Calouste Gulbenkian; Fundação de Serralves; Fundação Cupertino Miranda; Fundação da Casa de Bragança; e Fundação Ricardo Espírito Santo Silva.
- Associação Nacional de Municípios; Associação Portuguesa de Seguradores; APA (Associação Portuguesa de Antiquários); Federação dos Grémios do Comércio Retalhista do Distrito de Aveiro; Associação Comercial de Leiria; União das Associações de Comerciantes do Distrito de Lisboa; Associação do Comércio do Distrito de Santarém; Federação dos Grémios do Comércio do Distrito de Setúbal; Associação dos Comerciantes Retalhistas da Covilhã; Associação dos Grémios do Comércio Retalhista de Castelo Branco.

exhibition, and control in Portuguese territory, such as museums' tutelages, insurance companies, customs, police forces, associations concerning museums, antiquities, archaeology, and restoration, etc.

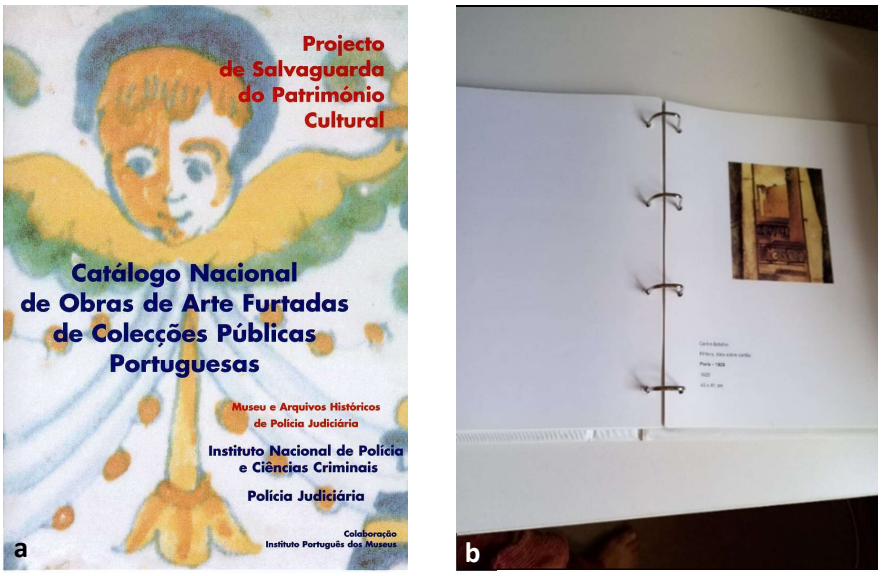


Fig. 2. *National Catalog of Stolen Artworks from Portuguese Public Collections.* *a*. Cover. b. First illustrated page concerning a contemporary stolen painting.

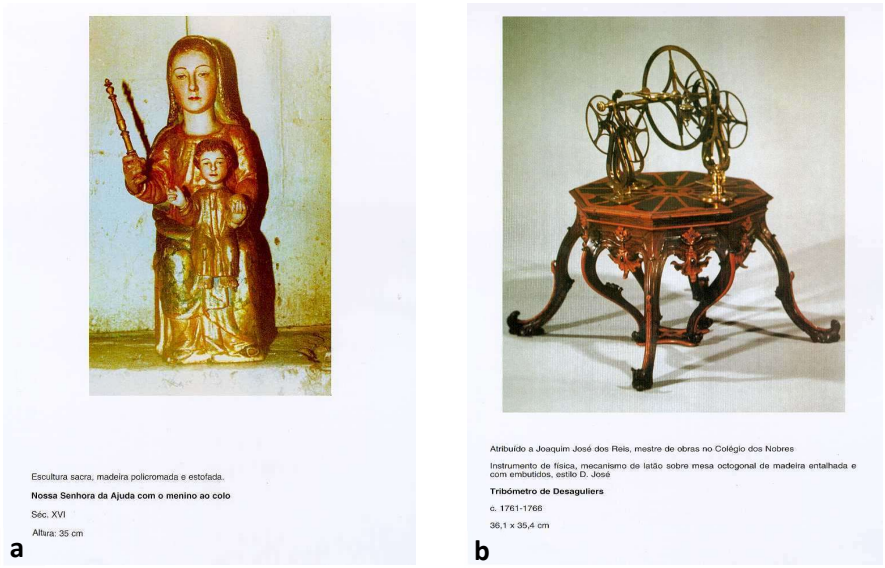


Fig. 3. Page 2 and 3 of the *National Catalog of Stolen Artworks from Portuguese Public Collections.* a. Religious sculpture (16th century). b. Scientific instrument (18th century.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

Despite the restricted resources and distribution net, the dissemination and updating of this dossier over a period of two and a half years lead to the identification and recovery of six stolen cultural objects, exceeding the initial expectations (Fig. 4).

Fig. 4. The first piece of art recovered thanks to the dissemination of the *National Catalog of Stolen Artworks from Portuguese Public Collections.* Reliquary bust (17th century).

D.2. Survey on Stolen Cultural Goods from Portuguese Public Collections 1980-2000. Presentation of Statistical Data, 2002

As already mentioned, this publication was the outcome of the statistical treatment of the confidential data obtained.

2. Results

The main objectives of the statistical treatment of the confidential results were:

1) To identify vulnerabilities, patterns, trends and other types of potentially useful information concerning the (lack of) security in museums and their collections;
2) To use the information mentioned in 1) to define strategic and effective measures for the improvement of preventive security in Portuguese museums,

> in face of a criminological panorama whose future contours appeared to be increasingly complex and problematic, both nationally and internationally.

In approaching this second objective, however, the project team bore in mind the importance of contextualizing statistical data to avoid distorting results and jumping into unrealistic and incorrect conclusions. This concern grew even further in view of the low percentage of responses to the inquiry: 37, 58% (see percentage of answers per tutelage, Fig. 7).

Regarding this ratio, however, one must consider its relativity, due to the fact that some museums registered here as not having responded to the survey might, in fact, be deactivated, or relocated, or, for various reasons, not even be considered as museums (Sá, 1998, pp. 7-8; Silva et al., 2000, pp. 29-39).

Notwithstanding, and bearing this conditioning in mind, the project team believed the obtained statistical data were still of interest if and when duly contextualized within a framework of references delimited ab initio. In fact, it considered the attained data worthwhile publishing not only for their unprecedented character and for providing important clues to analyze the problem, but also to serve as a starting point for future statistical analyzes carried out by teams with adequate resources for such an undertaking.

Due to endless bureaucracy involving several ministries and lack of financial resources, the Inquérito sobre Bens Culturais Furtados de Colecções Públicas Portuguesas 1980-2000: Apresentação de Dados Estatísticos (Survey on Stolen Cultural Goods from Portuguese Public Collections 1980-2000: Presentation of Statistical Data), was published only in 2002, long after it was finished. It presented the statistical data in eight thematic modules focusing on specific and complementary vectors, through graphic representations. The eight thematic modules are the following:

- Module I - Surveyed museums – Responses
- Module II - Surveyed museums - Responses – Thefts

- Module III – Stolen objects – Photography
- Module IV – Stolen objects – Characterization
- Module V – Theft of objects – Temporal dimension
- Module VI - Theft of objects - Spatial dimension
- Module VII - Theft of objects – Incidence
- Module VIII – Stolen Objects – Recovery

These thematic modules present a total of 22 graphs and/or sets of graphs, of which only 14 are presented here (section 2.1). Reading and interpreting these graphs immediately approach to the main basic Ws concerning the analysis of thefts in almost 40% of Portuguese public museums: Who, What, When, Where, – which can lead to Why - and other basic questions like incidence of thefts or recovery of stolen objects.

However, the analyzed restricted universe of 37, 58% museum responses, and the frequent incomplete filling out of forms by the inquired museums, made it impossible to present other equally interesting thematic approaches (e.g. used criminal modus operandi), in addition to harming those mentioned and making it impossible to cross-reference potentially important data.

The graphs with the most visibly impaired readings are perhaps those belonging to Modules V and VI, relating to the spatial and temporal data of the thefts. In fact, better data would provide us with very valuable indications regarding the typology of spaces and the most affected periods, that is, where and when the greatest number of thefts actually occurred in museums during the period in question.

With regard to the temporal analysis, for example, more consistent data would allow us to point to some more conclusive (and not distorted by one huge single theft, as it is the case) inferences regarding the identification of more critical chronological segments and their respective evolution, during:

- The total period covered by the survey: 1980 – 2000;
- The annual period (possible seasonal critical points);

- The daily period, in relation to the opening/closing periods of the museum.

With regard to spatial analysis, more and better information would also allow us, by way of example, to cross-reference data with regard to the relationship between the location where the thefts took place - exhibition rooms, museums' storage rooms, workshops, transportation vehicles, etc. - and the dimensions of the stolen objects.

The same goes for the remaining thematic vectors, among which we make special mention to "Module IV. – Stolen objects – Characterization" where more complete data would have provided us with more accurate clues concerning the illicitly most coveted typologies of objects.

On the other hand, the results of modules such as Module III, which shows us a percentage of 63, 33% of stolen objects which had no photograph at all give us key clues concerning basic museum procedures, even considering the restricted universe of responses.

The presenting text of the published statistical analyses repeatedly made a point of mentioning the convenience of completing the information treated and disclosed in this study and of extending its scope in the short or medium term, allowing the collecting of more realistic and detailed data, therefore, more conclusive, and useful.

Admitting the study was therefore not yet a reliable tool for museums and the police, it insisted on its potential and positive role not only in disclosing important hints for crime prevention in museums, but also as a catalyst for future actions for the protection of the Portuguese historical and cultural heritage.

2.1. Statistical data in graphs

As mentioned, we share 14 graphs out of the total of 22 produced with the data collected. It's assumed that they may be sufficiently clear in number and topic to permit an overview of the results and to support interpretation.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

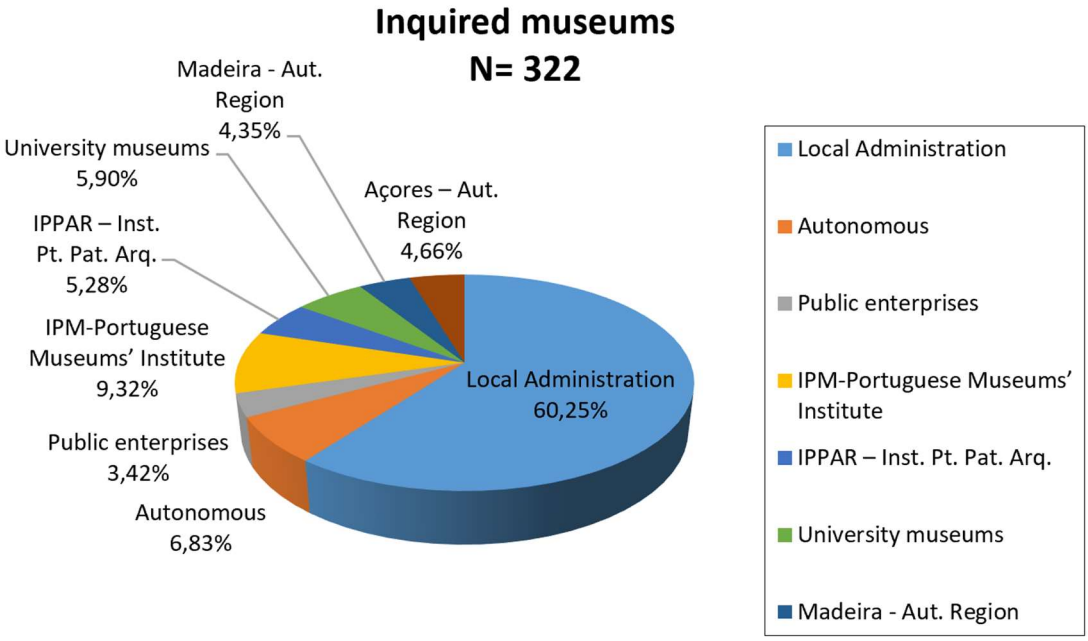


Fig. 5. Graph relating to the percentage of museums inquired, per tutelage.

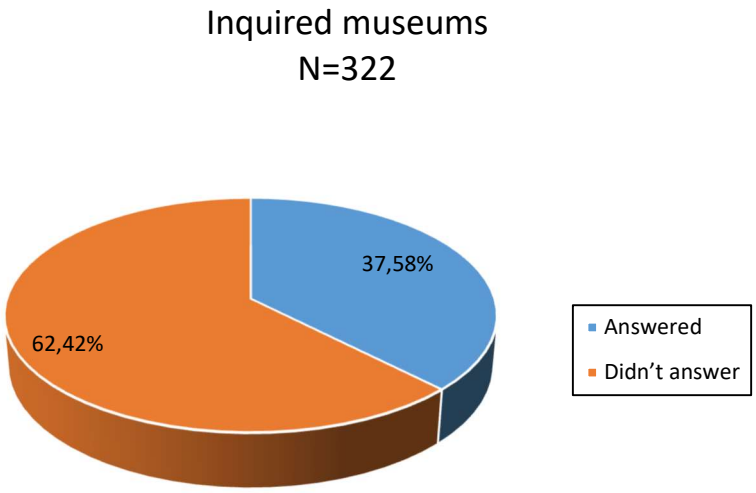


Fig. 6. Graph relating to the percentage of museums inquired that responded/did not respond.

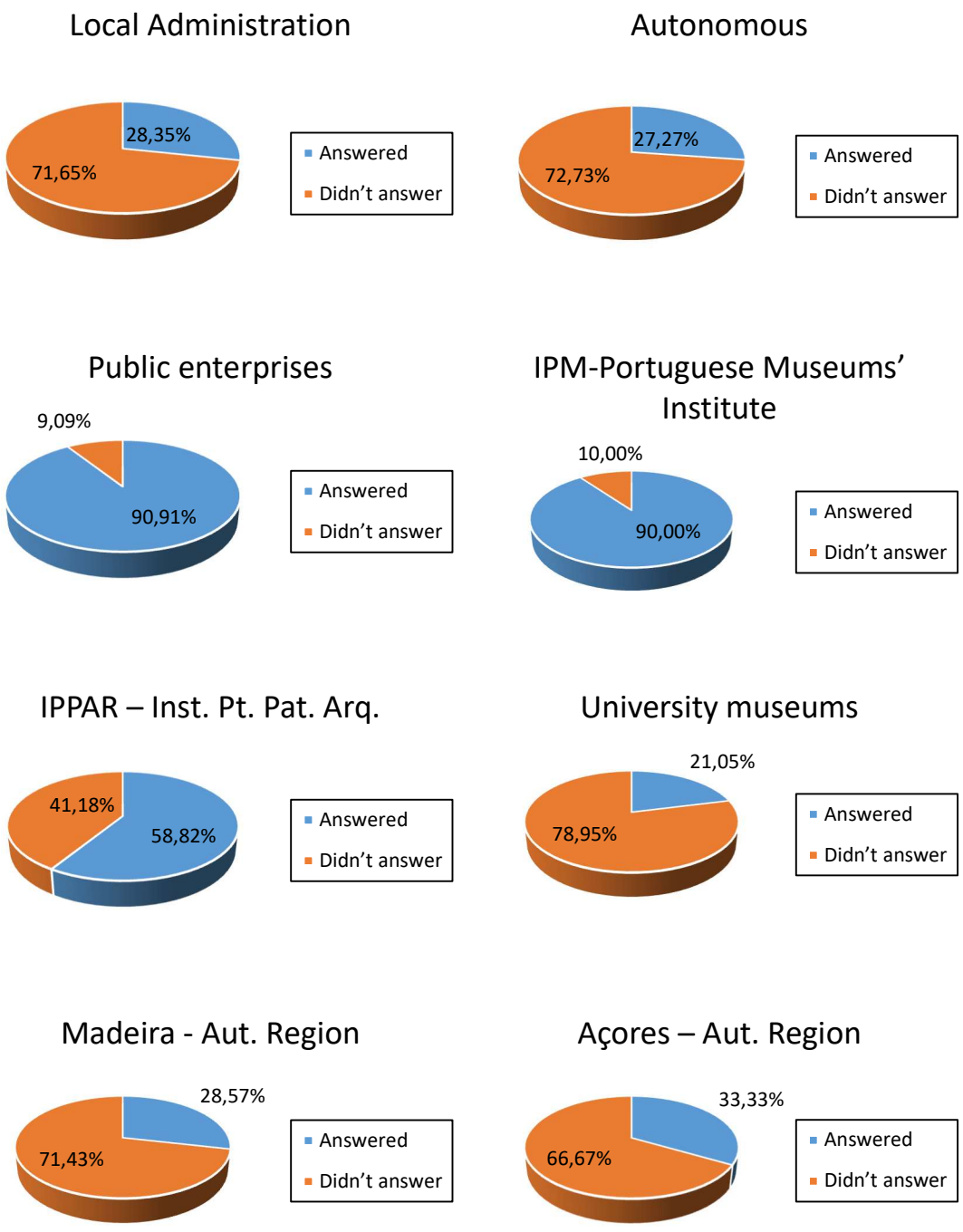


Fig. 7. Graph relating to the percentage of museums inquired that responded/did not respond, per tutelage.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

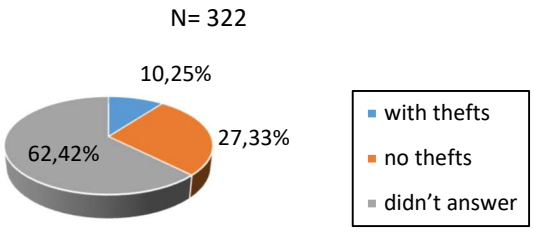


Fig. 8. Graph relating to the percentage of museums inquired that responded, with thefts and without thefts/did not respond.

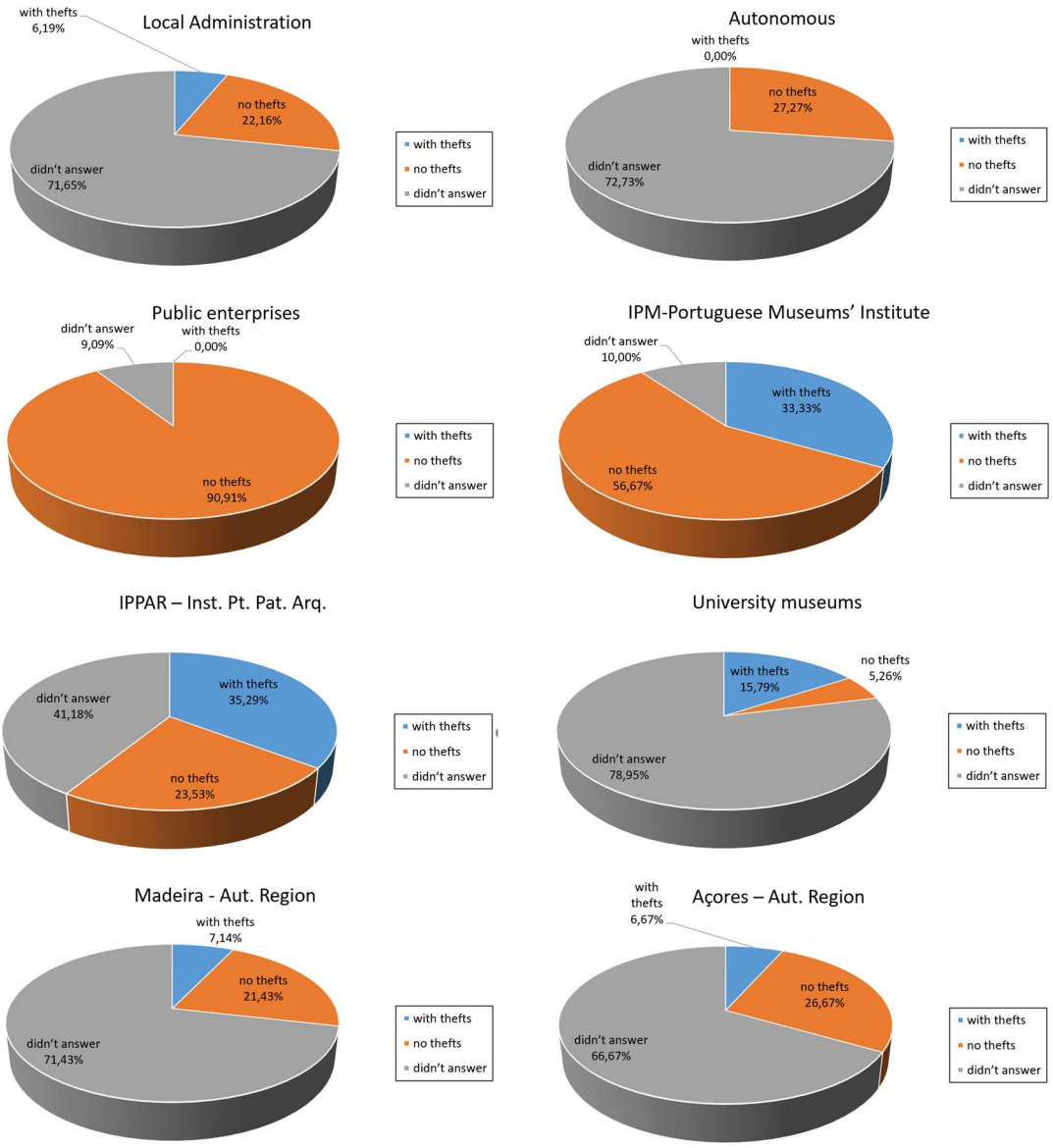


Fig. 9. Graph relating to the percentage of museums inquired that responded, with thefts and without thefts/did not respond, per tutelage.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

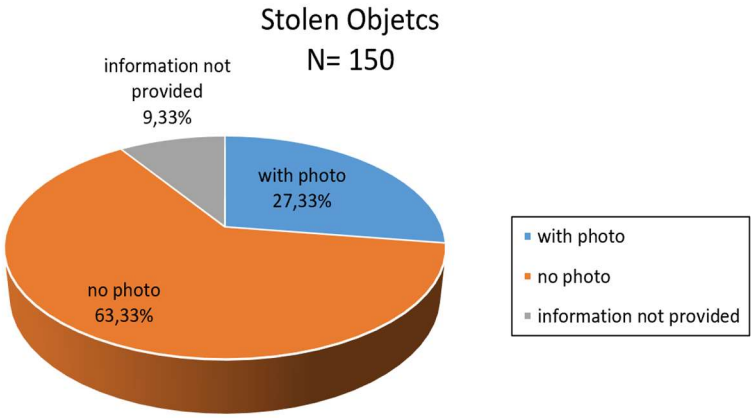


Fig. 10. Graph relating to the percentage of stolen objects with/without photographs.

