RELISE

EXPERIENCE IN THE TECHNICAL RESERVE OF MARIANA: TECHNICAL PHOTOGRAPHY OF THE RESCUED ASSETS FROM THE BENTO RODRIGUES TRAGEDY[1]

VIVÊNCIA NA RESERVA TÉCNICA DE MARIANA: FOTOGRAFIA TÉCNICA DAS OBRAS RESGATADAS NA TRAGÉDIA DE BENTO RODRIGUES

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ABSTRACT

The collapse of the Fundão dam on November 5, 2015, in the district of Bento Rodrigues, Mariana, Minas Gerais, marked a tragic turning point in contemporary Brazilian history. This disaster triggered one of the largest socio-environmental catastrophes in Brazil, affecting the environment, the local population, and the region's cultural heritage. Among the numerous damages, the losses to the collection of sacred artworks and other material elements from the 17th and 18th centuries stand out, as they were buried by the mud, turning the territory into an involuntary archaeological site. In response to the tragedy, the Renova Foundation was created to manage reparation actions, such as organizing a technical reserve aimed at hosting, treating, and providing emergency conservation for the rescued assets. This article presents an experience report on the process of technical photographic documentation within this reserve, reflecting on its importance for heritage preservation, symbolic reconstruction, and the potential educational and touristic uses of the records produced. The central objective of the study is to reflect on the role of technical photography as a preservation tool and how it can contribute to valuing heritage in emergency situations. The analysis is grounded in theoretical frameworks addressing Scientific Documentation by Image of cultural assets, the understanding of heritage as a mobilizer of emotions, identities, and memories, as well as community and educational practices in the fields of social museology and cultural tourism. The methodological approach adopted was the experience report, focusing on the systematization of professional practices for scientific purposes, based on the documentation of approximately 1,200 rescued pieces.

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Among the main results, the feasibility of using the images for exhibitions, virtual collections, educational materials, and memory tourism initiatives aimed at valuing and engaging affected communities stands out. The photographs enabled the visualization and interpretation of the assets even when physical display was not possible. As a final consideration, it is emphasized that technical photography, when carried out with methodological rigor, constitutes a powerful tool for preservation and symbolic resistance in the face of loss.

Keywords: Bento Rodrigues, scientific documentation, technical photography, cultural heritage, memory tourism

RESUMO

O rompimento da barragem de Fundão, em 5 de novembro de 2015, no distrito de Bento Rodrigues, em Mariana, Minas Gerais, representou um marco trágico na história brasileira contemporânea. Esse desastre provocou uma das maiores catástrofes socioambientais do Brasil, impactando o meio ambiente, a população local e também o patrimônio cultural da região. Dentre os inúmeros danos, destacam-se os prejuízos ao acervo de obras sacras e outros elementos materiais dos séculos XVII e XVIII, que foram soterrados pela lama, convertendo o território em um sítio arqueológico involuntário. Em resposta à tragédia, foi criada a Fundação Renova, responsável por gerir ações de reparação como a organização de uma reserva técnica destinada ao acolhimento, tratamento e a conservação emergencial dos bens resgatados. Esse artigo apresenta um relato de experiência sobre o processo de documentação fotográfica técnica no interior dessa reserva, refletindo sobre sua importância para a preservação do patrimônio, a reconstrução simbólica e as possibilidades de uso educativo e turístico dos registros produzidos. O objetivo central do estudo é refletir sobre o papel da fotografia técnica como instrumento de preservação e como ela pode contribuir para a valorização do patrimônio em situações de emergência. A análise é sustentada por referenciais teóricos que tratam da Documentação Científica por Imagem de bens culturais, da compreensão do patrimônio enquanto mobilizador de afetos, identidades e memórias, e das práticas comunitárias e educativas no campo da museologia social e do turismo cultural. O procedimento metodológico adotado foi o relato de experiência, privilegiando a sistematização de vivências profissionais com fins científicos, a partir da documentação de aproximadamente mil e duzentas peças resgatadas. Entre os principais resultados, destaca-se a viabilidade de uso das imagens para exposições, acervos virtuais, materiais didáticos e ações de turismo de memória voltadas à valorização e à participação das comunidades atingidas. As fotografias permitiram a visualização e a interpretação dos bens mesmo em condições que inviabilizavam sua exposição física. Como consideração final,

destaca-se que a fotografia técnica, quando realizada com rigor metodológico, constitui uma poderosa ferramenta de preservação e resistência simbólica diante da perda.