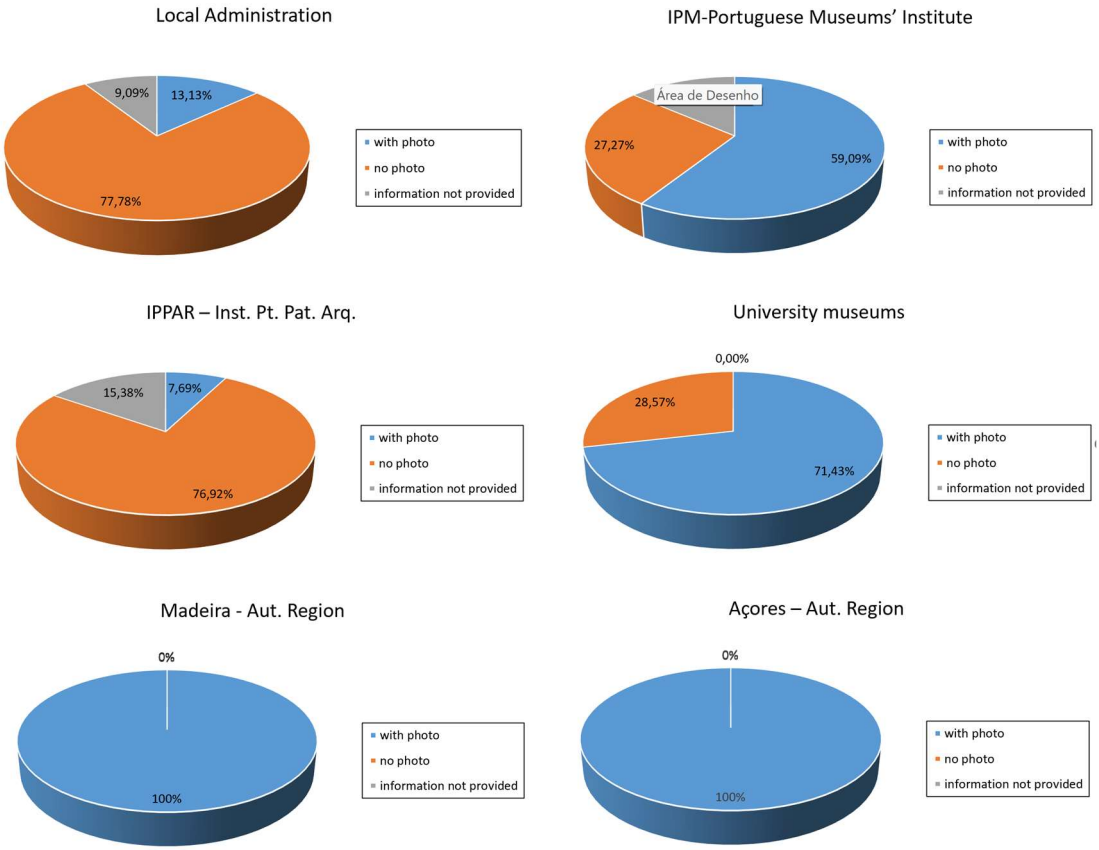


Fig. 11. Graph relating to the percentage of objects stolen with/without photographs, per tutelage.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

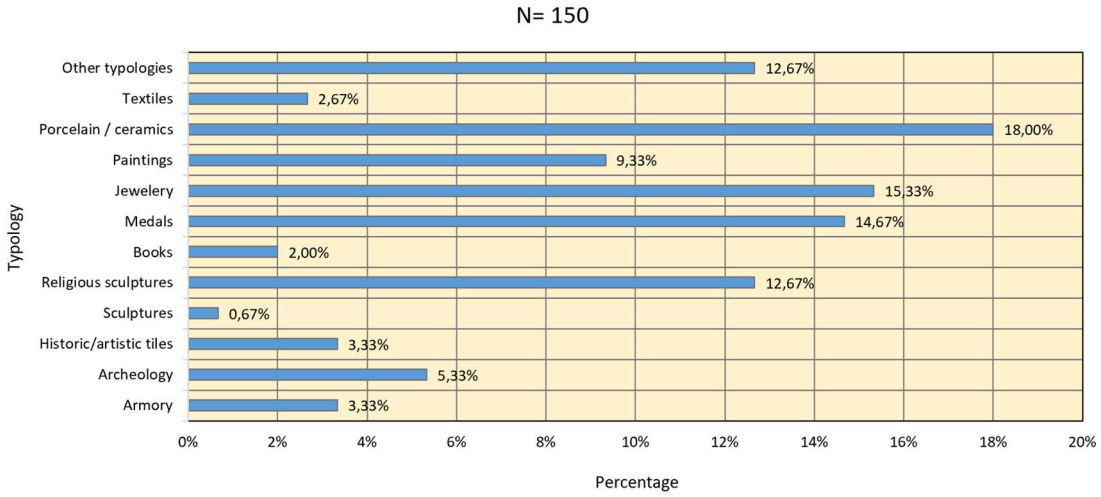


Fig. 12. Graph relating to the percentage of stolen objects, per typology.

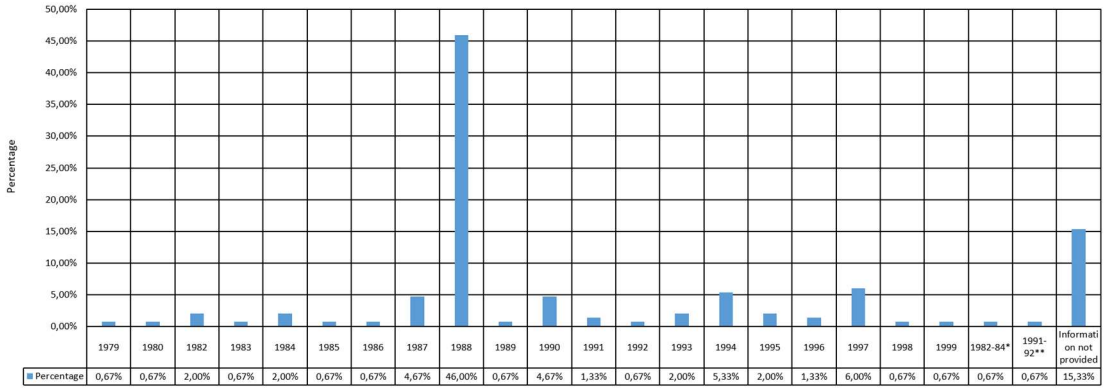


Fig. 13. Graph relating to the percentage of stolen objects, per year.

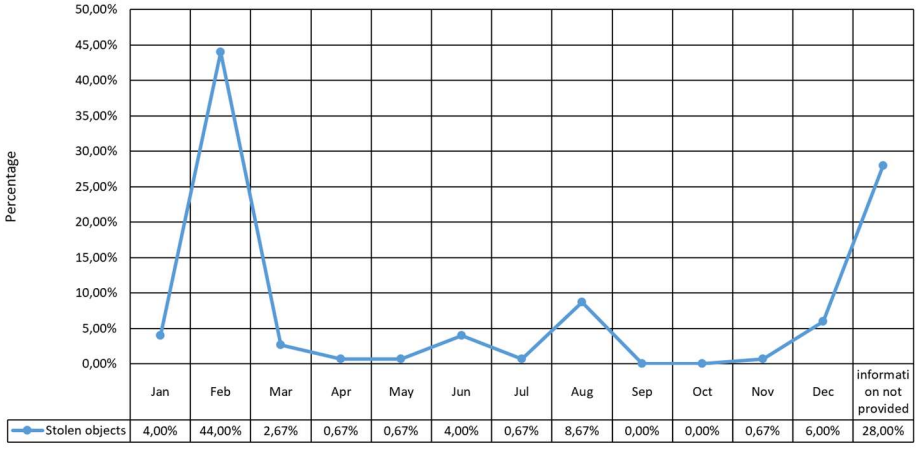
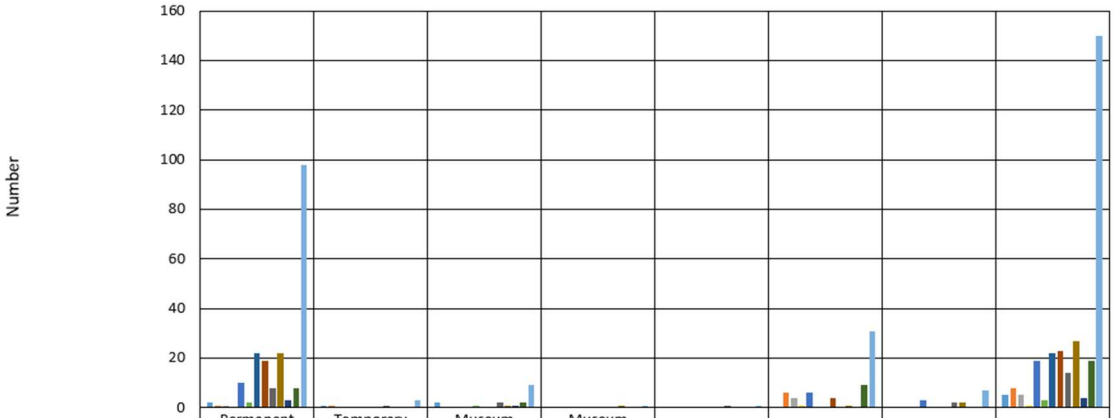


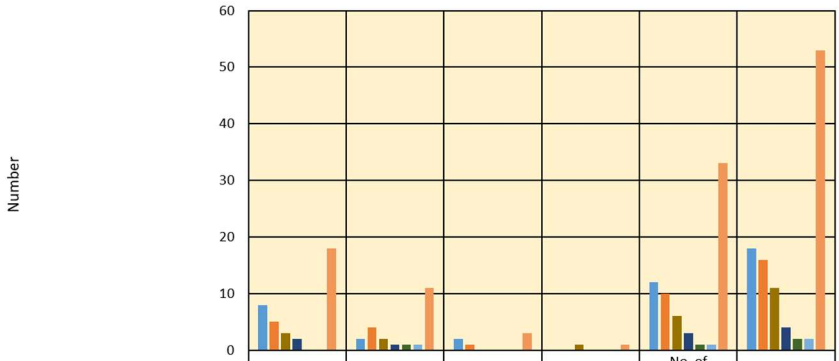
Fig. 14. Graph relating to the percentage of stolen objects, per month.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5



	Permanent exhibition room	Temporary exhibition room	Museum storage rooms	Museum restoration office	Transporting vehicle	Other cases	Information not provided	Total
Armory	2	1	2	0	0	0	0	5
Archeology	1	1	0	0	0	6	0	8
Historic/artistic tiles	1	0	0	0	0	4	0	5
Sculptures	0	0	0	0	0	1	0	1
Religious sculptures	10	0	0	0	0	6	3	19
Books	2	0	1	0	0	0	0	3
Medals	22	0	0	0	0	0	0	22
Jewelery	19	0	0	0	0	4	0	23
Paintings	8	1	2	0	1	0	2	14
Porcelain / ceramics	22	0	1	1	0	1	2	27
textiles	3	0	1	0	0	0	0	4
Other typologies	8	0	2	0	0	9	0	19
Total	98	3	9	1	1	31	7	150

Fig. 15. Graph relating to the number of stolen objects, per specific locations where the thefts occurred, per typology.



	1 time	2 times	3 times	4 times	No. of museums with thefts	No. of thefts
Local Administration	8	2	2	0	12	18
IPM-Portuguese Museums' Institute	5	4	1	0	10	16
IPPAR – Inst. Pt. Pat. Arq.	3	2	0	1	6	11
University museums	2	1	0	0	3	4
Madeira - Aut. Region	0	1	0	0	1	2
Açores – Aut. Region	0	1	0	0	1	2
Total	18	11	3	1	33	53

Fig. 16. Graph relating to museums according to the number of times they have been theft, per tutelage.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

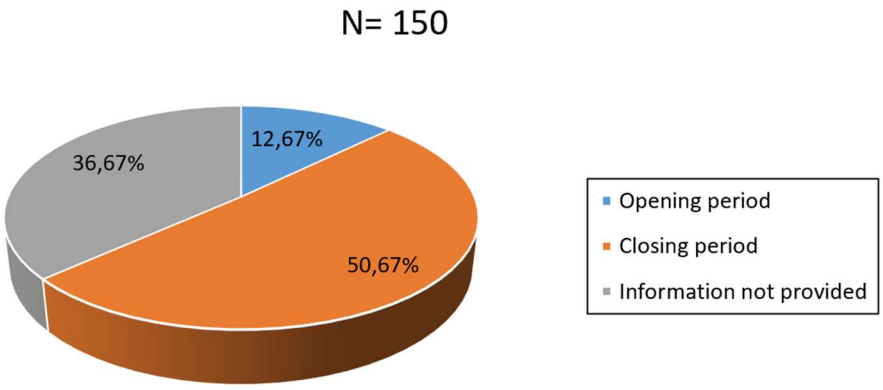


Fig. 17. Graph relating to the percentage of stolen objects, according to the periods in which the thefts occurred (opening to the public/closing to the public), per tutelage.

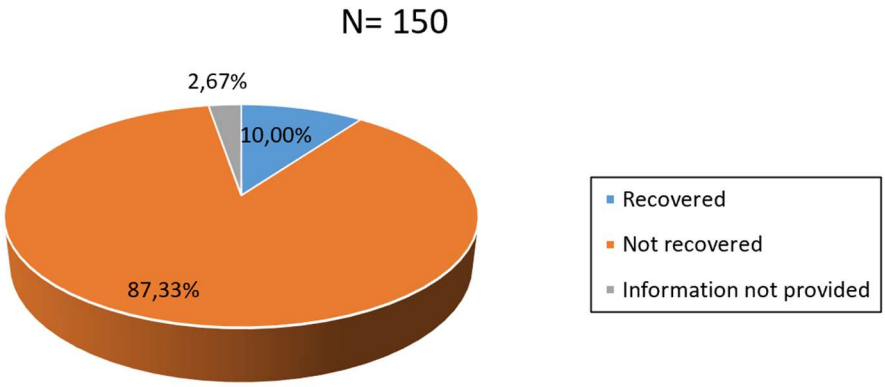


Fig. 18. Graph relating to the percentage of objects recovered/not recovered.

Final considerations

After the publication of the referred 'Catalogue of stolen objects' (Sá, 1999) and the statistics' results concerning museum security and thefts (Sá, 2002), the project managed to arouse the attention of some national and international museum organizations and specialized magazines. News and/or short articles were published in ICOM News (ICOM & Interpol, 2000), APOM Bulletin (Sá, 2000a), IAPH Bulletin (Sá, 2000b), ADCR Bulletin (Sá, 2001) and RPM Bulletin (Sá, 2002). In the long term,

however, we suspect the project made little impact on the museum community as well as on the police and was quite inconsequent in practical terms.

In May 2002, the MPJ leading team handed over the project to the Works of Art Brigade at the Lisbon Directorate of the Portuguese Judiciary Police (Brigada de Obras de Arte da Diretoria da Polícia Judiciária de Lisboa) to give it continuity, as initially planned. Several motives, however, made direct sequential developments impossible.

As a development in the field of museum security in Portugal at that time, however, we emphasize the importance of the publication of Inquérito aos Museus em Portugal (Inquiry to the Museums in Portugal), by the Instituto Português dos Museus / Observatório das Actividades Culturais (Silva et al, 2000). This general inquiry included very specific questions concerning security in museums and disclosed important information about the (lack of) security systems in many Portuguese museums[3] (Silva, et al. 2000, pp. 71-73; 154; 196-197).

Today, more than 20 years have passed, but the project we have been describing did not achieve the development it strived for - and the Portuguese museums deserve.

Therefore, we hope this contribution will encourage new advances, for the following main reasons:

- First, it provides tools and information that are not outdated and make it possible to take advantage of meticulous efforts and specific methodological work carried out in the past, saving time and resources;
- Secondly, information concerning (Portuguese) museums today is much more stable and mature to be worked on;

[3] E. g.: Only 13% of the inquired museums had "anti-theft systems", 12% 'anti-fire systems"; and 37% answered they had "no special security system whatsoever".

- Finally, today we can benefit from extraordinary innovative technological tools that can speed up and facilitate work in ways that were unimaginable twenty years ago.

If we agree on the fact that the enjoyment of works of art and other precious cultural goods is one of the most exquisite human privileges and a civilizational trait, then we must agree that preventing their theft from museums is fundamental too.

Let's do it, then!

Acknowledgments

The author expresses her gratitude for the assistance of Teresa Castro in renovating the original graphs and the contents of the data collection form in updated computer programs, enabling their presentation in this contribution.

References

ICOM & Interpol (2000). A Selection of stolen objects – Portugal. *ICOM News. Newsletter of the International Council of Museums*, 53(3).

Massy, L. (2000). *Le vol d'oeuvres d'art – une criminalité méconnue*. Bruylant.

Munck, J., & Pomarede, V. (1991). *Catalogue de peintures et dessins volés dans les collections publiques françaises*. Ministère de la Culture/Direction de Musées de France et Ministère de l'Intérieur/Direction Centrale de la Police Judiciaire.

Pinto, J. S. (1997). *Situação da Directoria de Lisboa relativamente ao furto de bens culturais. Estratégias para o futuro.* Seminário [sobre] furto e tráfico internacional de obras de arte: Situação actual e estratégias para o futuro, Lisboa.

http://www.dgsi.pt/bpjl.nsf/585dea57ef154656802569030064d624/8fa935d33db8be87802567b5003d4c67

Rede Portuguesa de Museus. (2002, December). Inquérito sobre bens culturais furtados de colecções públicas portuguesas 1980-2000. *BoletimTrimestral da Rede Portuguesa de Museus*, 6.

Sá, L. (2000a). Projecto Salvaguarda do Património Cultural. *Boletim da Associação Portuguesa de Museologia (APOM)*, III S., 1-2.

Sá, L. (2000b). Proyecto de salvaguarda del patrimonio cultural – Catálogo nacional de obras de arte robadas de colecciones públicas portuguesas. *Boletín del Instituto Andaluz del Patrimonio Histórico (IAPH)*, 31.

Sá, L. (2001). Projecto de Salvaguarda do Património Cultural - Obras de arte furtadas de colecções públicas portuguesas – Catálogo/Dossier e Página Internet. *Boletim da Associação para o Desenvolvimento da Conservação e Restauro (ADCR),* nº 10/11.

Sá, L. (Coord.) (1998). *Listagem de museus públicos e entidades similares detentoras de colecções públicas portuguesas.* Instituto Nacional de Polícia e Ciências Criminais.

Sá, L. (Coord.) (1999). *Catálogo nacional de obras de arte furtadas de colecções públicas portuguesas*. Instituto Nacional de Polícia e Ciências Criminais.

Sá, L. (Coord.) (2002). *Inquérito sobre bens culturais furtados de colecções públicas portuguesas 1980-2000: Apresentação de dados estatísticos*. Instituto Superior de Polícia Judiciária e Ciências Criminais.

Silva, R. H., Carvalho, A., Cordeiro, I., Freitas, I., & Pinho, E. (Coord.) (2000). *Inquérito aos museus em Portugal*. Ministério da Cultura, Instituto Português dos Museus/Observatório das Actividades Culturais.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

Notes on the author

Leonor Sá is the responsible museum curator for the Portuguese Judiciary Police Museum (Museu de Polícia Judiciária – MPJ) since 1993, when she started its organization. She is also a researcher at the IHC-Universidade Nova de Lisboa (UNL) and CECC-Universidade Católica de Lisboa (UCP). She has a PhD in Culture Studies (UCP), a postgraduation in Museum Studies (Universidade Lusófona) with traineeship at Ecomuseum de la Haute Bausse, Quebec, Canada, a degree, and a master's degree in German Literary Studies (Universidade de Lisboa and UNL).

She has created and coordinated several interdisciplinary projects for the protection of the Portuguese cultural heritage, two of them awarded at a national and international level (Grand Prix of the European Union Prize for Cultural Heritage/EUROPA NOSTRA 2013, Category 4, for 'SOS Azulejo Project') and four publications also focusing crime prevention and the safeguard of cultural heritage in Portugal.

She has also published two books (2018 and 2022) on the topic of early judicial criminal photographs in Portugal (the first one awarded by 'BPI/Lisbon Consortium UCP' and by Grémio Literário) and more than 50 articles. She has also curated several exhibitions, published a poetry book, and presented more than a hundred papers in Portugal and abroad.

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

Appendix

Reproduction of the data collection form concerning thefts in Portuguese public museums 1980-2000

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

NATIONAL CATALOGUE OF CULTURAL GOODS

STOLEN FROM PORTUGUESE PUBLIC COLLECTIONS

Data Collection Form

SHEET A - EXPLANATORY NOTE ABOUT THE FORM AND ITS FILLING IN:

- The present data collection covers the period from January 1980 to the present.

- **The form is supplied in three copies and can be photocopied whenever copies are missing. The entity that owns the public collection *will always keep a reserve copy*, for immediate complete communication if any theft occurs. This is the only way to ensure constant updating of the Catalog. This communication will not replace the formal complaint to be filed with the Judiciary Police.**

- Each form constitutes an individual identification form for a single stolen object, *to be recovered* or *already recovered**.

This form will contain **data for disclosure** and **confidential data**.

The data are divided into three distinct and complementary groups:

Groups I and III will contain confidential data only accessible to the Judiciary Police.

Group II will contain data that can be included and disclosed in the Dossier/Catalogue, as follows:

I. Data about the Museum/institution that owns the collection – **CONFIDENTIAL**
II. Data about the object – **subject to DISCLOSURE**
III. Data about the theft – **CONFIDENTIAL**

All headings must be filled in, through multiple choice marked with a cross and/or free text; however, there are cases in which the rubrics to be filled in may not be applicable to the description of the object in question, or unknown.

Thus: when the requested elements are not applicable in the case in question: trace the space.

when the elements are unknown: write "unknown" or "?", depending on the space.

The headings are often followed by some explanations and some examples/models that *are not necessarily exhaustive* and *merely illustrative* for some types of objects.

The completed form must be endorsed by the person in charge of the museum/entity that owns the public collection and sent within 60 days of receipt to:

National Museum of Criminalistics of the Judiciary Police – NATIONAL INSTITUTE OF POLICE AND CRIMINAL SCIENCES, Quinta do Bom Sucesso, Barro, 2670 Loures

Phone 01/9834059 Fax 01/9835495 E-mail: museu@inpcc.pt

*** We remind you that the collected data also aim at the elaboration of statistics on theft of works of art and cultural goods from Portuguese public collections. These statistics intend to contribute to the supply of indicators that could be precious for the continuous improvement of their protection and security.**

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

PROJECT FORM – NATIONAL CATALOGUE OF CULTURAL GOODS

STOLEN FROM PORTUGUESE PUBLIC COLLECTIONS

INCLUDES STOLEN OBJECTS SINCE JANUARY 1980, TO BE RECOVERED OR ALREADY RECOVERED

BEFORE COMPLETING, PLEASE CONSULT SHEET 'A' AND READ THE ENTIRE FORM.

SEND THE COMPLETED FORM TO: NATIONAL MUSEUM OF CRIMINALISTICS OF THE JUDICIARY POLICE, NATIONAL INSTITUTE OF POLICE AND CRIMINAL SCIENCES, QUINTA DO BOM SUCESSO, BARRO, 2670 LOURES

I – DESIGNATION OF THE MUSEUM/INSTITUTION OWNING THE COLLECTION

_____

ADDRESS

_____

POSTAL CODE _____TELEPHONE _____ FAX _____

TUTELAGE

_____

DIRECTOR OR RESPONSIBLE

_____

OCCURRENCE OF THEFT: YES ___ NO ___

II – DATA ABOUT THE STOLEN OBJECT

0. OBJECT - (e.g.: Painting – Musical instrument – Sculpture – Piece of furniture, etc.;)

1. SUBJECT and TITLE

SUBJECT - (e.g. for a painting: portrait, still life, landscape, etc.; for a musical instrument: violin, harpsichord, etc.; for a piece of furniture: counter, chest of drawers, etc.; for religious (ceremonial) objects: chalice, custody, etc.)

TITLE - (The title to be indicated is the official title, that is, the one which appears in the national inventory, if the piece is inventoried. In the case of foreign works, it will be necessary to indicate the title of the work in the author's original language and in Portuguese. It is very important to mention the title exactly, especially in the case of books.)

2. AUTHOR – (Name, followed by date of birth/death. Distinguish and explicitly mention, where appropriate: official name; or "attributed to", followed by the author's name; or "atelier of", followed by the name of author; or "school of", followed by the author's name.)

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

3. DATE/PERIOD – (The date should be mentioned if it is known, that is, if it appears in the piece and/or in an official inventory/catalogue or in some reliable document/study, which, if possible, should also be indicated.)

4. TECHNIQUE - (in the case of 2D fine art, for example, indicate whether it is: a painting – oil / acrylic / tempera / watercolor / collage, etc.; - or a drawing – pencil / charcoal / Chinese ink / sanguine / pastel, etc.; - or an engraving – metal (wet etching/dry point, etc.) / wood / linocut / lithography / silkscreen, etc.; - or an enamel – painted / cloisonné, etc.)

5. SUPPORT (MATERIALS USED) - (organic materials: e.g. wood, canvas, cardboard, coral, ivory, etc.; non-organic materials: e.g. bronze, glass, porcelain, plaster, marble, precious stone, etc.)

6. A - SHAPE - (choose a), b), c) or e); when doing so, in the case of 2D fine art, the shape of the frame should **not** be taken into account; indicate, however, below 6A if the shape of the frame is different from that of the work, and what the difference consists of

a) Rectangular b) Square c) Round d) Oval e) Other - specify if possible.

6. B - SINGLE OBJECT/SET OF OBJECTS

a) Isolated object (not part of a group or set)

b) Object that is part of a group or set (If "Other", indicate which one in the line ahead)

1. Diptych 2. Triptych 3. Polyptych 4. Pair 5. Other

7. DIMENSIONS (Indicate whether these are exact dimensions – "Ex"; or estimated dimensions – "ES";)

Length ____ cm Height ____ cm Diameter ____ cm

Width ____ cm Thickness ____ cm Weight ____ Kg/gr

8. DOMINANT COLORS:

9. SIGNATURE

9A - Detail:

a) Without signature b) With signature

1. Signature unreadable. 2. Legible signature 3. Monogram initials

Transcription:

9B - Location: (If you chose "Other", specify the location on the line ahead)

a) Bottom left c) Top left e) On the back

b) Bottom right d) Top right f) Other

10. MARKS/INSCRIPTIONS/NUMBERS (Mention them in detail and precisely, clearly indicating their location and, if possible, the means used, e.g. engraved, painted, etc. Describe all kinds of marks or inscriptions, also referring to those visible only by ultraviolet light.)

11. INVENTORY OR CATALOG REFERENCE (Indicate if the object appears in any published inventory, catalog or any other publication, indicating the entry number and/or pages.)

12. PHOTOGRAPHS OF THE STOLEN OBJECT (a) and (b) – Indicate whether it exists or not; a) – If so, attach at least one of good quality, in color whenever possible, with the name of the institution and designation of the piece on the back: we emphasize, however, that a poor quality photograph is better than none at all. If the colors of the photograph are distorted in relation to the original ones, mention this fact on the line below. b) – if there is no photograph, pay special attention to the following heading 13, DESCRIPTION)

a) Yes b) No

13. DESCRIPTION – (If there is no photograph or if the object is barely visible, make a detailed and complete description that allows its identification. Never omit: degradations/imperfections – piece missing from a sculpture, flaw in a porcelain object, etc.; restorations).

14. OBSERVATIONS ABOUT THE OBJECT (This heading should include information that did not fit in any previous heading and that may be useful for identifying the object)

III - DATA ABOUT THE THEFT

1. INSTITUTION WHERE THE THEFT OCCURRED (If it is unknown, write "unknown" in d)

a) The Museum/entity that owns the collection

b) Another national or foreign institution (to be indicated) to which the piece was loaned on the occasion of an exhibition or other event (to be indicated)

c) In transit between institutions, indicating which

d) Other situations

2. SPECIFIC LOCATION FROM WHERE THE OBJECT WAS STOLEN (* = museum)

a) *Permanent exhibition room c) * Storage room e) Transportation vehicle. Indicate type of vehicle

b) *Temporary exhibition room d)* Restoration Office f) Other cases. Specify

Sá, L. (2023). A pioneering museum's security study in Portugal (1980-2000): A past lesson for future ways? In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 76-105). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta5

3. DATE OF THE THEFT (In the case of exact data: "EX"; for estimated data: "ES"; for unknown data. "?".)

a) Day: b) month: c) Year

The theft occurred:

d) During the day e) During the period the museum was open to the public

f) At night g) During the period the museum was closed to the public

4. DATE OF DISCOVERY OF THE THEFT (In the case of exact data, "EX"; for estimated data: "ES"; for unknown data, "?".)

a) Day: b) Month: c) Year

5. WHAT AUTHORITY WAS THE THEFT REPORTED TO?

On which date?

6. HAS THE OBJECT ALREADY BEEN RECOVERED?

Yes No

If so, indicate:

a) Date, place and circumstances of recovery:

Date:

Place:

Circumstances:

b) Has the object suffered visible deterioration between the times it was stolen/recovered?

Yes No

If so, briefly indicate data on this deterioration:

c) Process No.:

7. OBSERVATIONS ON THE THEFT (in this field all information should be included (particularities of the theft that did not fit in the previous fields, especially those whose knowledge may be useful for the future prevention of this type of theft, namely its *Modus operandi*. The text should be very succinct, if possible not repeating information already contained in previous fields.)

SIGNATURE of Director/Responsible Date

TOMÁS PEREIRA [1]

& JOÃO SOUSA REGO [2]

[1] Parques de Sintra – Monte da Lua. Security Department | tomas.pereira@parquesdesintra.pt

[2] Parques de Sintra – Monte da Lua. Technical Department – Built Heritage | joao.rego@parquesdesintra.pt

Security and safety challenges of a palace-museum in nature environment. The case of Pena, Sintra.

Pereira, T., & Rego, J. S. (2023). Security and safety challenges of a palace-museum in nature environment. The case of Pena, Sintra, Portugal. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 106-119). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta6

Abstract

The National Palace of Pena, in Portugal, is managed by Parques de Sintra - Monte da Lua, S.A. (PSML) since 2007, a company with exclusively public capital created after the Cultural Landscape of Sintra was listed by UNESCO as a World Heritage Site.

This paper refers to two plans: the Territorial Security Plan and Conservation Plan for Built Heritage.

In articulation with the various bodies of Civil Protection, Territorial Management as well as Stakeholders, PSML has, throughout its Safety Department, the capability to assist in the development of an Integrated Strategic Territorial Planning, based on the establishment of sustained protocols. On the other hand, PSML has developed and implemented a Conservation Plan for Built Heritage with the aim of improving the condition of the monument, based on international principles and recommendations, codes of ethics, and terminology.

The plan establishes guidelines for maintenance actions and defines a set of rules for space usage and methodologies for inspection and monitorization of plan implementation, mainly focused on cost control and evaluation of key performance indicators.

Keywords

Sintra; Cultural landscape; Parques de Sintra; Territorial safety plan; Conservation plan for built heritage.

Pereira, T., & Rego, J. S. (2023). Security and safety challenges of a palace-museum in nature environment. The case of Pena, Sintra, Portugal. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 106-119). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta6

Introduction

Given the ever-evolving threat factors affecting the natural and built heritage, which have recently been broadened by socio-economic, political, industrial, and technological drivers, there has been a rising awareness regarding the need to safeguard cultural landscapes. As the first cultural landscape to be inscribed on the World Heritage List, Sintra reflects the secular actions of both nature and anthropic activities. Reflecting on the cultural landscape of Sintra, we realise that its longevity is never statical, is always prone to changes, thus revealing itself as an added challenge for its preservation and protection, through the necessities of the human being and its future generations, but also that its natural heritage has its own biological rhythm.

In consideration of the existing international legal instruments, regarding the protection and safeguarding of cultural landscapes (highlighting: UNESCO, 1972; IUCN, 1974; Council of Europe, 2000), with particular emphasis on Sintra, the Portuguese State undertakes the responsibility of governance and the establishment of management structures that will ensure the requirements of UNESCO. In Portugal, the Law on Cultural Heritage, the Law 107/2001 of 8 September (Assembleia da República, 2001), is the legal instrument that regulates the protection and enhancement of the National Cultural Heritage, which is then complemented with territorial management and planning instruments, both in terms of regulations and strategies. Considering the existence of natural values of relevant interest for biotic preservation of the landscape, and considering the high pressures of urban expansion in the region, the Sintra-Cascais Protected Landscape Area was created in 1981, which was preceded by the creation of the Sintra Cascais Natural Park, in order to ensure the "rational management of the natural and landscape resources which characterise the region, and the development of actions to safeguard them; safeguarding the architectural, historical or traditional heritage of the region, as well as promoting architecture integrated into the landscape; and promoting the economic development and well-being of the populations, in

harmony with the fundamental laws of nature" (DR 8/1994 of 11 March. Ministério do Ambiente e Recursos Naturais, 1994) (T. Pereira, Trans.).

1. Creation of Parques de Sintra – Monte da Lua

Nevertheless, given the absence of an entity devoted towards the requirements of the Cultural Landscape of Sintra, in the year 2000, in response to criticism raised by UNESCO, the company Parques de Sintra - Monte da Lua, S.A.(PSML) was created, through Decree 215/2000 of 2 September (Ministério do Ambiente e do Ordenamento do Território, 2000).

Parques de Sintra - Monte da Lua, S.A. was thus created with the purpose of gathering the institutions with responsibility in safeguarding and enhancing the value of this landscape, whereby the Portuguese State entrusted this company with the management of its main properties in the area namely the Park and National Palace of Pena, the National Palace of Sintra, the Palace of Monserrate, the Convent of Capuchos, Peninha, as well as forest properties (around 1000 hectares), integrated in the Sintra Cascais Natural Park and in the Sintra Cultural Landscape. Considering its overriding mission of managing the natural and built values present in the Cultural Landscape of Sintra, Parques de Sintra, assumes the safeguarding of the cultural landscape as an absolute necessity and only possible through the involvement of the widest range of stakeholders. It incorporates the Technical Directorate of Built Heritage (Direção Técnica do Património Construído - DTPC), which is responsible for the conservation, maintenance and requalification of the built heritage, through a multidisciplinary approach that integrates teams from areas such as engineering, architecture, conservation and restoration, and archaeology. The Security Department ensures corporate involvement in security affairs and cooperates with institutional entities with responsibilities regarding the protection of the Cultural Landscape of Sintra.

Pereira, T., & Rego, J. S. (2023). Security and safety challenges of a palace-museum in nature environment. The case of Pena, Sintra, Portugal. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 106-119). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta6

2. Development of management and territorial protection plans

A prominent concern within Parques de Sintra is its participation within the development of territorial protection plans for the Cultural Landscape of Sintra. Considering this responsibility, Parques de Sintra- Monte da Lua, under its own organic structure, created a Security Department which has specific responsibilities within the organization, in particular:

- Inter-sectoral articulation with the remaining institutions responsible for the management and safeguarding of Sintra's Cultural Landscape;
- To contribute towards the preservation of the natural and built values present in Sintra's Cultural Landscape;
- The implementation of security and protection mechanisms in the properties under Parques de Sintra's management;
- Ensuring the safety of both visitors and employees in the territorial context of the properties under management;
- Ensuring interdepartmental articulation for projects and requirements for the promotion of safety.

Together with the articulation with the various bodies of Civil Protection, territorial management as well as stakeholders, Parques de Sintra, in consideration of its importance in safeguarding Sintra's Cultural Landscape, has, throughout its Safety Department, the capability to assist in the development of an Integrated Strategic Planning, based on the establishment of sustained protocols through Technological and Social Innovation allied to Intersectoral Collaboration Structures. Considering the importance of Sintra's Cultural Landscape, the management and protection of the Territory is the result of the articulation of several entities, namely the Municipality of Sintra, Municipality of Cascais, Technical-Forestry Offices of Sintra and Cascais, Firefighting Brigades, Civil Protection Units of Sintra and Cascais, the Portuguese Armed Forces, National Republican Guard, Public Security Police, Municipal Police, Cascais Ambiente, CulturSintra Foundation and Parques de Sintra- Monte da Lua.

Therefore, Parques de Sintra, in close collaboration with the Municipality of Sintra, has been included in several collaboration protocols with the objective of promoting the environmental and social sustainability of the region, with emphasis on the management and protection of the territory. Hence, the following territorial management initiatives stand out:

- Collaboration Protocol between the Municipality of Sintra, Parques de Sintra, the CulturSintra foundation and the Humanitarian Associations of Voluntary Firefighters of the Municipality of Sintra for the functioning of permanent intervention groups at municipal level;
- Assistance in the management and economic operation of watchtowers for the early detection of fires, which are strategically located in the vicinity of the Municipality's Cultural Landscape of Sintra, namely in Nafarros, Pedra Amarela, Belas and Alcoitão;
- Economic support for the management and acquisition of individual protection and fire-fighting equipment for the municipal Forest Fire Brigade teams;
- Articulation between the Municipality of Sintra, the Portuguese Army and Sintra Civil Protection through surveillance by the Portuguese Military during the summer season, with the objective of improving the awareness of the population and dissuading the spread of illegal acts of vandalism and criminality in the Cultural Landscape of Sintra. In this sense, Parques de Sintra ensures the lodging of military patrols in the Park of Pena and expenses concerning the provision of meals;
- Considering the heterogeneity of the properties under the management of Parques de Sintra, each one with its own particularities, Parques de Sintra welcomes Emergency and Civil Protection entities to perform evacuation drills in a real environment;
- Allied to the articulation between all stakeholders, Parques de Sintra, through its Safety Department, also aims to improve safety conditions and prevention of accidents at the properties under management. This goal is also achieved

through the installation of safety equipment, improved communications and through human resources, which are in close coordination with all entities with responsibilities for safeguarding the Cultural Landscape of Sintra.

Concerning inter-sectoral collaboration, Parques de Sintra, alongside all stakeholders, strongly believe that technology performs a fundamental aspect in the management and prevention of incidents and that its contributions are essential towards the shared mission. Considering this premise, Parques de Sintra proceeded with the implementation of the following projects:

- The installation of an early fire detection camera, atop the Clock Tower, in the National Palace of Pena. This equipment allows, through its privileged position, a 360° coverage of the area classified as World Heritage, enabling a possible early detection of fire outbreaks and, by sending geographic coordinates, creates an alert to the Civil Protection entities;
- Considering the heterogeneity of the properties under management, Parques de Sintra, proceeded, whenever possible, with the installation of Closed Circuit Television, in order to promote more adequate safety conditions for both the Built and Natural Heritage;
- Additionally, in order to ensure adequate coverage of communication networks, Parques de Sintra, together with several stakeholders, proceeded with the installation of a fiber optic ring in the Cultural Landscape of Sintra, ensuring communication between all emergency communication equipment.

In addition to the strategies mentioned above, the cooperation between the Municipality of Sintra, Parques de Sintra and other stakeholders also stands out, in the creation of several plans dedicated exclusively towards the protection of Sintra's Cultural Landscape. Thus, the following plans and initiatives stand out:

- Regarding the Territorial Management and Protection Plans, we highlight the Municipal Plan for Emergency and Civil Protection of the Municipality of Sintra, which has the participation of Parques de Sintra - Monte da Lua, S.A, both in

emergency and disaster management strategies and in the rehabilitation phase;

- The Strategic Safety Plan of the Cultural Landscape of Sintra assumes the greatest prominence, being the main instrument of operational management in the event of the occurrence of accidents, particularly with stratified interventions and responsibilities that must be ensured by various stakeholders;
- On the initiative of the Municipality of Sintra, the Municipal Committee for the Defence of Forestry against Fires was created, which has weekly strategic meetings for the management of occurrences.

To conclude, throughout the actions of Parques de Sintra and its various stakeholders, the management of risk constitutes a daily task for all organisations. Hence, it is necessary to ensure the patrimonial value of the landscape, through an integrated and collaborative management, based on strategic planning and an equitable attempt to monitor uncertainties and threats.

3. The plan for heritage management and enhancement of monuments

In response to the European Cultural Heritage Green Paper and implementing the Europa Green Deal, Parques de Sintra developed measures to increase the resilience of the heritage under its management, both natural and built, in the face of Climate Change.

The Plan for Heritage Management and Enhancement of Monuments contribute to the valuation and conservation of the entire built heritage, promoting the reduction of energy consumption, and sustainable actions to safeguard the heritage preparing them

to resist the spread of an eventual natural disaster and making them more resilient to the effects of climate change.

With the aim of improving the heritage condition of the monument, PSML has developed and implemented a Conservation Plan for Built Heritage, based on the principles and recommendations enshrined in international conventions and charters, and codes of ethics (such as those approved by International Council on Monuments and Sites - ICOMOS), and taking into account the terminology established in European standards.

The Multi-Year Building Management Plan establishes the conservation and maintenance strategy for the five-year period, anticipating all maintenance and investment costs necessary to safeguard these spaces. Through periodic maintenance actions and routine inspections, it promotes the anticipation of anomalies and the significant reduction of investment costs and the need for deep interventions, promoting the sustainable conservation of the building.

This way, the plan proposes specific approaches for preventive and corrective maintenance, functioning as a strategic management tool that identifies conservation and maintenance goals for the built heritage and the actions that need to be implemented to pursue them.

The plan was developed according to the following goals:

- Implementation of methodologies that reduce future interventions and mitigate built heritage loss;
- Coordination of preventive and corrective maintenance actions between different specialties;
- Compliance of safety standards and regulations;
- Hierarchical approach of corrective maintenance actions to reduce the risk of built heritage loss.

This document compiles supporting information such as the characterization of the overall condition of the monument, the history of interventions, the conservation principles for interventions and the pluriannual plan of main interventions.

Based on this information, the plan establishes practical guidelines for preventive and corrective maintenance actions that need to be undertaken. Additionally, the plan also defines a set of rules for space usage and methodologies for inspection and monitorization of plan implementation, mainly focused on cost control and evaluation of key performance indicators.

Documenting the work and interventions carried out is an essential part of any maintenance plan. Details of all inspections, the work carried out as a result of the inspection, information about the entity that carried out the work and the costs associated with these tasks; all this information is relevant in the short, medium and long term, guaranteeing the current and future stakeholders on the heritage the knowledge about the work done, when it was done and when it should be carried out again.

Thus, in order to expedite the reading and implementation of preventive maintenance of built elements and equipment, the actions to be carried out are systematised in sheets by specialty, according to the following parameters:

- Description of the maintenance tasks;
- Estimated execution times for each task;
- Identification of necessary resources;
- Definition of its periodicity;
- Quantification, location and identification of elements;
- Safety Precautions.

As far as sustainability measures in construction and heritage rehabilitation actions are concerned, they include waste management plans that promote the reduction of waste production and its reuse whenever possible.

The following measures stand out:

- Reuse of waste resulting from construction or other works - for example natural materials resulting from demolition, such as stone, wood, ceramics - are reused in new construction (execution of traditional masonry structures, etc.);
- Use of natural materials in construction and rehabilitation - promoting the use of cork as an insulating material, or in traditional mortars where this material is incorporated resulting in passive actions to improve energy efficiency; use of natural oil paints for the treatment of wood and lime for building restoration, reduction of the use of solvent or chemical based paints in the building restoration actions contribute to the restoration of the building;
- Use of low-energy consuming materials - such as lime, a material with a reduced ecological footprint during the production phase and which promotes the consumption of carbon dioxide during the material's lifetime.

Energy, water and material efficiency was increased, reducing the consumption of primary energy, water and paper in the company's facilities by applying measures such as, among others:

- More efficient lighting equipment;
- Reduction of hours of outdoor lighting;
- Timed taps;
- Rehabilitation of the water supply mines network.

The set of measures developed will allow a reduction of 52,52 tonnes of oil equivalent (toe) per year (21.86%); of 13,368.10 m^3 of water (26.01%), as well as a reduction of 28.08% of greenhouse gases (GHG) (Tab. 1).

As important as the definition of the plans and respective projects is the effective follow-up of their implementation, through a monitoring and control process based on quantifiable indicators that transpose the information obtained into easily analysable and comparable data.

Tab. 1 - Determining the reduction of resource consumption.

CONSUMPTION IDENTIFICATION[1]	CONSUMPTION IN REFERENCE YEAR [value]	ANNUAL CONSUMPTION REDUCTION, ESTIMATED		GOALS [value]			UNITS
		Reduction value [value]	Reduction value [%]	Goals 2022	Goals 2023	Goals 2024	
On-site Energy (Non-Renewable)	333,45	42,39	12,71%	18,10	18,38	41,27	toe/year
On-site Energy (Renewable)	toe/year						toe/year
Energy in Fleets	111,37	10,19	9,15%	0,89	5,54	10,19	toe/year
Potable Water	51 401,65	13 368,10	26,01%	11384,67	12435,67	13382,59	m^3/ year
Non potable water	-						m^3/ year
Number of prints and copies	382 162,00	3 821,62	1,00%	3 821,62	3 821,62	3 821,62	[prints and copies /year]
Single-Use Plastics (Cups and Food Containers with or without Lids)	284 800,00	-	-	-	-	-	[units /year]
Single-use plastics (bottles)	1 307 978,00	-	-	-	-	-	[units /year]
Replaced Fluorinated Gases (quantities)	-	-	-	-	-	-	[kg/year]

Final considerations

The set of monitoring indicators aims to respond to the necessary verification of the progress of the interventions and the results achieved, enabling a complete and thorough analysis of the level of progress of the various objectives of the plan. A monitoring system with consolidated procedures allows optimising the allocation of resources and the documentation/reporting of the work in progress, giving visibility to

[1] In the case of Energy at the Facilities, the total consumption, i.e. the energy needs of the facilities, corresponds to the total of: Energy in Facilities (Nonrenewable) + Energy in Installations (Renewable)

the fulfilment of the defined strategies, promoting adjustments when pertinent and guiding the decision-making processes.

As described, the monitoring of this plan aims to control the implementation process, from a temporal and financial point of view, and to assess its impact, particularly on the evolution of the state of conservation of the monument.

References

Assembleia da República. (2001). Lei n.º 107/2001. Estabelece as bases da política e do regime de protecção e valorização do património cultural. *Diário da República. Série I-A*, 209 (08 de setembro), 5808-5829. https://diariodarepublica.pt/dr/legislacao-consolidada/lei/2001-72871514

Council of Europe. (2000). *European landscape convention.* https://www.coe.int/en/web/landscape/the-european-landscape-convention

IUCN. (1974). CITES – Convention on international trade in endangered species of wild fauna and flora. https://cites.org/eng/disc/text.php

Ministério do Ambiente e Recursos Naturais. (1994). Decreto Regulamentar 8/94. Cria o parque natural de Sintra-Cascais. *Diário da República. Série I-B*, 59 (11 de março), 1226. https://dre.tretas.org/dre/57320/decreto-regulamentar-8-94-de-11-de-marco

Ministério do Ambiente e do Ordenamento do Território (2000). Decreto-Lei n.º 215/2000. É constituída a Sociedade Parques de Sintra — Monte da Lua, S. A.. *Diário da República. Série I-A*, 203 (2 de setembro), 4663-4667. https://www.parquesdesintra.pt/media/h0ebexsf/pdf2_decreto-lei-n-%C2%BA-215_2000.pdf

UNESCO. (1972). *Convention concerning the protection of the world cultural and natural heritage*. https://whc.unesco.org/en/conventiontext/

Pereira, T., & Rego, J. S. (2023). Security and safety challenges of a palace-museum in nature environment. The case of Pena, Sintra, Portugal. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 106-119). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta6

Notes on the authors

Tomás Pereira, an employee of Parques de Sintra since 2012, holds the position of security technician since 2019. With training in tourism management, in the field of management of destinations and tourism products, he assists in the management of the company's security and compliance needs.

João Sousa Rego is the Director for built heritage at Parques de Sintra - Monte da Lua, S.A. since May 2019. He coordinates a multidisciplinary team, responsible for the maintenance, safeguarding and enhancement of the company's building, listed as a national monument. Before, he was the coordinator of the Blue-Green Corridor project at Parques de Sintra - Monte da Lua, which involved three municipalities - Sintra, Oeiras and Amadora.

Prior to Parques de Sintra - Monte da Lua, João Sousa Rego held Director roles in the Department of Rehabilitation and New Urban projects in the Public Urbanization Company of Lisbon and was a Deputy at Environment Ministry for the areas of land management and urban planning.

YACY-ARA FRONER

Federal University of Minas Gerais, Brazil | yacyarafroner@gmail.com

Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management.

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Abstract

In recent years, countless collections have been destroyed by acts of vandalism, war crimes, negligence, and accidents. Their loss can be seen from the perspective of the potential loss of their studies, but above all by understanding their impact in relation to the emptying of the voices of native communities, destruction of the memory of religious, racial, political, cultural, and territorial properties of certain groups or societies, and the disappearance of production systems, both in relation to everyday and symbolic objects. In Brazil, the impact of fires on public museums amplifies these issues. In 2020, the Federal Government sanctioned the Resolution No. 2, providing for the technical and administrative procedures for the preparation, implementation, and evaluation of risk management plans for museums, within the scope of units managed by the Brazilian Institute of Museums - Ibram. This contribution intends to discuss the conceptual and technical issues regarding risk and conservation assessment, as well as the guidelines on the protection of collections in museums and connect it with the demands generated by the Ibram´s instructions. It is part of the research “Protocols for the sustainable management of collections in museums: technical-scientific skills for the definition of standards, recommendations, and public safeguard policies” financed by the National Agency of Research (CNPq).

Keywords

Standards; Risk management; Conservation assessment; Preventive conservation.

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Introduction: Why protect?

The object exists as a material culture to be preserved when it is assigned a historical, artistic, and cultural value. Thus, the notion of object permeates two possibilities of meanings in the network of symbolic exchanges: the value is given according to the light it brings to scientific knowledge; and it is inherent to its aesthetic and cultural condition, causing the parameters to oscillate between these poles. Despite the discursive force of the object – configured in the artistic production or the artifacts –, in recent years, numerous museum collections have been destroyed by acts of vandalism, war crimes, negligence, and accidents. The loss of these collections can be analysed from the perspective of the loss of potential studies generated by the objects, but above all through the understanding of the impact of these losses in relation to the emptying of voices of communities, groups or remaining indigenous communities; by the erasing of religious, racial, political, cultural, and territorial traces from particular societies; and from the disappearance of the memory of the ways of producing artifacts, both in relation to objects of daily use, as in relation to symbolic objects. Such losses are aggravated when we understand the impact of the destruction of collections from extinct communities, whose only memory remains alive in the cultural vestiges remaining in the museum's collections.

In fact, both material culture and the history of the arts continually refer to objects that would have no meaning without this essential data: the reference to the concrete object and to the aesthetic value that contributes to define its specificity, both interconnected by the various discursive analyses. A society's way of seeing is not a single way of seeing, but several ways of seeing, determined by a continuous and circular relationship between erudite knowledge and popular knowledge. The different social levels influence each other, albeit in a different way, establishing a characteristic behaviour closely linked to their history, time, and place. Walter Benjamin states: "the chronicler who narrates the events, without distinguishing between the great and the small, takes into account the truth that nothing that once happened can be considered

lost to history" (1985, p. 223). Thus, every product of human action becomes a fundamental document for the rescue of the past: the artistic and the artifact stand out not only as an object inserted in the cultural system, but as a product elaborated by human consciousness, and thus, the record of a mentality, an era, an ideology, and a technic; the power of the object consists in determining, through a voluntary act, a portion of the visible world. From these reflections, it is possible to perceive the transformation of the senses in relation to objects. However, it is not possible to locate the parameters that determine which are the objects that deserve a place in the approaches of preservation and of the memory organization system, based on museological spaces: the exception; the rare; the document; the work of art; the handicrafts; the sacred; the profane; the everyday; the unusual? We increasingly perceive those objects can shed light and amplify voices, revisit issues, and propose new perspectives, break customary paradigms, and review models of analysis, approximation, access, and appropriation. Since the 1992 New Zealand Charter, indigenous communities have claimed their role as agents for the preservation of their own culture, heirs to their objects, owners of their own memory and entities capable of discussing the meanings of their own material and immaterial culture. The Treaty of Waitangi (1840) is the historical basis for the confirmation of indigenous society as the maintainer and guardian of its own culture, confirmed in its text:

> This interest extends beyond current legal ownership wherever such heritage exists. Particular knowledge of heritage values is entrusted to chosen guardians. The conservation of places of indigenous cultural heritage value therefore is conditional on decisions made in the indigenous community and should proceed only in this context. Indigenous conservation precepts are fluid and take account of the continuity of life and the needs of the present as well as the responsibilities of guardianship and association with those who have gone before. In particular, protocols of access, authority and ritual are

> handled at a local level. General principles of ethics and social respect affirm that such protocols should be observed (ICOMOS, 1992, p. 1).