Palavras-chave: Bento Rodrigues, documentação científica, fotografia técnica, patrimônio cultural, turismo de memória.

INTRODUCTION

On November 5, 2015, the siren did not sound, and the collapse of the Fundão dam in Mariana, Minas Gerais (MG), caused one of the greatest socio-environmental disasters in the history of Brazil. The absence of the audible warning made the magnitude of the catastrophe that struck the region even more brutal, profoundly marking the landscape and the lives of thousands of people. The mud advanced over the district of Bento Rodrigues, in Mariana, destroying lives, homes, and memories, causing an entire community, an entire territory, to suddenly become an archaeological site (Silva, 2023).

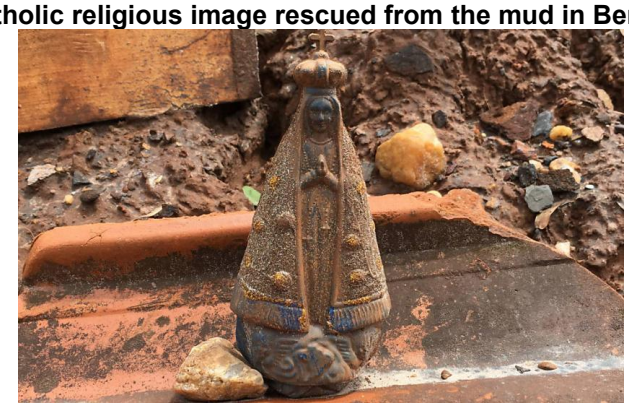
The material remains of local culture and religiosity, objects that had previously been part of these people’s daily lives, came to stand as tangible evidence of a collective memory abruptly interrupted. The scale of the devastation transformed everyday life into a landscape of ruins, with the buried cultural assets (Figure 1) emerging as silent witnesses to a life that was abruptly suspended, carrying within them fragments of a history that needs to be remembered, recognized, and reconstructed.

Figure 1 – View of the Bento Rodrigues district after the Fundão dam collapse.

Source: https://noticias.uol.com.br/meio-ambiente/ultimas-noticias/reporter-brasil/2023/04/05/mapa-da-lama-veja-se-sua-casa-seria-soterrada-por-barragem-de-mineracao.htm. Acesso em 22 jul. 2025.

In the face of the tragedy, there was widespread public concern, and the population mobilized to rescue from the mud the sacred artworks from Catholic churches dating from the 17th and 18th centuries. This popular mobilization reveals the profound value attributed to these cultural assets, which represent not only artifacts but also living parts of the identity and spirituality of this community (Figure 2).

Figure 2 – Catholic religious image rescued from the mud in Bento Rodrigues.



Source: https://fotografia.folha.uol.com.br/galerias/40876-bento-rodrigues-apos-a-lama. Acesso em 22 jul. 2025.

The Renova Foundation was then created, an institution responsible for coordinating the reparation actions. It was tasked with hiring an excavation company to recover the works that had been buried by the mud, bringing to light not only material fragments but also pieces of the collective memory that

persisted in remaining. The creation of the Renova Foundation represented a formal and structured response aimed at managing the reparation work and the emergency conservation of the rescued cultural heritage, including the implementation of a space for the storage and treatment of these assets.

The Renova Foundation organized the space known as the technical reserve, which was part of the compensation process for the damage caused to the cultural heritage of Bento Rodrigues, where the works rescued by the excavation team were stored. This technical reserve became a place for the emergency conservation and treatment of the artifacts rescued from the mud (Figure 3).

Figure 3 – Detail of the conservation team's work in the technical reserve.

Source: https://oglobo.globo.com/politica/sujas-de-lama-imagens-sacras-reaparecem-apos-tragedia-de-mariana-22030610. Acesso em 22 jul. 2025.

It is within this context that a (small) part of the photographic work carried out over three intense months in the city of Mariana, within the technical reserve, is presented, in an attempt to preserve the memory of this community through its cultural assets. The photographic documentation of the rescued cultural assets represents not only a conservation action, but also an act of symbolic resistance and reconstruction of collective identity. The images produced are more than mere records; they are a connection with the past, an affirmation of the existence and cultural continuity of a devastated community. Technical photography, in this context, acts as an instrument of conservation, analysis, and reactivation of heritage, while also serving as a connection between memory and tourism.

The creation of the technical reserve responded to an emergency need for protection, but it also revealed the fragilities of the technical structure, the absence of specific protocols, and the precarious working conditions of professionals in the field. These gaps highlight the urgent need for strategic planning and recognition of the specialists involved in heritage emergency processes (Froner *et al.*, 2021). Photographic documentation was incorporated into this process as a means of attempting to preserve the visual integrity of the works and assist future conservation interventions. By carefully recording each piece, the photographs provide a visual diagnosis that guides conservation actions – preventive conservation, remedial conservation, and restoration (ICOM-CC, 2008), allowing the history of each asset to be understood and preserved.

The reflection proposed here considers that, even in the face of destruction, cultural assets recorded through technical photography can be used as elements for musealization, as well as for memory tourism, based on narratives of pain, resistance, and reconstruction. Memory tourism, that is, tourism whose objective is to visit places and experiences that preserve and celebrate the collective memory of a people (Pinto; Alves; Braga, 2025), in this context, enables a deeper relationship with cultural heritage. It is not merely a matter of observing or visiting a place, but of engaging ethically with stories that have often been silenced by tragedies.

This research is also dedicated to presenting the technical procedures adopted, the structural conditions of the reserve, the importance of careful planning and the availability of adequate resources, as well as reflecting on the symbolic and methodological impacts of the photographic work carried out. By detailing these aspects, the article seeks to provide a comprehensive overview of the complexity and relevance of the work of documenting cultural assets in crisis contexts. Thus, by exploring the potential of technical photography as a methodological instrument and symbolic language, this study contributes to

debates on the relationship between heritage conservation, social memory, and tourism practices in territories marked by disasters. The intersection of these areas is necessary for building a future that respects the past and empowers communities to care for the present.

CULTURAL HERITAGE, PHOTOGRAPHY, AND MEMORY TOURISM: CONVERGENCES AND POSSIBILITIES

Technical photography of cultural assets is a tool that enables image recording and the transmission of collective memories. In disaster contexts, as occurred in Bento Rodrigues, this record becomes even more relevant: it not only seeks to preserve the image of threatened heritage, but also enables these objects to be reinterpreted in new contexts — such as educational and tourism contexts. Photographic images not only “freeze” the current state of the pieces, they also open space for new interpretations and uses, transforming losses into opportunities for learning, reflection, and awareness.

According to Silva (2023), cultural heritage mobilizes affections, identities, and narratives. This perspective is indispensable for understanding the human and emotional dimension surrounding cultural assets, especially when dealing with communities that have suffered such significant losses. In the case of Bento Rodrigues, this mobilization becomes even more intense, given that the cultural assets affected by the mud represent not only artistic or religious expressions, but also testimonies of collective trajectories, forms of resistance, and senses of belonging deeply connected to the history and community experience. In this sense, the objects rescued and photographically recorded in the technical reserve can serve as a starting point for memory tourism experiences, in which the community, as the protagonist of the affected territory, can guide visitors along routes shaped by memories, pain, and hopes (Pinto; Alves; Braga, 2025). Memory tourism, by directly involving the (former) local

inhabitants, promotes active participation and allows authentic narratives about the tragedy and resilience to be shared, creating a deeper connection between visitors and the history of the place.

More than observing preserved fragments, this proposal invites the creation of affective and educational routes in which residents assume the role of cultural mediators and guardians of their own memory. Such routes, based on practices of listening, orality, and intergenerational transmission of memories (Hampâté Bâ, 2010), have the potential to reconfigure the symbolic landscape of Mariana, incorporating multiple voices, including those traditionally silenced (Amaral, 2019). Pollak (1989) warns about this silencing of dissenting voices by stating that:

> The long silence about the past, far from leading to oblivion, is the resistance that a powerless civil society opposes to the excess of official discourses. At the same time, it carefully transmits dissenting memories through family and friendship networks, awaiting the moment of truth and the redistribution of political and ideological cards (Pollak, 1989, p.5).

The musealization of these fragments — whether in technical reserves, temporary exhibitions, or virtual collections — constitutes a mechanism for local empowerment and heritage education (Fruchtengarten, 2021). The ability to make these assets accessible, even digitally, ensures that memory is preserved and that knowledge about the disaster and its impacts is disseminated. The use of photographic images allows access to heritage even without physical contact with the pieces, which proves very important in situations involving risk or fragility of the assets. Technology, in this case, serves as a facilitator of preservation and democratization of cultural access, overcoming the physical barriers imposed by the condition of the objects.