Therefore, the objects should not be seen as a manifest product outside of social life, insensible to their existence and ignorant of their values, but as a manifestation integrated into the complex network of social relations. From the moment that man acts on matter, the discourse between this matter and humanity is already present. The work of art and the object become possible and live through an integrated relationship with society; otherwise, their discourses do not exist. Berenson (1972, p. 230) argues that no history can be written without values postulated, consciously manifest or unconsciously assumed. Objects acquire value through the hands of knowledge, but knowledge is not a product frozen or existing outside a network of intercommunications. The concepts are constantly reviewed and updating, as well as the perception of objects.

Currently, the studies related to memory claim the mobility of perception and revisitation of the assigned meanings. In the introduction to *História, memoria e Esquecimento*, Paul Ricoeur (2007) asks: "What is memory made of? Who does memory belong to? What is its function and use?" (p. 23). These questions establish the fundamental principles that determine the demand for the preservation of material culture today. The empire of the senses over objects has been built by colonialist logic anchored in a single worldview and, from the moment that the structures of domination shift to singular structures, objects acquire polyphonic and political meanings, multiple hidden voices behind a single denominator. The material preservation of the collections guarantees all forgotten, omitted, and ignored actors the possibility of establishing new dialogues, connections, and appropriations, generating another memory relationship with the exposed or hidden collections in the museums' technical reserves.

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Ensuring the protection of these collections is essential, especially if we consider disposal policies generated inconsequently, based on the premise that digitization guarantees preservation; the lack of museum plans aimed at preventing damages subsidized by technical-scientific management protocols and the lack of public policies, both in relation to support for research and the guiding principles that support the legal system for the protection of cultural heritage, the public notices of promotion aimed at protective measures or the training of museum professionals trained to work in the field of documentation, diagnosis and preventive conservation.

The text that we present seeks to articulate the epistemological, methodological, and conceptual bases that support the project “Protocols for sustainable management of museum collections: technical-scientific competences for the definition of standards, recommendations, and public safeguard policies”, developed by the Research Group ARCHE and linked to the Graduate Program in Arts and the Graduate Program in Built Environment and Sustainable Heritage at Federal University of Minas Gerais (UFMG). Throughout our experience, we hope to demonstrate the demand for dialogue in a two-way street on the plural meaning of memory exposed in material culture and the technical-scientific demand for its protection.

1. Memory, forgetting, and destruction of collections

In recent years, both in Brazil and elsewhere in the world, we have witnessed numerous losses of important collections, irreplaceable in terms of their intrinsic value and research potential, because of crimes, neglect, and natural disasters.

In 2010, the fire at the Butantã Institute (Instituto Butantã) destroyed one of the largest living collections of tropical snakes in the world, estimated at eighty thousand specimens, in addition to thousands of spiders and scorpions. In 2013, the fire at the Latin America Memorial (Memorial da América Latina) destroyed the interiors of the

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Simón Bolívar auditorium, an integral part of the complex, in addition to completely damaging the tapestry by artist Tomie Ohtake that covered one of its walls. In 2015, the fire at the Museum of the Portuguese Language (Museu da Língua Portuguesa) mainly affected the museum's tower, installed in the Light Station (Estação da Luz) building, consuming its entire collection, mostly digital. Analyzing the accidents that occurred in buildings with large museum functions in Brazil, in the last four decades, it is observed on average the occurrence of about one large fire per year. In São Paulo, statistics for the period 1999-2008 indicate an average of nine accidents in museums per year (Pedersoli Jr., 2019, p. 9). However, no loss was as irreparable in relation to the national memory as the fire that consumed the entire exhibition and all the technical reserves of the main building of the National Museum (Museu Nacional):

> On the night of September 2nd, 2018, one of the greatest tragedies in the fields of science and culture befell Brazil: the burning of the National Museum, a federal patrimony and research centre linked to the Federal University of Rio de Janeiro (UFRJ). The disaster affected not only Brazilian scholars and the public, but was a tragedy felt around the globe in view of the importance and significance of its collections to humanity worldwide. Priceless objects lost to the fire include: the Throne of the Kingdom of Dahomey offered to King João VI by King Adandozan in 1811; linguistic recordings of Brazilian indigenous communities now extinct; the oldest human remains found in Brazil, named “Luzia”; remnants of the Maxakalisaurus topai, a sauropod dinosaur found in Minas Gerais; ethnographic collections composed of cultural artefacts from all continents; and international archaeological collections, including Pompeian frescoes and the Egyptian collection of Pedro II, as well as the national archaeological collection. The entomological collection alone, consisting of about five million insects, including specimens collected by the naturalist Fritz Müller, a populariser of Charles Darwin’s ideas, was a horrific loss to scientific communities

> internationally. In short, more than two hundred years of research in several significant areas of science were impacted by the fire (Froner & Rodrigues-Carvalho, 2019, p. 9).

These tragedies expose the lack of protocols prior to the losses that could minimize the losses; the lack of document management, capable of clearly informing the population and public bodies about lost or damaged goods; or the lack of fire control, combat and evacuation projects that could mitigate the damage.

In 2011, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) carried out a survey commissioned by United Nations Educational, Scientific and Cultural Organization (UNESCO) indicating that 60% of the collections in storage are at risk, whether due to inadequate management and documentation, building, furniture, or packaging, and that this situation exists in all countries, regardless of its level of development. Also indicating that, on average, only 10% of museum collections are displayed and accessible to the public, while 90% are stored. Most of the losses occur exactly in the guard areas, meaning the destruction or degradation of most of the objects belonging to the museum collections. This situation becomes more reckless when institutions are unable to inform society which cultural goods have been lost or damaged, simply because of a lack of a minimum policy of cataloguing, inventory, documentation, or database generation. Because of the lack of this documentation, a loss of value by dissociation results and communities represented there will never know which objects related to their own culture have been lost (ICCROM/UNESCO, 2011).

In 2019, the 34th General Assembly of the International Council of Museums (ICOM), in Kyoto, Japan, passed the resolution *Measures to safeguard and enhance collections in storage throughout the world*. This document is not the only one, but it demonstrates the urgency of technical-scientific actions in relation to the protection of collections. The principle that generated this document stems from a long maturing of the area.

However, it does not establish specific determinations, but as a structuring of principles supported by general concepts about meaning. The document calls on ICOM members, institutions, governments, and museum professionals to:

- Take all measures to reduce risks for collections in storage throughout the world. This includes allocating funds and making use of all available tools and methodologies at their disposal, ensuring museums' mission for research, education, and enjoyment by present and future generations;
- Recognize the importance of culture in its various forms in time and space, and the need to adopt appropriate methods to preserve natural and cultural testimonies, in their diversity, in national and international development policies, in the interest of communities, peoples and countries;
- Reaffirm that different kinds of institutions of memory have a fundamental value as custodians of heritage, and that their role involves preserving the material characteristics and documentation of their collections for further study, exhibition, and access;
- Consider the fundamental mission of museums, libraries, archives and other institutions of memory to preserve, produce knowledge and give access to material culture, thereby contributing to the wide diffusion of culture and the education of humanity for justice, freedom and peace;
- Further affirm that the preservation of collections contributes to the enhancement of human rights, as set out in the Universal Declaration of Human Rights, and in the International Covenant on Economic, Social and Cultural Rights;
- Commit to strengthen the role of Conservation Science and Heritage Science in the production of specialized knowledge for the preservation and conservation of collections in favour of the protection of cultural and natural heritage, considering their role and related social responsibilities; and

- Rethink the management of cultural heritage, and in particular the policies, practices and exhibiting criteria of collections stored in deposits (ICOM, 2019).

In Brazil, this resolution was preceded by the event “International Seminar: Heritage on fire: who's next? Fire risk management for cultural heritage”, jointly promoted by ICOM Brazil, IBRAM and ICCROM, which resulted in the “Rio de Janeiro Declaration on Reducing the Risk of Fire in Cultural Heritage” (IBRAM, ICOM, & ICCROM, 2020). Despite the advances, both in relation to the discussions pointed out in the Recommendation on the *Protection and promotion of museums and collections, their diversity, and their role in society* (UNESCO, 2015b) and in relation to the resolution adopted by ICOM in 2019, there is a demand in the museum system emergency for the development, application, and continuous adoption of safeguard actions, supported by technical-scientific skills. The lack of an interdisciplinary field focused on Heritage Science in Brazilian research agencies - notably CAPES and CNPQ - produces an epistemological gap, in addition to the lack of subsidies aimed at research related to this area of knowledge.

In the UK, in 2010, the National Heritage Science Strategy (NHSS) (NHSF, 2010) report was produced to address research on science and heritage. The survey found that the sector was fragmented and undervalued and recommended that the heritage sector should come together in developing a comprehensive national strategy for heritage science (Froner, 2017 & 2018). The expression Heritage Science became more frequently used from 2006, when the Science and Technology Committee of the British Parliament proposed its use to name a broader scientific field, configuring an expansion of Conservation Science (UK’s House of Lords, 2005).

The historical understanding of the expanded transdisciplinary field of knowledge of Heritage Science and its advances is essential for the generation of actions that allow the preservation of collections and mechanisms for accessing, interpreting, and using the memories of objects (Froner, 2016).

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

2. Protocols for the sustainable management of museum collections: technical-scientific skills for the definition of standards, recommendations, and public safeguard policies

In carrying out this investigation, we propose a review of the concepts protocol and standard, their historical retrospectives based on the etymology of the words and the attributions of the concept, as used by the different authors that deal with the themes correlated to the areas that make up this research. Initially, the concept of protocol used is associated with the imputations defined in the Portuguese dictionary: "a document that incorporates an official statement of a rule or rules", as well as "a document that specifies nationally or internationally agreed principles". Thus, the regulations that govern acquisition and disposal policies, access to research and the specific conduct of the sectors in relation to collections can be considered management protocols. In turn, the concept of standard, recurrent in English and Portuguese, is used as "standard, type, model", more specific to the modelling parameters, such as temperature, relative humidity, lighting, vibration, noise, pollutant index and particulates, specific to the field of preventive conservation, and in relation to computer systems, typical of Information Science. It should be noted that the latter term has been continuously absorbed in the field of Preventive Conservation and Conservation Science, merging both terminologies. According to Rebeca Alcantara (2002):

> In recent times, a standard has come to mean “a document embodying an official statement of a rule or rules” as well as “a document specifying nationally or internationally agreed principles for manufactured goods, procedures, etc.” Thus, a museum’s rules for allowing access to its collections could be considered a standard (p. 5).

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

During the 1960s, the first articles appeared that used the word standard in relation to preventive conservation measures. One of the first was the article Standards of Exposure to Light (Feller, 1963), related to the use of the "Blue Wool Scale", samples of blue fabric that measured the impact of light incident on objects. His research contributed to the appropriation of ISO 105, applied to the textile industry, as a test method to measure colour fastness.

> The International Organization for Standardization (ISO) currently defines standards as documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes, and services are fit for their purpose (Alcantara, 2002, p. 6).

Focused mainly on industry, in the field of preventive conservation, ISO is used to prove the quality of exams and procedures in studies of the materiality of cultural assets. Due to the considerable volume of documents collected, the systematization proposed in this investigation sought to establish interrelationships between the sources and the generation of synthetic parameters in relation to the protocols of conservative management of collections in museums. Thus, the methodology that subsidizes this investigation is linked to the study of the development of standards, norms, recommendations, and protocols for the conservative management of collections in museums from documents already established in the area, seeking to identify the common principles and practical guidelines arising from this study, aiming primarily to support public policies in Brazil, but also to present a conceptual product of reference for the international community.

Risk management and conservation assessment establishes a specific focus in the research, since it is related to issues determined by the field of preventive conservation, although integrated with other areas, demanding an interdisciplinary association from them based on an understanding of their exclusive competences. By

proposing a clear definition of the terms, we seek to contribute to the establishment of normative documents internal to museums that cover international guidelines, regardless of the diversity of museum typologies, since the generic instructional principles can be seen as structuring, capable of adapting to the different realities in an inclusive way. In the same way, we propose, the survey of the normative instruments becomes fundamental for the establishment of the route of the area.

2.1. General guidelines

When discussing the technical-scientific parameters for the generation of protocols and standards aimed at the conservative management of collections in museums, through the compilation and analysis of basic documents structured since the Madrid meeting (1934), we mapped structuring concepts of the area based on its origin and through the understanding of its evolution. As an objective of this investigation, we seek to systematize the normative instruments related to the management of collections safeguarding, in order to understand the transformations of parameters, concepts, models and tools developed in the area:

a) *Museographie, Architecture and Management of Art Museums*, 1934
b) *Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*, 1970
c) *1st International Conference on Museum Storage*, 1976
d) Unesco publications, *Museum Collection Storage* (1979) e *Collection Storage* (1995)
e) *Standards in Preventive Conservation: Meanings and Applications*, 2002, ICCROM
f) *Declaration on the Collections Preservation Environment*, 2013
g) UNESCO *Recommendation concerning the Protection and Promotion of Museums and Collections, their Diversity, and their Role in Society*, 2015.

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Regarding the last normative instrument, the working document 38 C/25, of the 38th Session of the General Conference of UNESCO (2015a), called *Proposal for a non-binding standard-setting instrument on the protection and promotion of various aspects of the role of museums and collections*, recognizes the importance of establishing regulations.

The Article 2.23 of the ICOM *Code of Ethics* states: "It is an essential responsibility of members of the museum profession to create and maintain a protective environment for the collections in their care, whether in storage, on display or in transit." (ICOM Brasil, 2009, p. 23) (Y. A. Froner, Trans.). Thus, the protection of museum collections is ethically determined by this guidance document. Within the scope of ICOM, several documents are fundamental in the construction of guidelines:

- *ICOM Guidelines for Loans* (ICOM Secretariat, 1974)
- *Labelling and Marking Objects* (CIDOC Fact Sheet 2, 1993)
- *Guidelines for Disaster Preparedness in Museums* (ICMS, 1993)
- *Registration Step by Step: When an Object Enters the Museum* (CIDOC Fact Sheet 1, 1993)
- *International Guidelines for Museum Object Information: the CIDOC Information Categories* (CIDOC, 1995)
- *International Core Data Standards for Ethnology/Ethnography* (CIDOC, 1996)
- *The CIDOC Conceptual Reference Model* (CIDOC, 2001; 2011)
- *University Museums and Collections – Importance, Responsibility, Maintenance, Disposal and Closure* (UMAC, 2007)
- *Lightweight Information Describing Objects* (CIDOC, 2010)
- *Recommendations for Identity Photography* (CIDOC, 2010)
- *Statement of Principles of Museum Documentation* (CIDOC, 2012)
- *Environmental Guidelines: ICOM-CC and IIC Declaration* (ICOM-CC, 2014)
- *Best Practice in Museum Education and Cultural Programmes* (ICOM-CECA, 2017)
- *Education Toolkit, Methods and Technique from Museum and Heritage*

Education (ICOM-CECA/LCM, 2017)

- *Natural History Museums Conference Planning Guide* (NATHIST, 2018)

  Guidelines on Deaccessioning of the International Council of Museums (ETHCOM, 2019).

3. Brazilian Institute of Museums and the Resolution No. 2/2020

In 2020, the Federal Government sanctioned the Resolution No. 2, providing for the technical and administrative procedures for the preparation, implementation, and evaluation of risk management plans for museum heritage, within the scope of museum units managed by the Brazilian Institute of Museums – Ibram (IBRAM, 2020). In 2021, the revised version of the Brazilian Museum Heritage Risk Management Program was presented to the community (IBRAM, 2021). The program aims to support Ibram's action strategies and guide Brazilian museums on the planning, prevention, and control of risks to museum heritage, with a view to minimizing their effects, responding to emergency situations, and favouring the qualification of the museum management of museum institutions and sustainability in decision-making aimed at preservation and security.

The new version of the program foresees lines of action around thematic axes (new or renewed) that correspond both to the expectations of the museological field and to the perspectives posed by the institutional scenario. The program thus preserves the set of axes that thematically incorporate the several dimensions of Ibram's performance in risk management in museums: articulation and partnerships (at various levels), research, technical guidelines and recommendations, training and sharing of knowledge and expertise with professionals in the museological field. The five stages of risk control are present in the program: 1. *Identify* - identify the risks that

present themselves in the institution; 2. *Detect* - possible actions/damage that will be caused by the risks; 3. *Block* - measures that must be taken to minimize or avoid the risks; 4. *Respond* - actions taken in case of emergency; and 5. *Recover* - interventions on assets to reverse the damage.

The program remains divided into four axes:

- The first is *governance and articulation*, which brings together the guidelines, strategies, and actions for the integrated implementation of the program in its dialogue with all areas of Ibram (headquarters, museums, and representations), with the museological field (Brazilian museums, and networks of museums and professionals, teaching centers, national and international platforms, councils, and committees), public security institutions and others related to museums;
- The second axis is *risk planning and prevention*, which is responsible for preparing and/or disseminating methodological recommendations and/or normative instruments in order to support museum teams in the elaboration of their internal strategic planning, integrating the concepts of risks, risk management and mitigation measures focused on the main actions of preservation and safety of collections, public and buildings; to provide tools for consulting and orienting Brazilian museums regarding actions and concepts in the area of risk management; promote and disseminate training in the area of planning for museums and promote and/or integrate research on risk mapping to museum heritage;
- The third axis is *risk monitoring and control*, which brings together strategies and actions for monitoring risks to museum assets, with a view to improving the efficiency and sustainability of risk control and treatment. The axis attributions seek to promote and disseminate training on monitoring, control, and treatment of risks, involving topics such as priorities for action, cost-benefit of measures and feasibility of implementation;

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

The fourth axis is the *response to emergencies*, which brings together strategies and actions for responses to emergency situations in Brazilian museums, considering the containment of losses in the value of museum assets and the recovery of damages. Among the attributions of the axis are: maintaining and improving the Volunteer Bank in operation, with systematized and updated information; promote campaigns to publicize the Volunteer Bank and encourage membership; guide the volunteers registered at the bank in terms of training relevant to acting in emergency situations; disclose to Brazilian museums the technical and financial resources available for actions related to heritage at risk or emergency situations; guide and provide technical support for actions to recover damages and losses caused to museum heritage and maintain and improve the Register of Disappeared Musealized Cultural Assets (CBMD) in operation.

Final considerations

Currently, museum has been incorporated several concepts, such as democratization, inclusion, and decolonization, shaping a different relationship between the questions posed by academic areas, mainly considering the affective relationships awakened by objects. Thus, the methodology for valuing collections, which is crucial for the establishment of protection programs, must also incorporate new issues, such as the voices of extinct communities and the political value imprinted on the objects.

The relationship of knowledge expressed by documents, works of art and artifacts has been privileged in conceptual structures, to the detriment of affective and symbolic relationships of use and perception. This restricted approach poses an operational problem about the validity and meaning of museum objects in terms of memory over time, their capacity for reminiscence and reverberation of identities, in addition to their political use as an instrument of resistance of certain cultures or modes of life. By

understanding the displacement of subjects in relation to objects and the demand to use these objects as instruments for the rescue of ways of doing and expressing themselves in different communities, museum collections begin to tread an inverse path: if in the past these objects were expropriated from the communities of origin through the action of purchase, collection and, eventually, illegal trafficking, in contemporary society producing systems of access by communities to their cultural goods gives back to these communities a sense of belonging and cultural identity.

However, such an operation is not simple and demands an interdisciplinary, collaborative network supported by technical-scientific skills. Before granting access, extensive documentation and conservation work for museum collections is required. In the same way, no conceptual discussion about the social role of the museum today will be able to answer this question without a clear preservation policy, since objects lost due to fires, neglect, crimes, or degradation will totally lose their ability to articulate new voices through the interpretation, access, and reintegration of meanings. Thus, the ouroboros of the question is manifested here: the conceptual principles that discuss the meaning of collections are emptied in the face of the destruction of material culture; in the same way, safeguarding material culture through conservative technical-scientific management is meaningless in the face of the emptying of the conceptual meaning of the collections. Here, the power of Heritage Science fits in to reconcile arts and humanities, science and technical skill in practical actions that safeguard cultural heritage from the forces of physical and spiritual destruction.

In the pragmatic field of risk management and conservation diagnosis programs, the establishment of parameters, methodological models and international guidelines facilitates the generation of regulatory public instruments. What is possible to map from the normative instruments raised in the research? What is the mismatch between academic-scientific discussions and public policies? How and to what extent do objects suffer from the double inertia of the system: the inability to use technical-scientific skills to safeguard the collections and the inability to expand their access,

primarily to the communities where these collections come from?

There are no ready-made and conclusive answers, but good questions can support our actions as managers, consultants, and conservators.

Acknowledgements

We thank the Ministry of Science, Technology and Innovation and the National Council for Scientific and Technological Development - CNPq - for approving the project *Protocols for sustainable management of museum collections: technical-scientific competences for the definition of standards, recommendations, and public policies of safeguard* -, coordinated by researcher Yacy-Ara Froner, as well as the Graduate Program in Arts and the Graduate Program in Built Environment and Sustainable Heritage, at the Federal University of Minas Gerais. This program takes part of Research Group ARCHE – Art, Conservation, and History Environment – and LACICOR-UFMG – Laboratory of Conservation Science.

References

Alcantara, R. (2021) *Standards in preventive conservation: Meanings and applications.* https://www.iccrom.org/sites/default/files/ICCROM_04_StandardsPreventiveConser_en.pdf.

Benjamin, W. (1985). *Magia e técnica; Arte e política.* Brasiliense.

Berenson, B. (1972). *Estética e história.* Perspectiva.

Feller, R. L. (1963). Standards of exposure to light. *Bulletin of the American Group. International Institute for Conservation of Historic and Artistic Works*, *4*(1), 10-12. https://www.jstor.org/stable/i359166

Froner, Y. A., & Rodrigues-Carvalho, C. (2019). The fire at the National Museum of Brazil in 2018. *ICOM-CC On Board***,** 17, July**.** http://www.icom-cc.org/54/document/onboard--news-and-reports-from-the-icom-cc-directory-board/?id=1654#.YRLR2tNKiWc

Froner, Y. A. (2016). *Intellectual co-operation institutions for cultural heritage protection: History, science, training, and policies.* CAPES/ICCROM (Report).

Froner, Y. A. (2017). International policies for sustainable development from cultural empowerment. *Journal of Cultural Heritage Management and Sustainable Development*, *7*(2), 208-223.

Froner, Y. A. (2018). Storage collection recommendation from interdisciplinary tools: Documentation, preventive conservation, curatorship, and architectural issues. *CIDOC Annual Conference, Heraklion, Greece, 2018*. http://www.cidoc2018.com/sites/default/files/CIDOC2018_paper_111_0.pdf

IBRAM, ICOM, & ICCROM. (2020). *Declaração do Rio de Janeiro.* https://www.iccrom.org/sites/default/files/2020-01/declaracaoriojaneiro.pdf

IBRAM. (2020). *Resolução normativa Nº 2, de 19 de outubro.* https://www.in.gov.br/web/dou/-/resolucao-normativa-n-2-de-19-de-outubro-de-2020-283747959

IBRAM. (2021). *Programa de gestão de riscos ao patrimônio musealizado brasileiro.* https://www.gov.br/museus/pt-br/assuntos/noticias/ibram-divulga-versao-revisada-do-programa-de-gestao-de-riscos-ao-patrimonio-musealizado-brasileiro

ICCROM/UNESCO. (2011). *International storage survey.* ICCROM. https://www.iccrom.org/wp-content/uploads/RE-ORG-StorageSurveyResults_English.pdf.

ICOM Brasil. (2009). *Código de ética*. https://icom.org.br/wp-content/themes/colorwaytheme/pdfs/codigo%20de%20etica/codigo_de_etica_lusofono_iii_2009.pdf

ICOM. (2019). Measures to safeguard and enhance collections in storage throughout the world. In ICOM Kyoto2019. *Resolutions adopted by ICOM's 34th General Assembly* (Resolution No 4). https://icom.museum/wp-content/uploads/2019/09/Resolutions_2019_EN.pdf

ICOMOS. (1992). *ICOMOS New Zealand charter for the conservation of places of cultural heritage value.* https://www.gdrc.org/heritage/icomos-nz.html

NHSF. (2010). *National heritage science strategy.* https://www.heritagescienceforum.org.uk/what-we-do/national-heritage-science-strategy.