Additionally, memory tourism emerges as an instrument of awareness and critical education by providing experiences that bring visitors closer to the deeper and silenced layers of local history (Vita, 2024). This concept of tourism

goes beyond the aesthetic appreciation of heritage, prioritizing an ethical and transformative approach to visitation. Instead of reinforcing only hegemonic narratives or offering superficial experiences, memory tourism proposes direct contact with memories marked by trauma and loss, contributing to the recognition of the violence experienced and the resistance built by affected communities. For Pinto, Alves, and Braga (2025), this segment of tourism, therefore, is not merely a way of revisiting the past, but a tool for cultivating empathy, promoting understanding, and strengthening bonds of solidarity. Consequently, memory tourism not only values cultural diversity and heritage preservation, but also invites visitors to engage ethically in processes of symbolic and social reconstruction in territories marked by disasters (Vita, 2024). Conscious engagement with the reality of affected communities can inspire support and transformation initiatives, making the tourism experience an instrument of social change.

In the following section of this article, the methodological procedures adopted in the photographic documentation, the main results obtained, and a critical analysis connecting the rescued collection to the possibilities of musealization and the development of memory and educational tourism in Mariana and the surrounding region will be presented. This structure seeks to guide the reader through the trajectory of the experience report, from technical aspects to the social and cultural implications of the work carried out.

METHODOLOGICAL PROCEDURES AND THE PRACTICE OF PHOTOGRAPHIC DOCUMENTATION IN THE TECHNICAL RESERVE

Scientific image documentation has been gaining ground in heritage studies, being valued as a transdisciplinary practice that integrates technical, artistic, and scientific knowledge (Gonçalves, Jotta and Braga, 2024). Because it involves different areas of knowledge, this approach requires not only mastery of

photographic technique, but also sensitivity and understanding regarding the nature of cultural assets and the care necessary for their preservation. According to Leão (2015), this work requires specific competencies and methodological instruments capable of ensuring the reliability of image records, especially in contexts in which the handling of the works must be minimized. Minimizing the physical handling of the pieces is important to prevent additional damage, especially when the objects already exhibit some degree of fragility.

Gonçalves, Jotta and Braga (2024) emphasize that image documentation is not limited to capturing the appearance of a work, but involves careful technical choices regarding the use of light, perspective, calibration, scale, and color reference. Each of these decisions directly influences the accuracy and usefulness of the records, especially when intended for scientific research and conservation. The visual fidelity obtained through these images serves various purposes: from iconographic analyses and identification of techniques and materials to diagnoses of the state of conservation, comparative studies, and hypotheses regarding authorship. The diversity of applications of technical photography demonstrates its value as a multifunctional tool in the field of heritage.

In emergency contexts, such as environmental disasters, this practice takes on a strategic character. The limited time, the risks of accelerated deterioration, and the urgency of recording material remains impose the need for rigorous technical protocols. A rapid and effective response is important to ensure that as much information as possible is captured before the condition of the assets deteriorates further. The absence of these protocols, as will be seen in this report, can compromise the reliability of the records and, consequently, their scientific usefulness. The experience in the Mariana technical reserve serves as a case study regarding the practical challenges of applying scientific documentation in crisis situations.

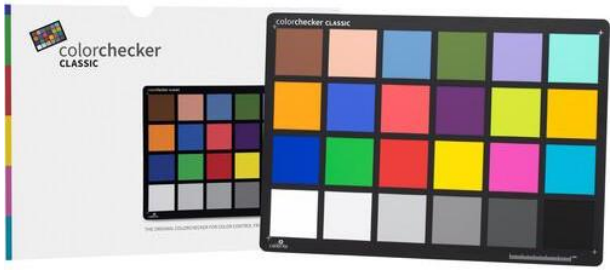
For this article, an experience report was chosen, following the guidelines of Mussi, Flores and Almeida (2021), through which a professional experience is systematized with the objective of critically reflecting on its contributions and challenges, presenting a protocol adopted to deal with a particular situation and its evolution. This format allows for a detailed and personal narrative of the experience, enriching the reader's understanding of field practices. In an experience report, the main characteristic is the description of the intervention with the objective of contributing to the advancement of knowledge, enabling the use of future work proposals and the *modus operandi* (Mussi, Flores and Almeida, 2021), without, however, having a fixed format (Gonçalves *et al.*, 2023). The flexibility of the format allows for a more fluid and direct approach to transmitting the knowledge acquired. The work in the Renova Foundation's technical reserve took place between August and October 2017, when an outsourced team was hired for this purpose, and technical and scientific documentation was carried out on works rescued from the mud, focusing on sacred pieces of historical, artistic, and symbolic value.