Pedersoli Jr., J. (2019), *Cultural heritage fire statistics.* ICCROM. https://www.iccrom.org/sites/default/files/Fire%20risk%20management%20seminar_Rio_JLP_17_6_2019.pdf

Ricoueur, P. (2007*). A memória, a história, o esquecimento*. Unicamp.

UK's House of Lords. (2005). *Science and Technology Committee. 9th report of session 2005–06*. https://publications.parliament.uk/pa/ld200506/ldselect/ldsctech/256/256.pdf.

UNESCO. (2015a). Proposal for a non-binding standard-setting instrument on the protection and promotion of various aspects of the role of museums and collections. In

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

UNESCO, General Conference, 38th, 2015, 38 C/25.
https://unesdoc.unesco.org/ark:/48223/pf0000233892

UNESCO. (2015b). *Recommendation concerning the protection and promotion of museums and collections, their diversity, and their role in society*.
http://www.unesco.org/new/en/culture/themes/museums/recommendation-on-the-protection-and-promotion-of-museums-and-collections/

Froner, Y. A. (2023). Heritage Science Networks and public policies: The importance of protocols, standards, and normative tools, and the Brazilian Institute of Museums guidelines regarding collections risk management. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 120-142). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta7

Notes on the author

Yacy-Ara Froner graduated in History from the Federal University of Ouro Preto (1988), holds a master's in Social History from the University of São Paulo (1994) and a PhD in Economic History, with emphasis on cultural heritage from the University of São Paulo (2001). She is a specialist in restoration by the Centro de Conservação e Restauração-CECOR (1992) and in the conservation of collections by the Getty Conservation Institute-GCI (1995). She is also a specialist in Baroque Art and Culture by the IAC-UFOP (1992). Currently, she is a professor at the School of Fine Arts at UFMG, working with undergraduate courses in Visual Arts and Conservation-Restoration. Permanent professor of the Graduate Program in Arts at the School of Fine Arts of UFMG and of the Graduate Program in Built Environment and Sustainable Heritage at the Faculty of Architecture of UFMG, having served as coordinator between 2018 and 2020. She is a consultant and researcher in the areas of History of Art, History of Collections and Preventive Conservation, a researcher at LACICOR (Laboratory of Conservation Sciences), and she coordinates the ArCHE research group (Environments - Art, Conservation and History). Between 2015 and 2016, she was a senior postdoctoral fellow with research at ICCROM.

NOBUYUKI KAMBA

Emeritus member of the Tokyo National Museum | nbd02744@nifty.com

Protecting museum objects from the threat of natural disasters.

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

Abstract

The wisdom and lessons left behind by our predecessors are instructive from various perspectives for our modern efforts in disaster preparedness and mitigation. Voltaire wrote "A Poem on the Great Lisbon Earthquake" about the situation after the Great Lisbon Earthquake in 1755, describing how to respond to a major disaster; the 1854 Ansei-Nankai Earthquake in Wakayama, Japan, resulted in the immortal disaster textbook "Inamura no hi (The Fire in the Rice Paddies)", in which the villagers sacrificed their precious personal property to save lives. Both Portugal and Japan are earthquake-prone countries due to faults that occur at plate boundaries, but the Japanese archipelago has a history of being struck by various large-scale natural disasters such as typhoons and floods in addition to earthquakes due to its geographical environment. In this disaster-prone country, various disaster mitigation measures for cultural heritage have been steadily established over the past 30 years through a combination of administrative policies and private sector activities, such as the Red Cross concept for cultural heritage, cultural heritage rescue operation, historical resource networks, and the cultural property registration system etc. Specific measures and responses will be introduced, along with examples such as the effectiveness of wooden preservation boxes, subsidized activities by private organizations, radioactive contamination, stabilization treatment, and inland water flooding.

Keywords

Inherited wisdom; Natural disasters; Disaster preparedness; Disaster mitigation; Stabilization processing.

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

Introduction

Starting with the Lisbon earthquake. At the bottom of the Strait of Gibraltar is a plate boundary where the African and Eurasian plates collide, and there is the Azores-Gibraltar fault. On November 1, 1755, All Saints' Day, this fault shifted significantly for 300 kilometres, and a major earthquake, estimated to be around 9.0 on the Richter scale, struck Lisbon. Tens of thousands of people lost their lives in the massive earthquake, tsunami, and ensuing fires, and Lisbon, a major European city, was instantly destroyed. Sebastião José de Carvalho e Melo (Marquês de Pombal), the prime minister of the time, was quick to issue an order to "bury the dead and provide food for the survivors," and led the city's recovery from the disaster under a rational urban planning system. This is considered to have been the first response to an urban disaster that is still relevant today. Voltaire's "Poem on the Great Lisbon Earthquake," which describes the situation at that time, is famous as an epoch-making text in the context of that period, although it has generated a lot of controversy (Voltaire, 1756).

Next, I would like to discuss the famous Japanese anecdote "Inamura no hi (The Fire in the Rice Paddies)". When Gohei, a village headman living on high ground, senses a tsunami coming, he sets fire to bundles of freshly harvested rice straw piled up in the rice paddies to warn the villagers in the foothills near the coast of the imminent danger. The villagers, seeing the flames of the rice straw, mistakenly believe that the village headman's house is on fire, and rush to the house, only to be saved in the nick of time from the tsunami that rushes in and engulfs the village shortly after. This story of Gohei, who sacrificed his personal fortune to save the lives of the villagers, is based on Lafcadio Hearn's English work "A Living God" (Hearn, 1897) based on the events of the November 5, 1854 Ansei-Nankai Earthquake, which measured over 8 on the Richter scale, and was retold by Nakai Tsunezo as "Inamura no hi (The Fire in the Rice Paddies)", which was popular among children before the war and is still a timeless disaster teaching tool. It has been popular among children since before World War II and is still used in textbooks as an enduring teaching material on disasters. In 2015, the United Nations General Assembly designated November 5, the original date of this

anecdote, as "World Tsunami Day" because of its popularity around the world. It serves as a catalyst for education to raise people's awareness about the risk of tsunamis.

I would like to introduce one more topic of tsunami awareness. In the Sanriku region, there is an old saying, "If a tsunami happens, you must be prepared for it." In the same way, there is a motto, "Life Tendenko," which means to protect one's own life by oneself, and "Tendenko" or "each one for himself" has been handed down for a long time and deeply engraved in the minds of people. The importance of this motto was reaffirmed as "Tsunami Tendenko" in a panel discussion at the first "National Coastal Municipal Tsunami Summit" held in Miyako City, Iwate Prefecture, in 1999 (Yamashita, 2008).

It is fitting to conclude this section with what physicist Torahiko Terada had to say about human habit, who wrote the following in his book "Tsunami and Human Beings" about the Sanriku Tsunami that hit the Sanriku coast on June 15, 1896, caused by an earthquake exceeding 8 on the Richter Scale. He said “But the trouble is that 'nature' is faithful to its past habits. Earthquakes and tsunamis do not care about new fads of thought, but come in stubbornly, conservatively, and vindictively. If these natural phenomena are so recurring, it seems to me that the local residents should have thought of some countermeasures long ago to prepare for them and prevent disasters from occurring. This is what everyone would think at this time, but in fact it is a human natural phenomenon of the human world that this is not the case” (Terada, 1933).

1. The Japanese Archipelago is prone to large-scale natural disasters

In this section, the natural environment and disasters surrounding the Japanese Islands will be discussed. The formation of volcanoes is related to three factors: the Central

Ridge, where continental plates separate from each other on the seafloor; subduction zones, where plates collide and one is pushed under the other continent; and hot spots, where the mantle is hotter than the surrounding mantle. Volcanic activity occurring at the Central Ridge is rarely visible because of the ocean floor, but Iceland is an extremely rare place where the Central Ridge and hotspot are in the same place, and Hawaii is an island formed by hotspot volcanoes. The circum-Pacific volcanic belt, with its numerous volcanoes, lies on a plate subduction zone, and the Japanese archipelago is located there. Mount Vesuvius in Italy, which erupted as far back as 79AD, and the Tongan volcano Funga, which erupted as recently as January 15, 2022, are both volcanoes that formed in the subduction zone. This subduction zone is also the site of earthquakes caused by fault displacement. It is a well-known fact that Japan, which is located in a subduction zone, is one of the most earthquake-prone countries in the world (Fig. 1). 10-15% of the world's earthquakes, and 20% of those with a magnitude of 6.0 or greater, occur in Japan (Japan Meteorological Agency, 2022a).

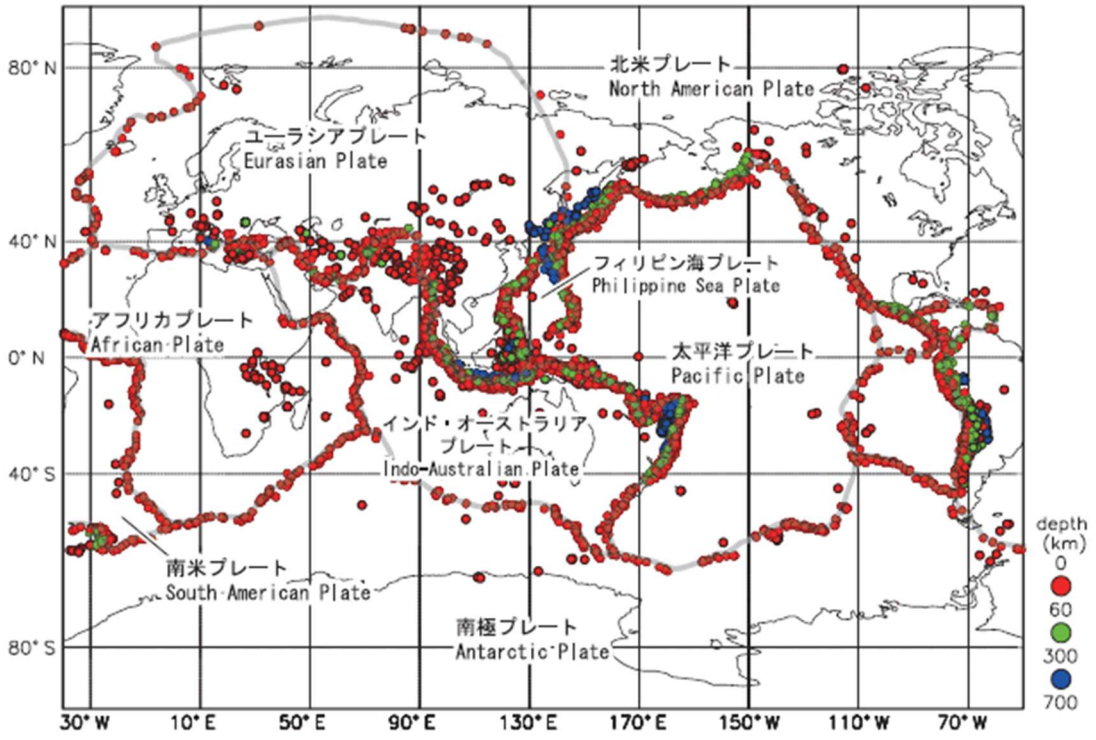


Fig. 1. Distribution of epicenters and plates in the world (Government of Japan, 2017).

In addition to volcanic eruptions and earthquakes, large-scale typhoon and flood disasters also occur frequently in the Japanese archipelago. The archipelago is in a monsoon zone, and the rainy season usually lasts from June to July. In recent years, however, rain clouds called "linear precipitation zones" frequently form, which dump large amounts of rain locally for long periods of time. In addition, typhoons that originate near the equator, move northward, and approach or traverse the archipelago from summer to autumn tend to become larger and larger, resulting in significantly higher maximum wind speeds and rainfall, and a wider range of typhoon power, making them more likely to cause large-scale disasters.

Three examples of natural disasters in recent years are presented below. As an example of an earthquake disaster, the Great East Japan Earthquake should be introduced that occurred at 14:46:18 on March 11, 2011, 130 km off the coast of Sanriku in the Pacific Ocean, causing seismic tremors and large tsunami waves over a wide area from Tohoku to Kanto along the Pacific coast and inland. The Japan Meteorological Agency named the earthquake "The 2011 off the Pacific coast of Tohoku Earthquake" and the name of the disaster brought by the earthquake was decided as "Great East Japan Earthquake (Japan Meteorological Agency, 2022b). The earthquake not only caused extensive damage to human life, social infrastructure, and industry, but also inflicted unprecedentedly severe damage to cultural heritage-related facilities and their collections, as well as to private collections of cultural heritages. In addition to the damage and deformation caused by the earthquake, the tsunami that immediately followed destroyed the facilities, and some of the collections were lost in the outflow. Although they escaped being washed away, most of the cultural objects were submerged in dirty seawater, and a vast number of objects were in danger of rapid deterioration. In addition, the core meltdown at TEPCO's Fukushima Daiichi Nuclear Power Plant, which was operating in Okuma-cho, Futaba-gun, Fukushima Prefecture, released a large amount of radioactive materials, and as a result, access to the surrounding area was severely restricted.

The example of a volcanic eruption is the eruption of Mt. Ontake. Since 1978, there have been many earthquakes at the southeastern foot of Mt. Ontake. In 1984, the western Nagano Prefecture earthquake recorded a magnitude of 6.8, causing large-scale landslides and slope failures on and around Mt. Most recently, a small phreatic eruption occurred in 2007, and ash ejected from the crater was found in an area about 200 m northeast of the crater (Japan Meteorological Agency, 2022c). Despite these conditions, many climbers and tourists visited Ontake, which has long been considered a sacred mountain and is one of the 100 most famous mountains in Japan. The eruption site was on the southwest side of Kenganbō, and pyroclastic flows were observed flowing down the south slope for more than 3 km. The eruption caused human suffering with 63 dead or missing and 69 injured.

And an example of an intensifying typhoon: Typhoon No. 19 (Fig. 2), which originated near Minamitorishima on October 6, 2019, moved northward south of Japan, and made landfall on the Izu Peninsula with large and strong force just before 19:00 on October 12 (Japan Meteorological Agency, 2022d).

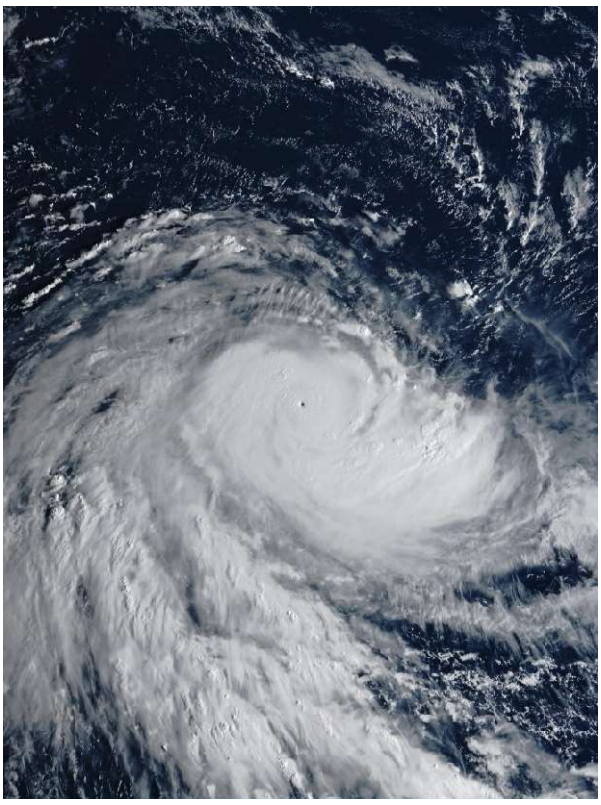


Fig. 2. Typhoon Hagibis, known in Japan as Typhoon No.19. This typhoon originated at 3:00 a.m. on October 6, 2019, off the eastern coast of the Mariana Islands and made landfall in Japan on October 12. It brought record-breaking rainfall to Shizuoka Prefecture and the Kanto, Koshinetsu, and Tohoku regions, causing extensive damage. (Advanced Himawari Imager. Japan Meteorological Agency's Himawari-8 satellite - Hagibis 2019-10-07 0600Z.jpg. Public Domain).

It then passed over the Kanto region and changed to an extratropical cyclone east of Japan at 12:00 pm on the 13th. With the approach and passage of Typhoon No. 19, heavy rain, storms, high waves, and storm surges were observed over a wide area, and total precipitation from the 10th to the 13th reached 1,000 mm at Hakone, Kanagawa Prefecture, and exceeded 500 mm at 17 locations mainly in eastern Japan. In particular, many locations in Shizuoka and Niigata prefectures, the Kanto Koshin region, and the Tohoku region experienced record-breaking rainfall. In terms of winds, the maximum instantaneous wind speed of 43.8 meters at the Edogawa waterfront in Tokyo was the highest in recorded history, and the maximum instantaneous wind speed exceeded 40 meters at seven locations in the Kanto region. Record high waves were observed at Irozaki, Shizuoka Prefecture, with wave heights of 13 meters, and at Kyogamisaki, Kyoto Prefecture, with heights exceeding 9 meters. In some places in Shizuoka Prefecture, Kanagawa Prefecture, and the Izu Islands, the storm surge exceeded the highest level ever recorded, including Miyakejima Island in Tokyo, where the tide level was 230 cm. The heavy rainfall caused a series of rivers to overflow over a wide area, as well as landslides and flooding damage. These heavy rain disasters and windstorms caused human casualties, damage to homes, and damage to lifelines such as electricity, water, roads, and railroad facilities. In addition to damage to cultural heritages caused by rivers overflowing their banks or bursting their banks, the storage rooms of art museums were submerged due to internal flooding.

2. Disaster prevention and mitigation measures for cultural heritage constructed over the past 30 years

2.1. Red Cross concept for cultural heritage

The late Japanese-style painter Ikuo Hirayama felt the need to protect the world's cultural heritage and was an early proponent of specific activities. He expressed this desire as the "Red Cross of Cultural Heritages" (Hirayamma et al., 1997). He devoted

himself to the conservation and restoration of the Dunhuang Grottoes, Japanese art works in abroad, and the Angkor monuments, and in 1988 he established the Foundation for the Promotion of Cultural Heritage Protection, moving full steam ahead toward the realization of the Red Cross Organization for Cultural Heritages. This was Japan's first attempt to organize such a private organization to protect the world's cultural heritage in times of peace and in times of emergency. Currently, the foundation's main effort is to provide donation grants to projects that work for the protection of cultural properties.

2.2. Cultural property rescue

The magnitude 7.3 Hyogo-ken Nanbu Earthquake that occurred on January 17, 1995, was a typical urban disaster that hit the Hanshin area, one of the economic and industrial centers of Japan, and was named the Great Hanshin-Awaji Earthquake. This disaster led to the organization of Japan's first cultural property rescue service. This activity involved moving damaged cultural heritage from public facilities and private residences to safe locations and giving necessary treatment to preserve them. The Agency for Cultural Affairs took the lead in the rescue activities, forming a committee of researchers from universities and national institutions, private conservation and restoration technicians, and academic societies related to cultural heritages, with its secretariat at the National Research Institute for Cultural Properties, Tokyo. As this was the first project of its kind, the scope was limited to nationally designated objects, and the project ended the following year with many issues left unresolved.

On March 31, 2011, about three weeks after the Tohoku-Pacific Ocean Earthquake of magnitude 9.0 occurred, the Agency for Cultural Affairs established the implementation guidelines for the Cultural Properties Rescue Project, and the Rescue Committee was formed in early April (Fig. 3).

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

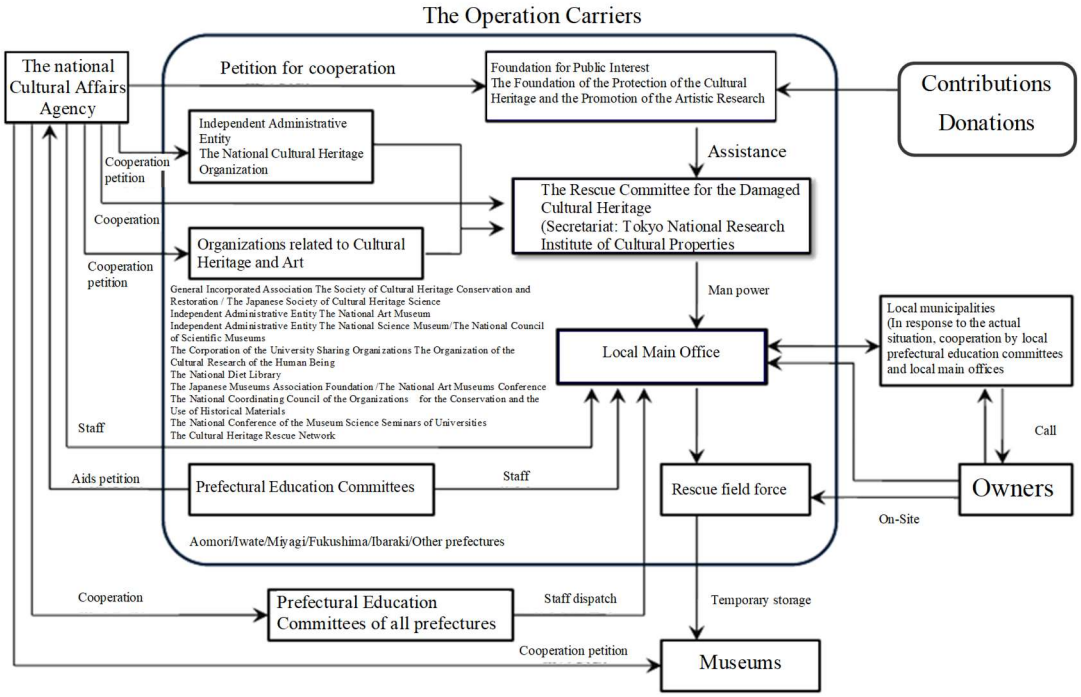


Fig. 3. Project of salvaging cultural properties affected by the 2011 earthquake off the Pacific Coast of Tohoku and related disasters (Committee for Salvaging Cultural Properties Affected by the 2011 Earthquake Off the Pacific Coast of Tohoku and Related Disasters, 2012).

Upon receiving a request, the Rescue Committee set up a local headquarters in the affected prefecture, and the committee headquarters, the local headquarters, and the prefectural board of education worked together to provide support. Since it was difficult to enter the affected areas in Fukushima Prefecture due to the nuclear power plant accident, specific activities began two years after it became possible to enter the area (Kamba, 2012).

2.3. Historical resource network

Around the same time as the cultural property rescue activities, the "Information Network for the Conservation of Historical Materials" was established mainly by historical societies based in the west Japan region for the conservation of historical

materials damaged in the Great Hanshin Earthquake. The organization, in which university faculty members, students, staff of historical archives preservation institutions, and historical researchers participated as volunteers, was formed with the main purpose of rescuing historical heritage, mainly documents in private collections, etc. In May 2002, it was reorganized as a nationwide organization, the Historical Materials Network, and currently has about 30 member organizations nationwide, which are working to protect cultural heritage. It has become a major force for the protection of cultural heritage (Rekishishiryo Network, 2022).

2.4. Cultural heritage registration system

When a nationally designated building is damaged, a roadmap for reconstruction is quickly laid out, and restoration work begins at an early stage of disaster recovery. Although there are many cultural heritages other than those designated as such that should be preserved, there is an extremely high risk that these undesignated properties will disappear along with the rubble removal in the event of a disaster. According to the Hyogo Prefectural Board of Education, 800 of the approximately 1,200 undesignated historical and cultural structures surveyed were damaged in the 1995 Great Hanshin-Awaji Earthquake, and 30% of them disappeared from the city within a few months of the disaster. Taking advantage of this lesson learned, a "cultural property registration system" was established in 1996. The aim of this system was to protect a wide variety of modern and early modern buildings that were difficult to designate under the existing national cultural property system. In 2004, the system was revised to include a wide range of fields, including arts and crafts (Ministry of Cultural Affairs, 2022a).

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

2.5. International Committee of the Blue Shield

Just as the International Committee of the Red Cross (ICRC) stands for humanitarian protection, the International Committee of the Blue Shield (ICBS) stands for the protection of cultural heritage. The ICBS is a symbol of cultural heritage protection. During the Yugoslav civil war of the 1990s, member states and UNESCO, faced with the reality that the Hague Convention alone was not effective, conceived of a private, expert organization to serve as a Red Cross for cultural heritage. The ICBS encourages the preservation and respect of cultural heritage and provides advice and assistance in crisis management and other specific activities. In 1999, ICBS was also given the mandate to respond to natural disasters, which have been on the rise on a global scale in recent years. A national committee has not yet been organized in Japan (Blue Shield International, 2022).