The experience described here consisted of setting up a workstation within the technical reserve equipped with the necessary equipment for producing high-quality photographic images (Cardoso and Leão, 2016). The organization of the work environment was essential for the efficiency and precision of the process. The equipment used included a table, chair, computer with image-editing software, calibrated monitor, external hard drive, camera with memory card and spare battery, support table for photographing the pieces, white seamless paper background, brush for removing soil or mud resulting from handling the pieces on the seamless background, Personal Protective Equipment (PPE), cabinet for storing materials, two light sources, two lighting tripods, and a camera tripod. Each item was carefully chosen to ensure image quality and safety

in handling the pieces, constituting strategic planning for obtaining reliable results.

The provision of scientific image documentation services began with the absence of an indispensable item for properly carrying out this technical work: the color reference chart (Leão, 2005), also known as a color chart (Figure 4). The color chart should be positioned next to the object to be photographed, assisting the photographer during image editing by enabling the professional to “read” the colors of the image accurately, according to the numbers provided by the chart manufacturer for each color contained in it. Without the chart, the faithful reproduction of the object’s colors in the photograph depends largely on the photographer’s experience and monitor calibration, introducing a factor of uncertainty.

Figure 4 – Example of a color reference chart.



Source: https://www.hollywoodstore.com.br/product/colorchecker-classic-x-rite/. Acesso em 22 jul. 2025.

The technical and scientific photographic work carried out within the Renova Foundation’s technical reserve aimed to record the state of conservation of the rescued pieces before they underwent the restoration process, immediately after their preliminary cleaning to remove excess mud. This specific moment of documentation, prior to more extensive restoration intervention, constitutes a strategic stage for documenting the impact of the disaster and the original condition of the assets. The photographs produced were intended to serve as archival documents or image records, comprising a digital image database that could be consulted, making this image database a resource for future studies and

for the memory of the affected heritage. In addition, the images generated would allow study and technical decision-making without the need for physical handling of the works, since they were already quite fragile after contact with the mud.

The procedures consisted of removing the piece from the technical reserve space, transporting it to the workstation, positioning the work on the support table already properly covered with the seamless background and, thus, beginning the photographic recording process. Each stage was carefully planned to minimize any risk to the works, prioritizing their integrity. For this purpose, the use of gloves and masks was necessary to avoid direct contact with the mud contaminated by the ore, since the safety of the professionals and the preservation of the pieces were priorities throughout the entire process. As a bachelor in conservation-restoration, in addition to being a scientific photographer of works of art, it was possible for the professional to handle and transport the pieces without requiring the presence of another conservator-restorer. This dual qualification was a determining factor in the efficiency of the work, saving time and resources, and ensuring that the handling of the pieces was carried out by a person with the appropriate experience and technical knowledge. Otherwise, this entire process would require the presence of another qualified professional to handle these pieces during the photographs. The process followed ethical principles of preservation, avoiding any unnecessary handling and ensuring the integrity of the pieces. Ethics in preservation is an important pillar in all heritage documentation activities, especially in contexts of fragility.

After the piece was positioned, it was photographed from all angles, including some detail images when deemed necessary, ensuring that all aspects of the object, including damage and specific characteristics, were properly recorded. Once the photographic process was completed, the work was returned to its proper place within the technical reserve, and the images generated were transferred to the computer so that the process of treating them could begin. The

post-processing phase is as important as image capture, since it is during this phase that the images are optimized for scientific use (Gonçalves, 2015). As previously reported, the photographs were taken without the presence of a color reference chart, so all treatment of these images was carried out based on work experience, the presence of a neutral-colored artifact in the images – the white seamless background – and the use of a calibrated monitor. Although the absence of the chart was a limitation, professional experience and the use of calibration tools helped reduce the losses in the accuracy of color reproduction in the images.

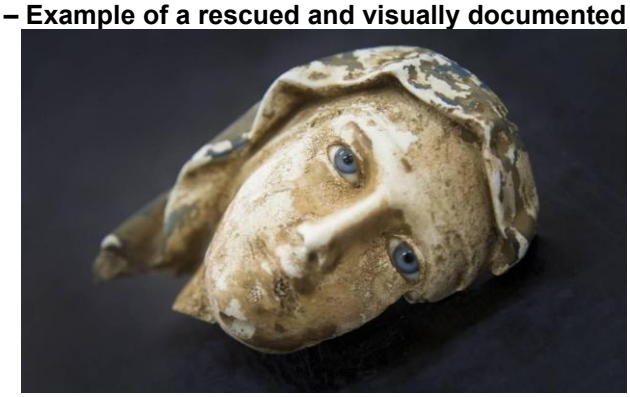
With the images treated and the files properly renamed, a *backup* was made on the external hard drive and on the Renova Foundation's servers, thus creating a digital image database. This task consisted of saving the original camera files and the images with the treatment completed, in addition to also preserving the originals on the computer's hard drive. The organization and security of the data are decisive stages for the longevity and accessibility of the collection. The methodology used not only generated a reliable technical visual collection, but also presents itself as a replicable practice in other heritage emergency situations, especially in contexts that require alternative forms of access to heritage, such as memory tourism. Through the production of images with the appropriate technical rigor, it is possible to consider actions such as the musealization of objects and the creation of memory interpretation centers (Silva, 2024). The applicability of the methodology in different disaster scenarios reinforces its value and its contribution to the field of preservation.

RESULTS AND PERSPECTIVES FOR TOURISM

The experience in the technical reserve enabled the production of approximately one thousand two hundred photographs of rescued pieces, ranging from sacred works that remained preserved to damaged fragments that

still carried symbolic and documentary value. The ability to document not only what remained intact, but also what was fragmented, highlights the commitment to the integrity of cultural memory (Figure 5). Each fragment was recorded individually, prioritizing visual legibility and potential use for conservation, musealization, and educational purposes. The work lasted three months, beginning on August 14, 2017 and ending on October 24, 2017, and it is not known whether the work was continued after the end of the contract, when another outsourced company was hired. The discontinuity of projects such as this represents a significant risk to maintaining heritage preservation.

Figure 5 – Example of a rescued and visually documented fragment.



Source: https://oglobo.globo.com/politica/sujas-de-lama-imagens-sacras-reaparecem-apos-tragedia-de-mariana-22030610. Acesso em 22 jul. 2025.

Upon completing the image treatment, already near the end of the contract with the Renova Foundation, but far from having photographed all of the approximately two thousand five hundred pieces present in the technical reserve, inconsistencies were observed in the visualization of the images on different monitors in the reserve building, revealing a practical challenge in ensuring chromatic fidelity and uniformity in the presentation of the images. Some monitors displayed overexposed images, while others showed highly saturated images, and this variation can compromise the accurate interpretation of the details and colors of the works, affecting the usefulness of the photographs as documents (Leão, 2015; Gonçalves, Jotta and Braga, 2024). When conducting this visual test of the images on different monitors, some questions arose: was the neutral-

colored element alone, the white seamless background, a sufficient artifact for making adjustments to the image and bringing somewhat more accurate chromatic information to the photographs? And furthermore: how would these images be viewed from the database on uncalibrated monitors? These questions further highlight the importance of ensuring accuracy in an operational environment with limited resources.

These doubts reinforce Leão's (2005) argument regarding the relevance not only of the presence of the color chart when photographing an object, but also of the continuous calibration of monitors, to ensure the fidelity and functionality of the photographic documentation of cultural assets, so that they can be used as documents (archives) and for diagnosis (Leão, 2015). Accuracy at all stages of the workflow, from capture to visualization, is decisive for the integrity of image data. Thus, from the photographs generated, it is possible to conduct iconographic studies, studies of materials and techniques, state of conservation, authorship, among others, and photography can be considered a preservation tool (Gonçalves, Jotta and Braga, 2024). In a reconstruction scenario, as is the case of Bento Rodrigues, this type of documentation becomes important material for proposals for cultural and educational actions, such as memory tourism, connecting memory, citizenship, and social engagement.

From the systematization of this material, it is possible to envision integrated actions with local communities, in which participatory musealization finds space: residents can act as cultural mediators, articulating their narratives with the visual records of the works, in actions such as memory tourism routes, workshops in schools, traveling exhibitions, and community digital collections (Silva, 2024). These initiatives promote an exchange between communities and visitors, transforming memory into a cultural and educational asset.