2.6. Project for rebuilding disaster-affected museums

A large amount of cultural heritage damaged by the 2011 Great East Japan Earthquake was brought to temporary storage by Cultural Heritage Rescue. However, there is a high risk of further deterioration and damage if they remain contaminated by the tsunami, and urgent conservation measures, such as cleaning, must be taken (Fig. 4).

Fig. 4. Cleaning and stabilization process of natural history specimens damaged by the tsunami was carried out by local experts and collaborators in 2011.

Photo courtesy of Rikuzentakata City Museum.

Furthermore, since it is difficult to store cultural properties contaminated by tsunami-contaminated seawater in the storage rooms of museum facilities, closed schools and other facilities were exclusively used for temporary storage, and the environment of storage facilities had to be improved urgently. In addition to these emergency measures, full-scale treatment of the large amount of damaged cultural properties had to be carried out in a systematic manner. In order to ensure the long-term and stable implementation of such work, the Agency for Cultural Affairs has implemented the "Restoration of Damaged Museums Project" to subsidize the cost of conservation treatment of cultural objects in the affected prefectures from FY2012 to FY2020, with some projects receiving extended subsidies thereafter (Ministry of Cultural Affairs, 2022b).

2.7. Project to promote cultural property disaster prevention network

From April 2014 to March 2020, the Agency for Cultural Affairs and the National Institutes for Cultural Heritage will take the initiative in the "Cultural Property Disaster Prevention Network Promotion Project" to build Japan's cultural property disaster prevention system by utilizing the network of many related organizations cultivated through the rescue of cultural heritages after the Great East Japan Earthquake, and to establish local cultural heritage disaster prevention systems and conduct training related to rescue activities. The project was implemented from April 2014 to March 2020 under the leadership of the Agency for Cultural Affairs and the National Institutes for Cultural Heritage. Specifically, the project aims to: (1) Conduct research on how the National Institutes for Cultural Heritage should perform disaster prevention and rescue operations for cultural properties; (2) Collect information on cultural property disaster prevention and rescue; (3) Provide guidance, advice, and training on cultural property disaster prevention and rescue; (4) Research on the storage environment, stabilization and repair of damaged cultural properties based on conservation science; (5) Establishment of a network for disaster prevention and rescue of cultural properties in

an emergency; and (6) International collaboration on disaster prevention and rescue of cultural properties in line with the Sendai Framework for Disaster Prevention of the United Nations Conference on Disaster Reduction. During this period, there have been frequent natural disasters such as the Kumamoto earthquake, flooding in northern Kyushu, torrential rains in western Japan, typhoon damage in Chiba, and flooding along the Kuma River (Cultural Heritage Disaster Risk Management Center, 2021).

2.8. Sendai Framework for Disaster Reduction 2015-2030

The Sendai Framework for Disaster Reduction is an international guideline for disaster reduction through 2030 adopted by United Nations (UN) member states at the 3rd UN World Conference on Disaster Reduction held in Sendai, Japan from March 14 to 18, 2015, and approved by the UN General Assembly in June 2015. It is the successor to the Hyogo Framework for Action 2005-2015, which was the most comprehensive international agreement on disaster risk reduction. It emerged from three years of consultations among UN Member States, non-governmental organizations (NGO), and other stakeholders, supported by the UN International Secretariat for Strategy for Disaster Reduction (UNISDR), and highlights the need for Member States to address disaster risk reduction and climate change adaptation (United Nations Office for Disaster Risk Reduction, 2022).

2.9. Cultural Heritage Disaster Risk Management Center

On October 1, 2020, the Cultural Heritage Disaster Risk Management Center was established as a new organization within the National Institutes for Cultural Heritage, with its headquarters located at the Nara National Research Institute for Cultural Properties. This means that the "Cultural Properties Disaster Prevention Network Promotion Project," which has been implemented since FY2014, has progressed to the

establishment of a permanent organization. The mission of the Center is to establish a system to protect cultural properties in various fields such as buildings, arts and crafts, and folk cultural properties from disasters (Cultural Heritage Disaster Risk Management Center, 2022).

2.10. Regional disaster prevention plans

In addition to the strengthening of systems at the national level, local governments are also expanding their efforts to strengthen their resilience against disasters. For example, in the "Tono City Regional Disaster Prevention Plan," in Iwate Prefecture, which provided logistical support as a supply base to assist disaster areas after the Great East Japan Earthquake, an item "(5) Matters related to damage assessment of cultural heritages" is already clearly stated as a matter related to implementation of emergency measures for cultural properties in the event of disaster. In the wake of the Great East Japan Earthquake, a new item "(2) Support for Education" was added to the logistical support activities section of the "Tono City Regional Disaster Prevention Plan" and cultural heritage rescue was officially included (Tono City, 2022).

2.11. National Treasury subsidies

The "Guidelines for National Treasury Subsidies for Restoration, Disaster Prevention, and Public Utilization of Important Cultural Properties" established under the Law for the Protection of Cultural Properties enacted in 1950 stipulates government subsidies for the management and restoration of important cultural properties and for the public utilization of important cultural properties. In recent years, subsidies have been added to the Guidelines to cover the cost of "installation of seismic isolation platforms and seismic isolation devices," and earthquake countermeasures for Important

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

Cultural Properties have been actively implemented (Fig. 5) (Ministry of Cultural Affairs 2022c).

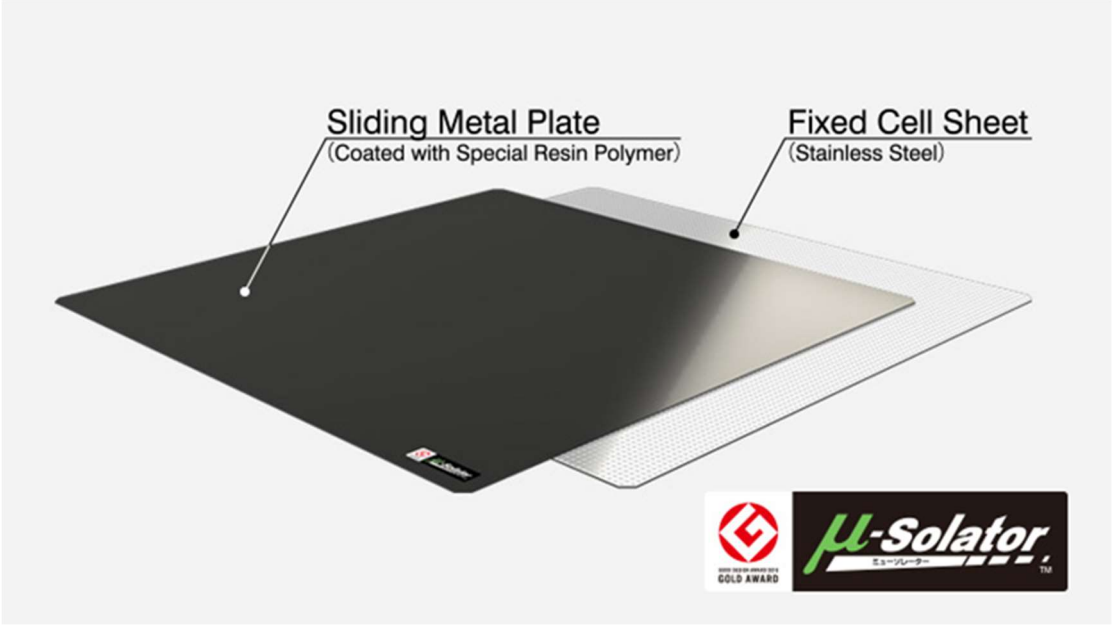


Fig. 5. Government subsidy for national treasury have been expanded to cover the cost of "installation of seismic isolation measures and seismic isolation devices," and earthquake countermeasures have been actively implemented. Photo courtesy of Ideal Brain Co. Ltd.

3. Case studies

3.1. Effects of storage boxes

The direct effects of earthquakes on cultural objects are the tipping over of objects due to shaking and damage caused by falling from a height. To prevent objects from falling in storage rooms, many storage shelves are equipped with fall protection fences, and doors and screens are attached to the front of shelves to prevent falling. While these measures undoubtedly reduce the risk of objects falling, one way to increase safety is to use wooden storage boxes, as has been done traditionally. Wooden boxes are excellent preservation containers because of their shock-absorbing

properties that protect the objects inside from impact; during the Great Hanshin-Awaji Earthquake of 1995, some ceramics in paulownia boxes fell nearly 2 meters from shelves without damage, while other pots left naked on storage shelves were all wrecked when they collided (Fig. 6) (Kamba, 2022).

Fig. 6. Wooden boxes which have been traditionally used to keep objects are excellent preservation containers because of their shock-absorbing properties that protect the objects inside from impact.

3.2. Subsidized activities by private institutions

In the aftermath of the Great East Japan Earthquake that occurred on March 11, 2011, the Foundation for Cultural Properties Protection and Art Research, in cooperation with the Agency for Cultural Affairs, has been supporting rescue projects for damaged cultural properties from the beginning, using donations of over 450 million yen from individuals, corporations, and other organizations. For example, the Foundation supported the restoration of the Otokoyama Sake Brewery in Kesennuma City, Miyagi

Prefecture, with the cooperation of Hermes Japan. The tsunami's loss and damage to ritual implements makes it difficult to resume the festivals handed down in the community. Recognizing the healing and enlivening power of festivals, the foundation has also provided funds for intangible cultural assets to help revive festivals. In addition, a donation to the Foundation from writer Kyogoku Natsuhiko, has subsidized the restoration of the "Yoshida Family Documents" in Rikuzentakata City, in line with his request that it be used to preserve cultural properties made of paper damaged by the tsunami (Foundation for Cultural Heritage and Art Research, 2022).

3.3. Radioactive contamination

The accident at Fukushima Daiichi Nuclear Power Plant of the Tokyo Electric Power Company (TEPCO) resulted in strict restrictions on entry into the surrounding area, depending on the level of radiation, in order to prevent the spread of health problems caused by the released radioactive materials. The facilities for cultural properties left behind in the restricted area had been without electricity supply for nearly a year without any staff to manage the facilities, but as of December 2011, the Fukushima Prefectural Board of Education and the Agency for Cultural Affairs conducted a survey on radiation levels inside the facilities, and found that the inside of the Futaba Town Museum of History and Folklore was 0.2 μSv/h or less inside the Futaba Town Museum of History and Folklore as of December 2011. Similar radiation levels have since been reported from other towns. Since the radiation levels were lower than those outdoors, though by no means safe, a decision was made to conduct rescue activities for the cultural properties left behind in the facility. Rescue operations were carried out in accordance with the manuals, which included the following: workers whose cumulative radiation dose exceeded 1 mSv/year were not allowed to engage in any further work, and work was stopped when the radiation level inside the facility exceeded 2.5 μSv/h. The radiation doses of the cultural property materials to be removed were also measured in advance, and only those with a figure of 1,300 cps or

less as measured by a scintillation survey meter were targeted for movement. The actual dose was reported to be around 100 to 200 cps. About 6,000 items from the collections of the Futaba Town Museum of History and Folklore, the Tomioka Town Museum of History and Folklore, and the Okuma Town Folk Lore Museum were moved to a building once used as Fukushima Prefectural Soma Girls High School (Fig. 7) (Kamba, 2019).

Fig. 7. The rescue operations within a restricted area were carried out in accordance with the manuals. This allowed the relocation of approximately 6,000 items from the museum collection to safer facilities (© artscape, 2013).

3.4. Stabilization treatment

The damage caused by seawater from a large tsunami or storm surge is called "seawater loss." On April 2 and 3, 2011, many of the archives rescued from the Rikuzentakata City Library and brought to the Iwate Prefectural Museum were not only

covered in sediment and other materials, but also had fungal infections and smelled putrid even though the daily average outside temperature was below 10 degrees Celsius. Many of the documents were found to have fungal infections and smells of decomposition. In order to control the rapid deterioration of paper cultural objects such as old documents damaged by seawater, it is essential to remove sludge from the seafloor containing chemical substances, sterilize and remove fungi and bacteria contained in wastewater, desalinate seawater to remove salt, and degrease oil and fat contained in frozen fish and other materials discharged from fishing ports. Water washing is the simplest and most effective way to ensure the removal of mud, bacteria, salt, and grease, and is most effective for ancient documents written in ink on Japanese paper, but simple water washing may be difficult depending on the materials and techniques of the cultural properties. For example, there is a high possibility that the paint layer of oil paintings will peel off, and watercolour paintings, dye and pigment inks, and immersed ink will dissolve, making it necessary to devise various methods for cleaning. Partial removal by dry cleaning without water, temporary sterilization by fumigation, and control of deterioration by frozen storage are possible, but ultimately salt, oil, and sludge must be removed to a safe level and returned to a condition where they can be stored as before in a normal museum storage environment. This process of restoring cultural objects to their normal storage environment by controlling rapid deterioration is called stabilization treatment. The Great East Japan Earthquake was the first example of a stabilization treatment technology that needs to be implemented before full-scale repairs can be made to damaged cultural objects, and further development is still required (The Committee for the Multi-Organizational Co-Operative Project for Preserving and Restoring Cultural Assets Damaged by Tsunami, 2014).

3.5. Inland flooding

Typhoon No. 19 caused internal flooding in Kawasaki city on October 12, 2019, flooding all nine underground storage rooms of the Kawasaki City Museum, as well as the unpacking room and electrical room. In the vaults, which were flooded with 50,000 cubic meters of water, even the sturdy steel doors were destroyed by the water pressure, and paper objects swollen with water destroyed the shelves. The electrical room was damaged and the air conditioning in the storeroom was completely shut down, so the soaking wet collection had to wait in the high humidity environment for the start of the cultural heritage rescue operation. The outside temperature at the time was around 20 degrees Celsius, and the environment inside the storehouse was ideal for the growth of mold. Normally, rainwater collected through storm drains would have flowed into the river, but the water flowed back from the river and overflowed through manholes in the low ground around the museum. The overflowing water cascaded down to the lower underground parking lot and dry area of the museum, flooding the underground storage rooms. This phenomenon is known as internal flooding. From October 14, when the Cultural Heritage Disaster Risk Management Center was contacted, in cooperation with the Agency for Cultural Affairs and related organizations, provided advice from many experts and engaged in removal and emergency treatment of the approximately 230,000 artifacts that had been damaged by the water. On June 19, the removal of the damaged collection from the storehouse was completed, and after that, the works and materials were removed from the storehouse after disinfection and mold removal were completed. After July, the main work shifted to the stabilization process, which is still ongoing (Kawasaki City, 2022).

Final considerations

We are reminded that learning from the lessons of the past has great significance and practical value. Especially in the disaster-prone Japanese archipelago, disaster mitigation measures need to be constantly updated and made more effective by learning from the past. The rescue of damaged cultural heritage sites has become more efficient as experience has been gained. However, in order to rescue more cultural assets faster, it is necessary to collaborate with experts in disaster response, such as the Self-Defense Forces and fire departments. In order to accurately assess the damage to cultural heritage at the site of a disaster, it is necessary to acquire the ability to quantify the scale of damage, not to mention the importance of networking among experts. To move forward on these issues, we need to organize a Blue Shield National Committee in Japan that can respond more quickly to natural disasters.

Acknowledgement

I would like to express my sincere gratitude to Prof. Paula Menino Homem of the Faculty of Arts and Humanities of the University of Porto (FLUP) for inviting me to present at the online international meeting "Integrated Risk Management in Museums: Past Lessons, Future Ways".

References

Blue Shield International (2022). *History*. https://theblueshield.org/

Committee for Salvaging Cultural Properties Affected by the 2011 Earthquake Off the Pacific Coast of Tohoku and Related Disasters. (Ed.) (2012). *2011 activity report of the committee for salvaging cultural properties affected by the 2011 earthquake off the*

pacific coast of Tohoku and related disasters. Independent Administrative Institution National Institutes for Cultural Heritage.

Cultural Heritage Disaster Risk Management Center. (2021). *Bunkazaibousai network suishinjigyo katsudo hokokusyo, 2014-2019, Shiryo hen (Activity Report on the Project for Promoting the Network for Disaster Mitigation of Cultural Properties, 2014-2019, Document Volume)*. http://doi.org/10.24484/sitereports.91797

Cultural Heritage Disaster Risk Management Center. (2022). *Overview of the Cultural Heritage Disaster Risk Management Center*. https://ch-drm.nich.go.jp/

Foundation for Cultural Heritage and Art Research. (2022). *Relief and conservation projects for cultural heritages damaged in the Great East Japan Earthquake*. https://www.bunkazai.or.jp/02bunkazai/02_14.html

Government of Japan. (2017). *Distribution of epicenters and plates in the world*. Disaster Management, Cabinet Office. https://www.bousai.go.jp/kaigirep/hakusho/h22/bousai2010/html/zu/zu002.htm

Hearn, L. (1897). *A living god.* Houghton-Mifflin.

Hirayamma, I., & Tani, H. (1997). *Hirayama ikuo no bunkazai sekijuji (Ikuo Hirayama's Red Cross of Cultural Properties)*. Geijutsu shinbunsya.

Japan Meteorological Agency. (2022a). *How many earthquakes occur in the world and around Japan?* https://www.jma.go.jp/jma/kishou/know/faq/faq7.html#9

Japan Meteorological Agency. (2022b). *The 2011 off the Pacific coast of Tohoku Earthquake*. https://www.data.jma.go.jp/svd/eqev/data/2011_03_11_tohoku/index.html

Japan Meteorological Agency. (2022c). *Mt. Mitake Volcanic activity since prehistoric times*. https://www.data.jma.go.jp/svd/vois/data/tokyo/312_Ontakesan/312_history.html

Japan Meteorological Agency. (2022d). *Heavy rain and storm caused by Typhoon No. 19 in East Japan in 2019*. https://www.data.jma.go.jp/obd/stats/data/bosai/report/2019/20191012/20191012.html

Kamba, N. (2012). Museum's role and view in the future for rescue activity of a cultural heritage. *Journal of Disaster Mitigation for Historical Cities*, 6, 179-184. https://core.ac.uk/download/pdf/60537585.pdf

Kamba, N. (2019). Higashinihon daishinsai de hisaisita siryo no kyusyutukara saisei eno ayumi (Steps from Rescue to conservation of cultural objects damaged in the great east Japan earthquake). *Museum Studies, 54*(7), 6-10.

Kamba, N. (2022). *Conservation practices in museums*. Springer

Kawasaki City. (2022). *City Museum collection rescue*. https://www.kawasaki-museum.jp/rescue/

Ministry of Cultural Affairs. (2022a). *Act for partial revision of the law for the protection of cultural properties*. https://www.bunka.go.jp/seisaku/bunkazai/93084801.html

Ministry of Cultural Affairs. (2022b). *Project for revitalization of disaster-affected museums*. https://www.bunka.go.jp/seisaku/bijutsukan_hakubutsukan/shien/museum/

Ministry of Cultural Affairs. (2022c). *Cultural Property Subsidy Related Guidelines*. https://www.bunka.go.jp/seisaku/bunkazai/joseishien/hojo/hojokin.html

Rekishishiryo Network. (2022). *Records and memories for the future*. http://siryo-net.jp/

Terada, T. (1933). *Tsunami to ningen (Tsunami and Humanity)*, in Tetto, p. 5.

The Committee for the Multi-Organizational Co-Operative Project for Preserving and Restoring Cultural Assets Damaged by Tsunami on March 11th, 2011. (2014). *Stabilization processing*. Japanese Association of Museums.

Tono City. (2022). *Tono city regional disaster prevention plan*. https://www.city.tono.iwate.jp/index.cfm/50,39896,305,569,html

United Nations Office for Disaster Risk Reduction. (2022). *Sendai Framework for Disaster Risk Reduction 2015-2030*. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

Voltaire. (1756). *Poème sur le désastre de Lisbonne.* https://gallica.bnf.fr/essentiels/anthologie/poeme-desastre-lisbonne

Yamashita, F. (2008). *Tsunami tendenko*. Shinnihon syuppansha.

Kamba, N. (2023). Protecting museum objects from the threat of natural disasters. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 143-168). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta8

Notes on the author

Nobuyuki Kamba was born in Japan in 1954.

He has a BS in physics at Tokyo Metropolitan University in 1977 and obtained a MA in conservation science at postgraduate course at Tokyo National University of Fine Arts and Music in 1979. He obtained his PhD based on his research into microclimate control at Tokyo National University of Fine Arts and Music in 1997 while he was working at National Museum of Japanese History as an associate professor.

He started his career as a conservator at the conservation studio of Sokei School of Fine Art in Tokyo for five years, then became an associate research fellow of the Museum Science Department of National Museum of Japanese History in Chiba Pref. in 1984 and became an associate professor in 1992. He did fundamental research about museum climate, transport, and scientific analysis of museum objects.

Since 1998 he had been head of the conservation section at the Tokyo National Museum from 1998 to 2015. He practiced practical conservation by utilizing his experiences and experiments. During 1985 he joined International Center of Conservation in Rome as a research fellow by obtaining UNESCO Fellowship. In 1989 he went to Courtauld Institute of London University as a research fellow of Japanese Ministry of Education for one year. He has been focusing on preventive conservation in the museum and the practical conservation for the museum objects. Current research includes establishment of primary care system for museum objects, and development of disaster preparedness. He is a member of the Japan Society for the Conservation of Cultural Properties, International Institute for Conservation, International Council of Museums. He wrote many articles concerning conservation science.

SUSAN HAZAN

Digital Heritage, Israel | susan.hazan@gmail.com

The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Abstract

This paper focuses on the implications of digital museum holdings and how cultural heritage institutions are managing their digital content and transactions while facing the climate emergency. The effects of climate change are already impacting cultural heritage in many ways, threatening our heritage landmarks, buildings, and collections. Inspired by New European Bauhaus (NEB), we are motivated to create cultural practices that can help our sector translate the Bauhaus vision into innovative and transformational urban-regeneration and efficient green-transformative processes including digital initiatives and practices. Only when we acknowledge that climate change is an emergency and make the sectoral decision take joint action will we be able to reverse this momentum and work towards a greener future. Speaking from the perspective of Europeana as an Initiative that represents over 4,000 museums libraries and archives across Europe, this paper discusses how Europeana works towards both a digital AND a green future. It is not enough simply to praise our paperless office, our digital collections systems, and electronic communications. We need to turn our attention to think about both the short- and long-term impact of our digital practice and, as soon as possible, learn to make the right choices. We turn for inspiration here to the NEB initiative directed by the European Commission to think green, sustainable and affordable, alongside accessible, inclusive, and beautiful and impacting all aspects of how we live.

Keywords

Climate; Europeana; Crisis; Bauhaus; Digital sobriety.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Introduction

At a tumultuous time of change and challenge, when museums and other cultural heritage institutions need to reflect on how to adapt and evolve there are many critical issues to consider concerning resilience, development, sustainability in a society that is going through ruthless jolts of upheaval. Speaking from the perspective of Europeana as an Initiative that represents over 4,000 museums libraries and archives across Europe, this paper discusses how Europeana and the digital transformation work in tandem with the museum ethos to collect, conserve, stage and interpret unique physical objects. Managing these digital collections in a central portal, at a time of climate emergency, Europeana has a responsibility to act as an agent of change to encourage best practice and digital sobriety in confronting climate challenge across the sector.

1. Europeana

Europeana imagines a cultural heritage sector powered by digital and a Europe powered by culture, giving it a resilient, growing economy, increased employment, improved well-being, and a sense of European identity. To enhance the process of digital transformation, Europeana develops expertise, tools, and policies to embrace digital change and encourage partnerships that foster innovation. This makes it easier for people to use cultural heritage for education, research, creation, and recreation towards an open, knowledgeable, and creative society. In this way, digital transformation enables both the process and the result of using digital technology to transform how an organization operates and delivers value which in turn, supports them to thrive, fulfil their mission and meet the needs of its stakeholders.

The Europeana Foundation with some 60+ staff, the Europeana Network Association with over 3,300 members from Europe and beyond, and the Europeana Aggregators'

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Forum with 40 regional, national, domain and thematic aggregators and representing 4,000 archives, libraries, museums, and other cultural heritage institutions are collectively referred to as the Europeana initiative (Fig. 1).

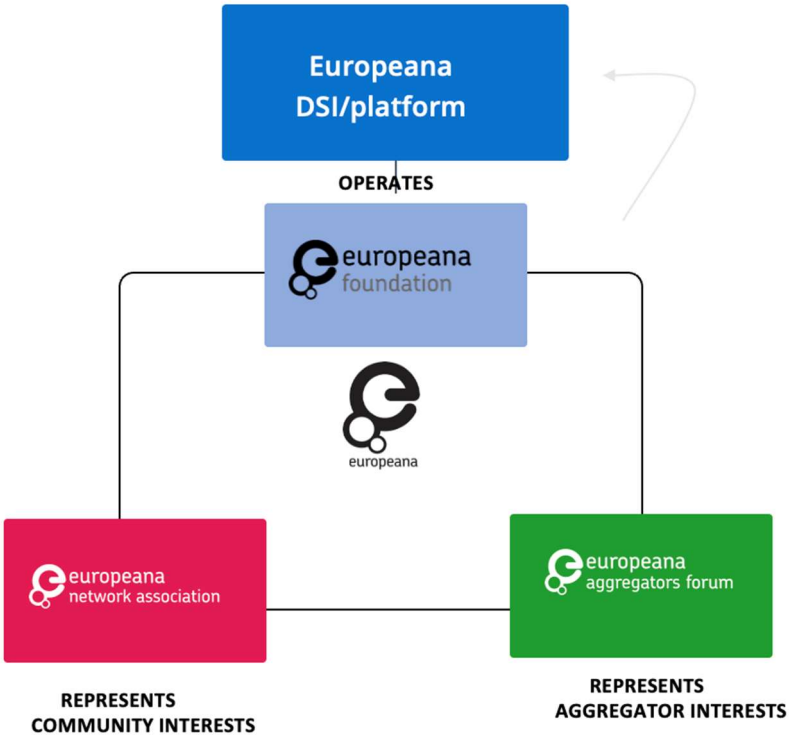


Fig. 1. The Europeana Initiative.

Led by the Climate Action Group, for more than two years all parts of Europeana came together and agreed to advocate for and embed working practices that minimize the digital cultural heritage sector's impact on the climate and environment, culminating in the Climate Action Manifesto (Europeana, 2021), launched at the Europeana 2021 conference.

Informed by the Green Team, Europeana continually develops eco-thinking and green practices, to build capabilities to maintain a sustainable workplace. The Green Team acts as focal point for the Initiative to frame questions, investigate processes and raise awareness around the impacts of digital AND green transformation; for example, how

to investigate and help reduce our carbon footprint. In a recent post, *Researching our carbon footprint - findings and tips from the Europeana Foundation*, Patrick Ehlert, Shadi Ardalan explain how developing solutions to the climate emergency and environmental challenges is not an easy journey, but starts with understanding our impact and our footprint. The Green Team shared the results of their 2020 carbon footprint investigation to inspire and help other organisations. *To gain an overview of the Europeana Foundation's carbon use in 2020, we investigated our footprint from our entire value chain'* they explained. *'This included our digital services and our corporate operations: working from home and at the office, and our business travel. In cases where that data wasn't available, we relied on secondary sources, including industry averages. Some exclusions due to lack of data included staff's daily commutes, manufacturing or disposal of computer devices, and overnight stays during business trips* (Ardalan, & Ehlert, 2022). From their work, they estimated that the Europeana Foundation's carbon footprint in 2020 was 87,300 kg CO2e. In everyday terms, according to the United States Environmental Protection Agency calculator (EPA, 2020), this total 2020 carbon footprint is equivalent to the energy use of 11 homes for one year, the consumption of 202 barrels of oil, or charging 10,619,403 smartphones.

Switching to a green hosted server additionally decreased the carbon footprint and once measures were adopted, such as how to host a sustainable event (Jarrett, 2019) things improved even further. Events were hosted through a strategic choice of venue and the catering – local, seasonal, vegan, and vegetarian were taken up with obvious enthusiasm by all stakeholders concerned. Once the events were announced as 'Green' this encouraged others to follow suit and the ripple effect did the rest. Raising awareness, sharing what they learn along the way, promoting sustainable, environment, and climate friendly practices across the Europeana networks became the norm. Europeana staff chose to travel by train, bike or walk to work after becoming aware of their air travel footprint, and the entire initiative adopted a holistic green approach in a surprisingly short time.

Digital sobriety is all about reducing the ecological footprint of our daily digital lifestyles, and in the workspace. In an interesting call to action concerning *Digital health at the age of the Anthropocene* (Chevance et al., 2020), the mental health sector called for digital temperance instead of overconsumption and overpromotion. Recognizing that while most data flows are attributable to services from the GAFAM/BATX group (ie, Google, Apple, Facebook, Amazon, and Microsoft; Baidu, Alibaba, Tencent, and Xiaomi) professionals from the mental health sector declared that they had a responsibility to make their own green choices. Digital health technologies have revolutionised medical practice, they argued, and could feasibly reduce carbon emissions via strategies such as telemedicine. They were not arguing to stop scientific and medical progress, rather to raise awareness and offer possible actions towards a more sustainable digital health system. Culture heritage professionals too need to consider their actions and how to manage digital resources and practices across the sector. We turn for inspiration here to the New European Bauhaus (NEB) (European Union, s.d.) initiative directed by the European Commission to think green, sustainable and affordable, alongside accessible, inclusive, and beautiful and impacting all aspects of how we live.

2. The New European Bauhaus

What does it mean when the NEB initiative wants to put beauty, inclusivity, and sustainability at the heart of how we live? (Fig. 2) These are all admirable qualities but demands fresh perspectives and actions think about how we can improve our everyday quality of life. The call essentially asks us to think about bringing design principles together with art and culture to work alongside modern science and technology. The Bauhaus School was founded in 1919 in the city of Weimar by German architect Walter Gropius (1883–1969). Its core objective was a radical concept: to reimagine the material world to reflect the unity of all the arts.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Fig. 2. The New Europeana Bauhaus.

We now need to re-imagine the world, based on the same principles (Casciato, Fox, & Rochester, s.d.), and as the original Bauhaus School evolved in the wake of the Spanish flu (Fig. 3), we too need to think about the new challenges we are facing today.

Fig. 3. Auto plant workers in Michigan wear masks to protect themselves from the Spanish flu, 1918. ©The Flint Journal.

Marcel Breuer helped to create designs that would fight future outbreaks. After a significant outbreak of tuberculosis in 1882, and the Spanish flu pandemic of 1918, there was need for new furnishing that could be easily cleaned from lurking flu germs. With these goals in mind, Breuer helped create minimalist pieces using hygienic wood and tubular steel. Before this period, overstuffed furniture was popular, but it was found to hold bacteria. To combat that problem, these new styles used aimed to use less fabrics (Fig. 4).

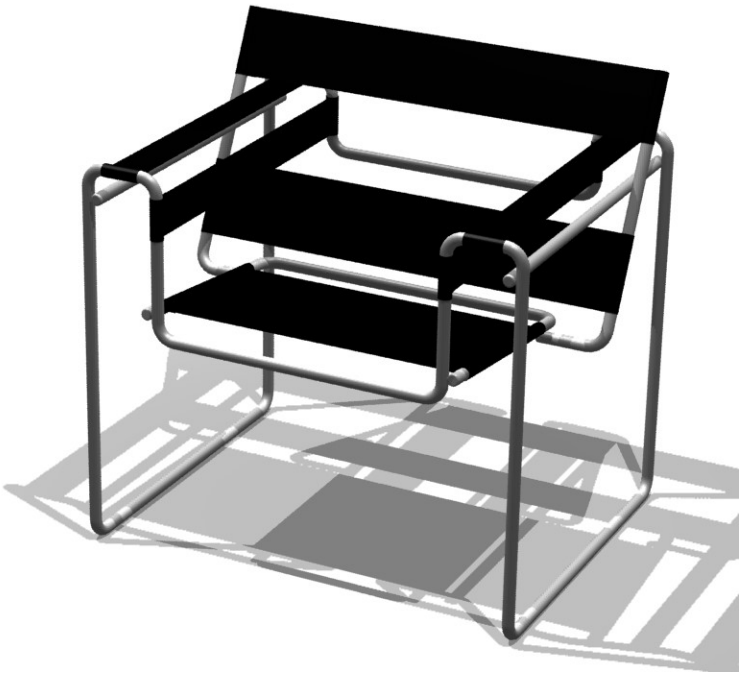


Fig. 4. Wassily Chair, B3, design By Marcel Breuer at Bauhaus School.

In the same way we need to rethink our approach to our daily lives in a multifaceted strategy that considers the complexity of what is at stake. We need to take care of our planet, our natural resources, our climate, and our way of living. In the same way that the famous Bauhaus chairs were reimagined, we need to think about all our actions and how can contribute to mitigating climate damage. The New European Bauhaus called for inspiring examples of how our cultural institutions and heritage contribute to sustainable and inclusive practices, services, and spaces in our communities. It brings a cultural and creative dimension to the European Green Deal and considers green

transition and digital challenges as an opportunity to improve lives of citizens to create beautiful, sustainable, and inclusive places, products, and ways of living.

The Bauhaus principles invite us to come together to learn, discuss and co-create the newest data-driven methods used in architecture, design, and art. They spotlight the kinds of societal and cultural changes we are facing as we witness the accelerating systemic change in the field of design and architecture and the integration of user-oriented thinking more than ever before.

This is a sea-change for the cultural heritage community who can take the up the opportunities that are made possible by the various digital tools now available which can at the same time be disruptive but also game changers.

How does Europeana reimagine the culture heritage sector for climate justice? In a series of blogs, leaders from the sector describe what NEB means for them.

Harry Verwayen, General Director of the Europeana Foundation describes how *The New European Bauhaus initiative's goals and methods resonate strongly within the Europeana digital transformation, our efforts are animated by a broader vision to reimagine the relationship between people, society, and the institutions of European culture. The digital space,* he suggests*, is integral to our living environment today - we work there, we play there, we come together there. It is as much a part of our daily life as our physical surroundings, and increasingly how we use those spaces and experience them determines our experiences as human beings* (Verwayen & Evans, 2021).

Merete Sanderhoff, Senior Advisor at the National Gallery of Denmark (Statens Museum for Kunst) described the impact of NEB in a similar blog - *To my knowledge,* she explained*, it's the first time we've seen such a clear and compelling call on the cultural sector to contribute to a more sustainable future. All too often, art and culture are perceived as an add-on once the basic infrastructures of society have been put in place – like decorative icing on the cake. In the New European Bauhaus, art and culture*

are fundamental to building truly livable societies where we take better care of nature and each other. (Sanderhoff & Evans, 2021).

The NEB brings a cultural and creative dimension to the European Green Deal, aiming to demonstrate how sustainable innovation offers tangible, positive experiences in our daily life. Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal will transform the EU into a modern, resource-efficient, and competitive economy, ensuring:

- No net emissions of greenhouse gases by 2050;
- Economic growth decoupled from resource use;
- No person and no place left behind.

3. The Europeana climate action manifesto

Inspired by the NEB, the Europeana Foundation, the Europeana Network Association, and the Europeana Aggregators' Forum have agreed to advocate for and embed working practices that minimize the digital cultural heritage sector's impact on the climate and environment. To declare our intentions, we launched Europeana Climate Action Manifesto at the Europeana 2021 conference (Europeana, 2021). The Manifesto sets out four guiding principles that will inform the concrete actions the Europeana Initiative have promised to undertake to mitigate climate change through the way we plan, collaborate, operate, and advocate. This declaration shows that we believe that collective action is essential, and that acknowledging climate impact should inform all stages and elements of our work, where both large and small systemic changes can make a difference.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Fig. 5. The Europeana Climate Action Manifesto.

These four guiding principles will shape how we work towards a sustainable digital transformation throughout the Europeana Initiative where each body incorporates these principles into its strategies and working practices. In our planning we will embed eco-thinking and 'think climate' from high-level strategy settings to yearly roadmaps and individual planning cycles. This includes setting standards for managing resources and will ensure our supply chains are as ecologically responsible as possible. Through benchmarking our progress by carrying out sustainability audits and impact assessments we will continue to find ways to reduce our carbon footprint in targeted areas.

Collaborating with our partners and networks has always been embedded in all that Europeana does because we believe that we progress faster when we work together. Collaborating with experts, organisations and networks who are similarly committed and who may be further along this journey than we are all in all serve to strengthen the sector when we harness the expertise and experience of the professionals and organisations in our networks all integral to our ability to address the

complexities of climate change in our sector. Together, we will work towards common solutions, standards, and frameworks for climate-responsible practices for digital culture. Sharing good practices and the challenges we encounter can empower further change at professional and organisational level. We hope our learnings to be helpful for others to use or adapt for their own settings. In this way Europeana's climate actions will be transparent and made available through easy-to-access guides, a new chapter in the Impact Playbook, and ongoing working documents.

We are making systematic changes in the way we operate. We believe that small changes contribute to a big impact and recognise how the development of a climate action strategy will be an important tool to help us to exercise material and digital minimalism in all our operations. As we convene meetings, either physically or digitally, we will minimise the damage we do, from considering the impacts of travel and catering, to the green credentials of the conferencing software we use. One of the personal and institutional principals is the regular clean-up of our digital practice where every individual can make a difference once we follow the principles of digital sobriety in all we do. Good practice such as elimination of digital duplication of the resources we hold, avoiding continuing resending long email threads, and basically dumping any excess files media resources that simply choke up systems and electronic transactions.

We know that change doesn't end with us, and we believe that by leading by example raises awareness of climate issues related to digital cultural heritage and highlight environmentally friendly practices on both individual and organisation levels. It is not only about advocating for climate action it is also about providing support to our members and peers, partner and contributing organisations. When everyone works together to develops their own capacity for making sustainable change, through sharing tools and case studies and providing opportunities for learning and discussion we know that we can make a real difference.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

4. The Climate Action Community

Established and supported by the Europeana Network Association (ENA), the seven Communities represent like-minded group of people who work together on a voluntary basis to cultivate and share knowledge, expertise and best practices on a specific topic or area of common interest. As the youngest of the seven communities that empower Europeana to act across the Network, the Europeana Climate Community seeks to drive impactful, cooperative, and sustainable action to address the climate emergency and consider the environmental impact of our digital life both at home and at work. Building on the Europeana Climate Action Manifesto declared last November, the Steering Group that drives the Climate Action Community aims for wider systemic and lasting change within our organisations and networks. We believe it's crucial to act now to find new ways to work without compromising our environment. We believe with the right support, guidance, and collaboration we can turn our climate action aspirations into reality. As agents of change, we want to promote and enable change to happen within our communities (Fig. 6) and networks.

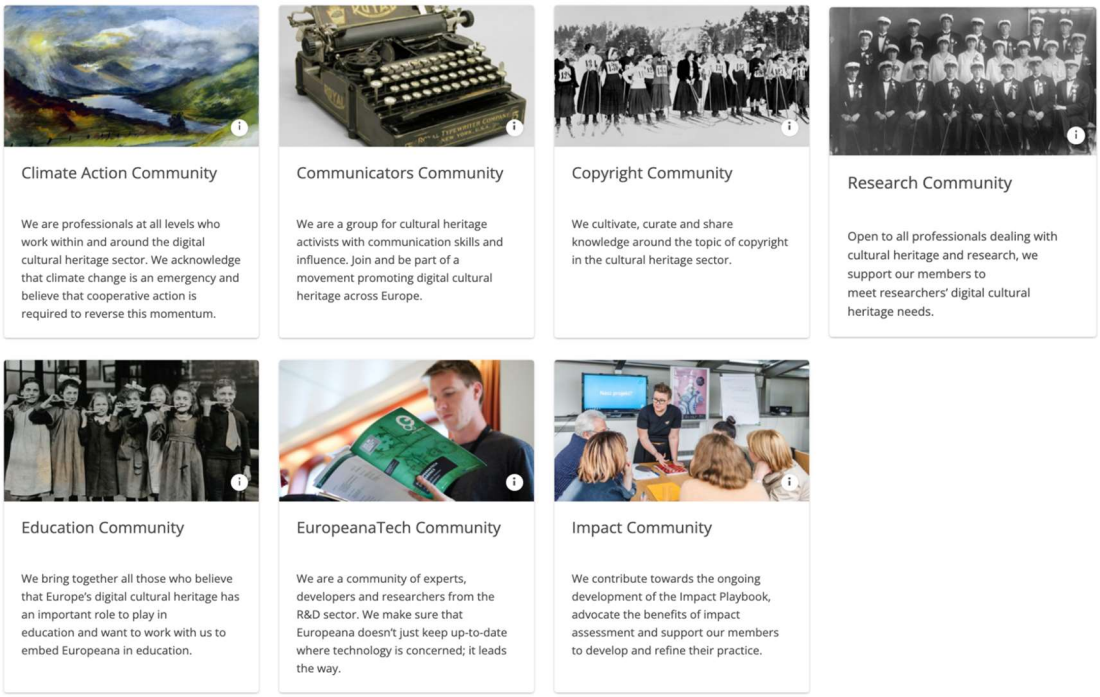


Fig. 6. The Europeana Communities.

The Climate Action Community (CAC) is the youngest of the seven distinct communities and was formed by a dedicated group of like-minded professionals in the cultural heritage sector who acknowledge that climate change is an emergency and believe that cooperative action is required to confront the climate emergency. CAC is devoted to the development of environmentally sustainable internet and digital technologies, and all actions that can contribute to mitigating the climate crisis. In addition to our measures, towards limiting the footprint of digital assets and services by sensible choices made during conceptualisation and development of a digital system the community believes in raising awareness, sharing what we learn along the way, and promoting sustainable, environment and climate friendly practices in our networks. We are determined to find the vernacular, the vocabulary that empowers our messages and to showcase best practices and inspirational curatorial and editorial activities across the sector to amplify this urgent message.

In a short span of 8 months, we have already come together as team to plan our action and activities together. While we are just starting on our work plan, we have already made impressive impact at the recent Europeana annual conference. Climate action was given front stage (EuropeanaEU, 2022) in the two-days of sessions and workshops including a passionate panel discussion on the first day that was devoted to environmental impact emphasized the importance of climate action in creating the data space for the future, the keynote presentation by Caitlin Southwick *Heritage for Future*, Evangelia Paschalidou's insightful research, *Environmental sustainability of Digital Preservation of Cultural Heritage: is Eco-sufficiency answering the pressing question?* and the Community session *How cultural institutions tell the story of climate change* with the Communicators Community all strengthened the call to action. Matias Katajavaara, from Khora.com introduced an inspiring underwater state-of-the-art rendered 3D VR that brought into sharp focus how microplastic pollution impacts the seahorse environment. Collectively the Climate Action Community steering group's contributions put climate action firmly on the agenda for Europeana 2022 and so much more.

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

5. What can you do for your planet?

The call to action is getting louder all the time. We are often reminded of the seven Rs of the circular economy – rethink, reduce, repair, reuse, refurbish, recycle, and recover – as terms of reference that were re-iterated in a recently European report, *Stormy times. Nature and humans: cultural courage for change* (European Commission, Directorate-General for Education, Youth, Sport and Culture, 2022). This publication includes 11 messages from Europe, including the emphatic message that the realization that *harnessing the cultural dimension of sustainable development is also increasingly well understood by governments* (p. 12). This gives cause for optimism as does the idea that included in the six key areas of the sustainability transition with a cultural dimension, global environmental commons are identified as building a new relationship with nature in the Anthropocene. We have also learned that studying cultural heritage and its history and reminding ourselves how previous generations coped with climate change can inform our understanding of our concurrent extreme climate events by marking out the tipping points for cultural heritage that are occurring today as they did in the past. We can learn from our museum collections of natural heritage about the role of small landscape elements such as verges, dykes, ditches, sunken roads, and thickets and re-learn how to mitigate the impact of climate change that we are facing today. There is much to learn.

There are many steps you can take to mitigate further damage to our planet. We all already know what these steps are. The cultural sector has an important role to play and the museum community, just as the digital health sector has its own responsibilities to take their own affirmative action. Number 6 of the 11 messages from Europe states *make the cultural carbon footprint lighter.* You can start today by taking this first step and check whether your website is hosted green? Our hope is that one day the Internet will run entirely on renewable energy. The Green Web Foundation (n.d.) believes that day should be within reach and works to develop tools to speed up the transition towards a green Internet. Meanwhile, think about climate

action and encourage the museum you are working in to join the efforts towards raising awareness and engage with their communities. There is a lot that needs to be doing. Join the green team in your museum, and, if there is not yet a green team – you can decide to set one up. It up to each and every one of us.

Acknowledgments

Europeana is an initiative of the European Union, financed by the European Union's Connecting Europe Facility and European Union Member States. The Europeana services are operated by a consortium led by the Europeana Foundation under a service contract with the European Commission. As of early 2020, the Europeana website (Europeana, n.d.) provides access to 58 million digital objects - books, music, artworks and more - with sophisticated search and filter tools, and many themed collections, exhibitions, galleries, and blogs.

References

Ardalan, S., & Ehlert, P. (2022, May 9). *Researching our carbon footprint - findings and tips from Europeana Foundation*. https://pro.europeana.eu/post/researching-our-carbon-footprint-findings-and-tips-from-the-europeana-foundation

Casciato, M., Fox, G., & Rochester, K. (n.d.). Principles and Curriculum. *Bauhaus: Building the New Artist*. The Getty Research Institute. https://www.getty.edu/research/exhibitions_events/exhibitions/bauhaus/new_artist/history/principles_curriculum/

Chevance, G., Hekler, E. B., Efoui-Hess, M., Godino, J., Golaszewski, N., Gualtieri, L., Krause, A., Marrauld, L., Nebeker, C., Perski, O., Simons, D., Taylor, J. C., & Bernard, P.

(2020). Digital health at the age of the Anthropocene. *The Lancet Digital Health*, *2*(6), E290-E291. https://doi.org/https://doi.org/10.1016/S2589-7500(20)30130-8

EPA (2020, July 21). *Greenhouse gas equivalencies calculator*. United States Environmental Protection Agency. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

European Commission, Directorate-General for Education, Youth, Sport and Culture. (2022). *Stormy times – Nature and humans – Cultural courage for change – 11 messages for and from Europe*. Publications Office of the European Union. https://data.europa.eu/doi/10.2766/90729

European Union. (n.d.). *New Bauhaus Initiative*. https://new-european-bauhaus.europa.eu/index_en

Europeana. (2021, November 11). *The Europeana climate action manifesto*. https://pro.europeana.eu/post/the-europeana-climate-action-manifesto

Europeana. (n.d.). *Discover Europe's digital cultural heritage. Search, save and share art, books, films and music from thousands of cultural institutions*. https://www.europeana.eu/en

EuropeanaEU. (2022, September 28-30). *Europeana 2022 - How cultural institutions tell the story of climate change* [Video]. YouTube. https://www.youtube.com/watch?app=desktop&v=1e_sIqrSehc&list=UU_Z8vHTU2qx4_qBIy9f_u0A&index=10&ab_channel=EuropeanaEU

Jarrett, N. (2019, November 21). *Europeana 2019: Building a sustainable event*. https://pro.europeana.eu/post/europeana-2019-building-a-sustainable-event

Sanderhoff, M., & Evans, G. (2021, July 21). *New European Bauhaus - an interview with Merete Sanderhoff*. https://pro.europeana.eu/post/new-european-bauhaus-an-interview-with-merete-sanderhoff

The Green Web Foundation (n.d.). *Does your website run on green energy*? https://www.thegreenwebfoundation.org

Verwayen, H., & Evans, G. (2021, August 12). *New European Bauhaus - an interview with Harry Verwayen*. https://pro.europeana.eu/post/new-european-bauhaus-an-interview-with-harry-verwayen

Hazan, S. (2023). The Foundation, The Network and the Climate Community come together to locate Climate Action in Europeana. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 169-187). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta9

Notes on the author

In her emerita role of Senior Curator of New Media and Head of the Internet Office at The Israel Museum, Jerusalem, Susan Hazan's responsibilities include: identifying, and implementing digital solutions for the gallery, online and mobile platforms and outreach programs. Her Masters and PhD at Goldsmiths College, (2004) University of London in Media and Communications, focused on electronic architecture in the contemporary museum. Hazan has been recognized for her numerous publications on new media in education, art, museums and cultural heritage, and is currently investigating social networks, innovative platforms for disseminating virtual museums, and digital libraries in the context of cultural heritage.

Researcher, curator, evaluator, lecturer.

Chair, Europeana Network Association, (2021-22).

Europeana Advisory Board member (Current).

Chair, Europeana Climate Action Community.

WESAM MOHAMED

Curator, Egyptian Ministry of Antiquities | wesam.mo@cas.au.dk

Illicit trafficking of antiquities on the internet.

Mohamed, W. (2023). Illicit trafficking of antiquities on the internet. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 188-205). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta10

Abstract

With the continuous growing of online marketplaces, criminals have found new avenues to sell stolen or looted cultural artifacts. By doing so, it becomes easier for traffickers to make deals and it becomes more challenging for cultural heritage institutions and governments to protect their heritage resources. Either authentic antiquities or fake objects can be found frequently on online auctions, e-commerce websites such as eBay, and social media platforms such as Facebook and YouTube. This is a process where stolen cultural properties can enter the international art market behind the eyes of the police and law enforcement agencies in addition to using fake artifacts to fraud inexperienced buyers who try to buy stolen artifacts. This paper looks at the increasing risks threatening cultural heritage by means of internet, particularly through social media and online auctions. By highlighting Egypt's antiquities as a high demand in the black market and since Egypt's heritage is essential for several museums worldwide, the contribution offers deep understanding of the problem and explores significant considerations in addressing this issue, importantly for improving collaboration between cultural heritage organizations, governments, internet websites and platforms, and law enforcement agencies to effectively share the responsibility tackling this global challenge.

Keywords

Fighting illicit trafficking; Illicit trafficking on the internet; Selling antiquities on social media; Antiquities black market; Sale of stolen artifacts.

Mohamed, W. (2023). Illicit trafficking of antiquities on the internet. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 188-205). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta10

Introduction

Illicit trafficking is a persistent threat to cultural heritage. This is a global issue which stresses cultural heritage protection institutions in many countries in the world, above all those which are located at areas under political or social conflicts. The middle East suffered from growing levels of art and antiquities looting during and after the so called “Arab Spring” in the second decade of the 2000s. This resulted in more stolen antiquities entering the international art market. On top of that, the increasing use of internet including e-commerce websites, online auctions, and social media platforms made it easier for looters and traffickers to reach buyers and to sell stolen artifacts easily, quickly, boundaryless, and in complete privacy.

1. Antiquities trafficking on social media and other websites

Social media is an undeniably significant tool in the communication with mass audiences and it is constantly increasing (Hartshorn, 2010). In October 2018, Mark Zuckerberg, CEO and cofounder of Facebook (now Meta), confirmed that 2.6 billion users were using at least one of his products - at least once a month, including WhatsApp, Messenger, and Instagram (Kozlowska, 2018). Facebook is the most popular social media platform in Egypt. It's accessible, free of charge, and it gained high presence since 2011 when Facebook posts about local protests have gone viral and turned into a national revolution.

The benefits of Facebook and other social media websites in supporting cultural heritage in Egypt is of great importance. They are typically used for cultural heritage advocacy as well as to engage with the public. However, Facebook is seen as one of the most social media websites used for antiquities trafficking in ancient Egyptian artifacts (locally and internationally), that antiquities dealers and buyers largely use social media platforms to sell and buy stolen artifacts. Areas in conflict such as Syria, Iraq and

Libya are facing the same threat. Additionally, stolen antiquities can be found on other social media platforms, such as YouTube. This is also a place for scammers to find greedy people who are looking for illegal rapid wealth. Inexperienced buyers get nothing or at least they get fake objects.

Those websites also act as spaces for exchanging knowledge on how to perform illicit digging, or what are the tools and devices needed for this and how to get them. Sellers usually publish images or videos of looted artifacts accompanied with a proof of recency, such as a calendar page or newspaper. Sometimes they publish images and videos of objects which are still *in situ* as an extra verification of authenticity and the recentness of the discovery.

E-commerce websites play the same role as a mediator between the looters/sellers and the buyers. For example, eBay is well known for selling Egyptian antiquities on online auctions. However, eBay claims that it cannot monitor the sale of looted antiquities on their website (Campbell, 2013). In this case, eBay helps shortening the trafficking chain to two points only: the looter/seller and the buyer – while the website – in this case- might be seen as a facilitator for the entire process.

In respond to the changing nature of crime during the 21st Century, Egypt initiated the Police of Internet in 2002 to specifically address electronic and informational crimes (حماة الحق, n.d.) and for fighting internet crimes. Currently, the Police of Internet is largely appreciated by Egyptians for their efforts in monitoring and thwarting internet crimes, and in particular social media crimes. They also cooperate with the Police of Tourism and Antiquities regarding any online content about looted artifacts. Such cooperation led to a continuous arrest of antiquities looters (Youm7, 2011). Moreover, the Department of Repatriated Antiquities under the Ministry of Tourism and Antiquities watches online overseas auctions looking for possible looted Egyptian antiquities on sale.

Mohamed, W. (2023). Illicit trafficking of antiquities on the internet. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 188-205). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta10

2. Social media facilitating antiquities trafficking

A report published in 2019 by the Antiquities Trafficking and Heritage Anthropology Research ATHAR (ATHAR Project, n.d.) expressed that Facebook, in particular, has turned into a sprawling digital black market which supports traffickers after nearly two years of research and a detailed case study on Facebook groups based in Syria. This international project which aims to investigative and study the digital underworld of transnational trafficking and organized crime in the Middle East and North Africa is led by a group of international anthropologists and heritage experts who argued that Facebook unintentionally facilitates illicit trade in antiquities from across the Middle East and North Africa by expanding the communication means of criminal networks worldwide. Their report focused on some features of Facebook which enable looters to get their job done perfectly and, at the same time, makes it very difficult for archaeologists and for the Police to stop the looting activities. Some of the features they mentioned are:

- Facebook's "Groups" which are capable to control a contained content, allowing antiquities looters and buyers to communicate efficiently and discretely. Those groups can be even private or secret which means that invited people only can see the content and the entire group can be hidden from all search results;
- Encrypted messaging gives the looters opportunities to communicate privately and exchange information and make deals;
- Live streaming gives the looters the chance of publishing live videos showing looted artifacts, sometimes in situ, proving the authenticity of the finds and getting more audience engagement and interactivity;
- Easy and secured payment mechanisms make it easy for buyers to pay secretly for looted artifacts;
- Facebook "stories" which are posts which only remain for 24 hours, after this they move to the user's stories archive and no other user can see them. ATHAR

report included a Facebook "story" showing a video for a looted relief offered for sale and posted on 13 April 2019. The "story" was captured by ATHAR 30 minutes after it was posted. If not detected, the "story" would have disappeared after 24 hours and no information about it would be available unless it showed up again at some place;

- The ability to create multiple profiles - including fake profiles – which makes it easy to traffickers to hide behind fake names and information.

While it is extremely difficult to have control on what each user publishes, it is noteworthy to mention that the majority of the most popular social media platforms have no accountability for illegal activities (Gretchen & Al-Azm, 2019) since they are based in the USA and work according to the 1996 Communications Decency Act Section 230 (Federal Communication Commission, n.d.) which means that they are not responsible for any content posted on their platforms by third-parties. This means that there are no legitimate to compel Facebook or other websites to take actions in regard to posts or comments on looted artifacts.

In addition, online secured payment methods can actually help traffickers to get their work done effortlessly. For example, Meta Pay (was Facebook Pay) is a payment method users can choose to pay for buying goods or services on Facebook, Instagram, WhatsApp, and Messenger (Meta Pay, n.d.). They can also connect their accounts on different Meta social media accounts and pay from here to there, such as using Meta Pay between Facebook and Instagram. Today, Meta Pay works in 144 country (73.8% of the world's countries) and soon to have more apps in other countries around the world. This means that once the looter publishes something about looted antiquities on social media, the buyers can buy them and pay without leaving the social media app/website. Meta of course protects the privacy for purchases and clearly stated on their website that "*What you buy is your business*". All of this supports the financial transactions between traffickers and gives them more privacy and protection.

However, Meta cancelled its plan to launch a cryptocurrency in December 2021 (Bursztynsky & Rodriguez, 2021). No doubt that Meta cryptocurrency would have been a great choice for traffickers as it is undisclosed and unquestionable and therefore the authorities cannot track them.

3. Social media companies respond to illicit trafficking on their websites

Facebook (now Meta) finally acknowledged in June 2020 that its platform served as an online bazaar selling looted artifacts from the Middle East (Mashberg, 2020). Later in the same month, Facebook added historical artifacts to its prohibited trades (Meta, n.d.). However, you can continue your search for looted antiquities, even though this is no longer allowed on Facebook. All what you need to do is to press “see the results anyway”.

While Facebook started to delete groups dedicated to antiquities trafficking thinking that this is a good step on fighting illicit trafficking in historical goods, the company has been accused of deleting evidence of war crimes in conflict zones since it deleted groups and profiles of extremists in Syria rather than sharing such information with authorities (Warner, 2019). Moreover, the materials published on social media can sometimes be the only information available about looted artifacts, in particular *in situ* materials which offer a chance to record the early stages of looting. The criteria on how Facebook select those groups are not clearly recognisable. ATHAR project commented that only four groups which they investigated were deleted while other groups were still active on Facebook, adding that they observed Facebook group members who have close connections with terrorism organizations which refers to some concerns regarding extremists who destroy archaeological sites and museums and sell some other collections to finance their activities (BBC News, 2018) in addition

to fears that the money can be used for buying weapons or equipment (Sargent et al., 2020).

4. International cooperation, challenges, and responsibilities

Both museums and auction houses have a responsibility to conduct due diligence to make sure that their new acquisitions or consignments are legal. This includes a provenance check as well as an investigation on all the documentation related to prospective purchases, i.e., excavation reports, evidence of donation or earlier purchases. Sellers of looted artifacts usually claim ownership using fake documents referring to fabricated dates or provenance.

Even with fighting illicit trafficking is becoming a global case, several museums and heritage institutions possibly may not see fighting illicit trafficking on the internet as their responsibility. Therefore, only few projects or research in this area can be spotted while most of the research projects focus on the artifacts themselves or other institutional work. The importance of research projects in fighting illicit trafficking on the internet is critical in all stages of monitoring, documenting, and reporting, which challenges building strong collaboration between a variety of stakeholders including museums and cultural heritage institutions, governments, law enforcement agencies, auction houses, and owners and providers of e-commerce websites and social media websites.

While the International Council of Museums ICOM's Red Lists for Cultural Objects at Risk illustrate types of artifacts most vulnerable to illicit traffic (ICOM, n.d.), the idea of fighting illegal online trade of historical goods recently started to find supporters among museum leaders, funders, and art-related organizations. The British Museum's Circulating Artefacts (CircArt) is one example of a museum project supporting the fight against illicit trafficking in antiquities, with special focus on artifacts from Egypt and Sudan, in addition to organizing a set of training sessions and workshops in London,

Cairo and Khartoum promoting a deeper understanding of antiquities trafficking aiming to protect, detected and recover more heritage at risk and to enable a wider transmission of skills and expertise (The British Museum, n.d.).

According to the British Museum, the project - which was launched in April 2018 and was completed in February 2021 - was a partnership with cultural organisations and universities in Egypt and Sudan, and law enforcement agencies with the support of auction houses and dealers. CircArt aimed to create a digital research system to study the objects in the antiquities trade and to collect information from auctioneers, dealers, collectors, government bodies, law enforcement agencies and museum de-accession lists and allowing specialists around the world to supply data to the database (British Council, n.d.). The project team researched more than 50,000 objects advertised on the open market and on social media with priority given to objects traded before issuing the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property in 1970. Researchers found that at least 15% of the artifacts appears to be traceable to illegal excavations which means they were result of looting activities.

More than 1,200 images and videos of recent digging were posted online including a variety of artifact categories and inscribed blocks taken from tombs and temples statues, and hundreds of fragments of artifacts (The British Museum, n.d.). This is particularly important because looters sometime break larger artifacts into small pieces and sell each piece separately so no one can identify the larger piece anymore, for example, to cut out the faces of coffins so they can’t be identified either as parts of coffins or mummy masks.

Although some resources claimed that the project succeeded to get the appreciation of several auction houses, dealers’ associations, and dealers who have agreed to share images and metadata on the database making such information more accessible for research and making the art market more transparent (Culture in Crisis, n.d.), other resources have claimed that Egypt refused to cooperate with the project due to the

project's engagement with auction houses and dealers and insisted on removal of the logos of art trade organizations and auction houses from the press announcements regarding the database objecting to acknowledging auction houses (Cultural Property News, 2019). While some countries keep good relationships with art trade organizations, the negative effects of the art trade dominate its overall picture in Egypt for its continuous harmful impact on Egypt's past and present. In addition, there are several cases when Egypt had to stand-up against auction houses regarding stolen Egyptian antiquities being on sale on their websites (France 24, 2019). Besides, after so many decades of continuous suffering from the impact of the colonial policies regarding Egypt's past such fears might be understood to a certain extent.

CircArt can be evaluated as an example which sheds some lights on the challenges museums and cultural institutions can face involving international and collaborative projects, particularly projects on the subject of combating illicit trafficking. The great impact of successful projects comes in principle from the fact that all the project partners work together on achieving the project's goals. However, the conflict (and/or competition) between the project partners is able to trigger unintended resistance to the project related assessments and decisions.

Differences between international and local laws and regulations is an additional challenge. Case in point, antiquities in Egypt are public ownership and it is not allowed for individuals to own or to excavate/search for antiquities. Only few cases of people who own small collections of antiquities exist and such collections were acquired by their families before issuing the Egyptian Law for the Protection of Antiquities in 1983. Accordingly, no auction houses in Egypt can sell antiquities. On the other hand, individuals in various countries are allowed to own Egyptian antiquities and sell them at auction houses and therefore it is the responsibility of Egypt to perform an additional check on the status of the artifacts every time there is an auction in addition to facing accusation and misunderstanding of the public and the press in Egypt. In this context, the UNESCO's Database of National Cultural Heritage Laws (UNESCO, n.d.) stands as a valuable support compiling the national laws of UNESCO Member States,

including translation and contact details for the national authorities responsible for the protection of the cultural heritage, and offering all stakeholders an accessible source of information.

It is essential that museums and cultural institutions share information about illegal sale of artifacts on the internet. By doing so, they can combat illicit trafficking on the internet by identifying stolen artifacts in addition to possible traffickers. However, it is a fact that some museums and cultural institutions might not want to share every information about the collections in their custody even if they conducted due diligence, that they might still have some fears regarding missing information or inaccurate data in addition to the possibility of having objects in their collections which may have been acquired decades ago without proper due diligence. On the other hand, there are several cases when museums did report to local governments on looted artifacts on the internet market, i.e. archaeologist Marcel Marée, Assistant Keeper of Ancient Egypt and Sudan at the British Museum, and archaeologist Hourig Sourouzian, identifying the provenance of a stolen artifact out of six looted from Egypt and meant to be auctioned through Christie's auction house in London in 2013 claiming that it has been in a private UK collection since the 1940s, which means it has been moved out of Egypt before issuing the Egyptian Law for the Protection of Antiquities in 1983 (Sultan, 2013). Sourouzian, who used to conduct excavations in Luxor for many years, now had the artifact already on her database confirming that it was discovered in the year 2000. This is another example of auction houses involved in illicit trafficking – either unintentionally or knowingly – but at the same time it is a leading case of what sharing information can bring about.

Such cooperation must extend to law enforcement authorities as well as websites owners and owning companies either by sharing information about stolen artifacts or by official reporting if stolen artifacts are found on sale. Official reporting here refers to a more serious and human-based reporting tool rather than the usual automated/ computerized tools such as those which can be found currently on social media platforms. For e-commerce and social media websites, monitoring for illicit trafficking

can be complicated since their staff normally have no knowledge in archaeology and, therefore, they need to cooperate with museums and cultural heritage institutions to understand the details of every case and to gain experts knowledge in addition to avoid conflict in how every institution thinks the best action could be. For example, it is essential to understand that it is extremely difficult to prove the ownership of artifacts resulting from illicit digging because usually the local authorities have no documentation about those artifacts. They have never been registered at a museum or a magazine or at an excavated site and so there is no prior information about them. The information which appears on social media can be in some cases the only information or evidence about those stolen objects. In this case, that evidence might be lost forever if there is no appropriate and timely cooperation between all parties.

Furthermore, sellers may use euphemisms or code words when they publish information about looted artifacts on the internet so they can escape algorithms which detect posts about stolen historical goods. This is particularly functional when sellers use non-western languages (i.e., Arabic) because normally social media and e-commerce websites are designed to match the western mindset more than other cultures. In this case, some help from experts in the field who can speak, read, and write the language related to the culture/place where the looting/selling occurs can advance a considerable impact on understanding published materials in their correct context.

Yet, governments have to understand the changing nature of the antiquities black market and how modern technologies involved into this industry require constant updates to laws, policies and strategies used to fight illicit trafficking and to protect cultural heritage from looting. Flexibility and collaboration with international efforts is vital, in particular by understanding that technology is not exclusive to looters but also people who fight looting can use it. To demonstrate, while The Art Loss Register (ALR) online database currently holds more than 700,000 of lost and stolen art, antiques, and collectibles, it depends on other sources to add items to the database on behalf of the victims of looting, such as police forces, museums, and others (The Art Loss

Register, n.d.). The INTERPOL's Stolen Works of Art database also serves as a tool to tackle the traffic in cultural property with more than 52,000 items on the database added by INTERPOL experts at the request of countries from which the artifacts have been stolen (INTERPOL, n.d.). This shows - once more - that only collaborative work can lead to an effective risk management tool that each institution affected by illicit trafficking can use.

Final considerations

Illicit trafficking in historical goods is a global issue that threatens our shared cultural heritage. While internet made it easier for traffickers to sell stolen artifacts, we have the same privilege to use internet to fight illicit trafficking. Besides, laws and regulations related to illicit trafficking are better to update and to adapt with the characteristics of today's life and technologies. International projects in this area are key elements for learning as well as for developing creative policies which can offer better results and for advocating stronger regulations. Collaboration is a must. A collaboration between all parties is necessary to provide a comprehensive understanding of the situation and to propose best action to each case.

Earlier conflicts proved the need for improved and dynamic policies to organize the relationship between online markets on various websites on one side and governments and cultural institutions on the other side. Experts from both sides should be available to work in partnership and to support each other's efforts as well as to improve each other's knowledge of the issue and the challenges they face. Each party should learn to share the responsibilities rather than pointing out others imperfection. The mutual commitment to the case is a keystone for successful projects. By nature, partners usually commit to projects which they were involved in from the beginning and during the planning phase. Creating a wide network of experts

against illicit trafficking in historical goods is a powerful asset which is capable of significant impact.

More support and participation for online databases of stolen artifacts or artifacts in the market means more information to be shared and more looting cases to be solved. For museums, auction houses, and collectors, more efficient and thorough due diligence is fundamental. Transparency is essential for developing capable approaches for sharing information and for understanding the challenges of acquisitioning and old days collecting policies. Moreover, good documentation is an urgent need for every collection and for every detail.

Raising awareness regarding the case and the pressure put on social media platforms proved the ability to force social media companies to change their regulations. It is vital to involve local and international communities and to bring them on board by enriching the community's knowledge about illicit trafficking of historical goods. User satisfaction is highly valued for social media websites and e-commerce websites. Therefore, keeping the users informed about this ongoing threat against our shared history is a meaningful tool to protect cultural heritage from looting.

References

ATHAR Project. (n.d.). *2019 Report*. http://atharproject.org/report2019/

ATHAR Project. (n.d.). *Home*. http://atharproject.org/

BBC News. (2018, March 28). *Spain police recover artefacts looted by IS in Libya*. https://www.bbc.com/news/av/world-europe-43571615

British Council. (n.d.). *Circulating artefacts: A cross-platform alliance against the looting of pharaonic antiquities*. https://www.britishcouncil.org/arts/culture-development/cultural-protection-fund/projects/circulating-artefacts

Bursztynsky, J., & Rodriguez, S. (2021, December 1). *Facebook retreats from crypto ad ban*. CNBC. https://www.cnbc.com/2021/12/01/facebook-ends-ban-on-cryptocurrency-ads.html

Campbell, P. B. (2013). The illicit antiquities trade as a transnational criminal network: Characterizing and anticipating trafficking of cultural heritage. *International Journal of Cultural Property*, *20*(2), 113-153. https://doi.org/https://doi.org/10.1017/S0940739113000015

Cultural Property News. (2019). *Egypt rejects accessible database of art in circulation.* https://culturalpropertynews.org/egypt-rejects-accessible-database-of-art-in-circulation/

Culture in Crisis. (n.d.). *Circulating artefacts: A cross-platform alliance against the looting of pharaonic antiquities*. https://cultureincrisis.org/projects/circulating-artefacts-a-cross-platform-alliance-against-the-looting-of-pharaonic-antiquities

Federal Communication Commission. (n.d.). *Telecommunications act of 1996*. https://www.fcc.gov/general/telecommunications-act-1996

France 24. (2019). منحوتة أثرية لرأس توت عنخ آمون تباع بمزاد في لندن ومصر تعترض. https://www.france24.com/ar/20190704-%D9%85%D8%B5%D8%B1-%D9%84%D9%86%D8%AF%D9%86-%D8%AA%D9%88%D8%AA-%D8%B9%D9%86%D8%AE-%D8%A2%D9%85%D9%88%D9%86-%D8%AA%D9%85%D8%AB%D8%A7%D9%84-%D9%85%D8%B2%D8%A7%D8%AF-%D8%A8%D9%8A%D8%B9-%D8%A2%D8%AB%D8%A7%D8%B1-%D8%B1%D8%A3%D8%B3

Gretchen, P. & Al-Azm, A. (2019, June 25). *Time to clean up Facebook's dark side*. Morning Consult. https://morningconsult.com/opinions/time-to-clean-up-facebooks-dark-side/

ICOM. (n.d.). *Emergency Red List of Egyptian cultural objects at risk.* https://icom.museum/en/resources/red-lists/

INTERPOL. (n.d.). *Stolen works of art database*. https://www.interpol.int/en/Crimes/Cultural-heritage-crime/Stolen-Works-of-Art-Database

Kozlowska, H. (2018). *One third of everyone on Earth uses a Facebook product every month*. Quartz. https://qz.com/1446712/one-third-of-everyone-on-earth-uses-a-facebook-product-every-month/

Mashberg, T. (2020). Social networks: The new El Dorado for traffickers. *The UNESCO Courier*, *3*, 20-21. https://unesdoc.unesco.org/ark:/48223/pf0000374570_eng

Meta Pay. (n.d.). [*Full details about Meta Pay*]. https://pay.facebook.com/

Meta. (n.d.). *Restricted goods and services*. Transparency Center. Facebook. https://transparency.fb.com/en-gb/policies/community-standards/regulated-goods/

Sargent, M., Marrone, J. V., Evans, A., Lilly, B., Nemeth, E., & Dalzell, S. (2020). *Tracking and disrupting the illicit antiquities trade with open-source data*. RAND Corporation. https://www.rand.org/content/dam/rand/pubs/research_reports/RR2700/RR2706/RAND_RR2706.pdf

Sultan, A. (2013, August 9). *British Museum and archaeologist confirm identity of stolen Egyptian artefact*. Ahramonline. https://english.ahram.org.eg/NewsContent/9/0/78641/Heritage/0/British-Museum-and-archaeologist-confirm-identity-.aspx

The Art Loss Register. (n.d.). *About us.* https://www.artloss.com/about-us/

The British Museum. (n.d.). *Circulating artefacts (CircArt).* https://www.britishmuseum.org/our-work/departments/egypt-and-sudan/circulating-

artefacts#:~:text=The%20project%20was%20completed%20in,market%20and%20on%20social%20media

UNESCO. (n.d.). UNESCO *database of national cultural heritage laws*. https://en.unesco.org/cultnatlaws

Warner, B. (2019, May 8). *Tech companies are deleting evidence of war crimes*. The Atlantic. https://www.theatlantic.com/ideas/archive/2019/05/facebook-algorithms-are-making-it-harder/588931/

حبس الشاب المتهم بتأسيس صفحة على فيس بوك لبيع وشراء الآثار الفرعونية, (2011). *Youm7*. https://www.youm7.com/story/2018/9/30/%D8%AD%D8%A8%D8%B3-%D8%A7%D9%84%D8%B4%D8%A7%D8%A8-%D8%A7%D9%84%D9%85%D8%AA%D9%87%D9%85-%D8%A8%D8%AA%D8%A3%D8%B3%D9%8A%D8%B3-%D8%B5%D9%81%D8%AD%D8%A9-%D8%B9%D9%84%D9%89-%D9%81%D9%8A%D8%B3-%D8%A8%D9%88%D9%83-%D9%84%D8%A8%D9%8A%D8%B9-%D9%88%D8%B4%D8%B1%D8%A7%D8%A1/3970783

مباحث الانترنت في مصر, (n.d.) *حماة الحق*. https://jordan-lawyer.com/2021/08/18/internet-police-in-egypt/

Mohamed, W. (2023). Illicit trafficking of antiquities on the internet. In P. M. Homem (Ed.), *Integrated risk management in museums. Past lessons, future ways* (pp. 188-205). Porto: FLUP. https://doi.org/10.21747/978-989-9082-15-1/inta10

Notes on the author

Wesam Mohamed is a Museum Curator and Egyptologist, Board Member of the International Council of Museums' Committee for Documentation ICOM-CIDOC. She works at the Ministry of Antiquities in Egypt since 2010 where she could gain great knowledge working with several museums - in addition to working with international museums and institutions. She was awarded the Nancy Hanks Award for Professional Excellence by the American Alliance of Museums in 2019.

Wesam received education in Egyptology, Art History, and Museum Studies. Her current work particularly focusses on community engagement and the protection of Egyptian antiquities from illicit trafficking. Her PhD at Aarhus University in Denmark focuses on the community participation in protecting cultural heritage in times of crisis.

The publication

INTEGRATED RISK MANAGEMENT IN MUSEUMS.

PAST LESSONS, FUTURE WAYS

Seeks to incorporate the Web Content Accessibility Guidelines

(WCAG 2.0)

and is protected by the International License

Creative Commons

U.PORTO
FLUP FACULDADE DE LETRAS
UNIVERSIDADE DO PORTO