This report also indicates the importance of professional qualification in emergency contexts. The initial absence of basic resources, such as the color

reference chart, demonstrated that the presence of clear technical protocols and minimum infrastructure is an indispensable condition for ensuring the quality of the documentation and, consequently, the effectiveness of the actions derived from it. The experience in the municipality of Mariana serves as a vivid reminder of the need for investment in human and material resources for heritage preservation.

As a development, the image database produced can foster projects such as augmented reality, digital reconstructions, and the production of educational material on heritage (Santos, 2023) and disasters. Such immersive technologies can be applied to the creation of interactive virtual exhibitions, educational applications, and sensory experiences in school and museum environments, contributing to making heritage accessible and attractive to different audiences. According to Santos (2023), these resources expand the reach and depth of heritage education by enabling, for example, three-dimensional simulations of damaged works, digital routes guided by community narratives, and audiovisual reconstructions of the landscape prior to the disaster. Thus, the practice of technical photography goes beyond the limits of recording, becoming a link between material memory and teaching-learning processes in heritage education that can be appropriated by tourism. Photography emerges as a bridge between the tangible and the intangible, between the past and future generations.

The lack of continuity in the scientific image documentation of the remaining objects exposes the risk of interruption in the documentary conservation cycle, which can lead to the loss of information about the evolution of the state of conservation of the works and enable subsequent interventions. Works without technical photographic records lose a stage of their post-disaster history, limiting future analyses and conservation actions. This reinforces the need for strategic planning and recognition of the role of technical photography

professionals in heritage management plans. The sustainability of preservation and conservation projects depends on the recognition and continuous support of the work of specialists.

FINAL CONSIDERATIONS

From Silva's (2023) perspective, cultural heritage is not only what remains after the disaster, but also what mobilizes affections, identities, and symbolic reconstructions. Heritage is, therefore, a living and dynamic element, capable of inspiring resilience and social reconstruction in the face of adversity.

Thus, photographic documentation is positioned as an act of resistance against loss and erasure, allowing the visual memory of the works to be preserved, even in the absence of guarantees regarding their physical future. It is a testimony to the persistence of culture and memory, even when conditions are unfavorable.

The images produced in the technical reserve are visual evidence of a past in ruins, but also of a present that resists being erased. They nourish narratives, support exhibitions, enable scientific investigations, and reinforce the struggle for the memory of the affected communities. The power of these images lies in their ability to tell a story, provoke reflection, and mobilize actions in favor of justice and reparation.

At the end of the contract with the Renova Foundation, on the day of leaving the reserve, the color reference chart arrived. Its late arrival symbolizes both a technical frustration and a sign of the structural precariousness of the reparation processes. This event serves as a striking reminder of the operational failures that can compromise the quality and effectiveness of important preservation projects. Even well-intentioned initiatives encounter operational failures that partially or entirely compromise the expected results. It also signals the neglect of technical and scientific photographic documentation work, even

when financial resources are available for its execution. The availability of these resources does not always guarantee that the work will be properly carried out if there is no well-developed planning and adequate management of those resources, such as investment in the recognition of professionals.

The experience reported here highlights the importance of integrating specialized professionals from the earliest stages of preservation actions, reinforces the need for clear technical protocols and the provision of adequate resources to ensure the effective preservation of heritage in emergency situations. The involvement of specialists from the outset is a determining factor in avoiding errors and optimizing results, ensuring that the work is carried out with the necessary rigor. Technical photography, when applied with methodological rigor, represents a powerful tool in the preservation of cultural heritage in disaster situations. The experience, although limited in time and structure, demonstrates the documentary and symbolic value of these images. The case of Bento Rodrigues alerts us to the urgency of efficient technical protocols and to the recognition of qualified professionals in the management of collections in crisis contexts and the guarantee of continuity in the work of these professionals, should they be replaced.

Thus, what was experienced during the three months of the contract serves as both a warning and an inspiration: a warning about failures that cannot be repeated and an inspiration to strengthen a culture of preservation that recognizes the value of the image as a document and photography as a practice of resistance and memory. The tragedy of Bento Rodrigues, and the response that followed, offers lessons for the future of heritage management in emergency situations, encouraging a more proactive, structured approach that values the professionals involved. Photography, in its essence, captures not only form, but also the soul of cultural memory, ensuring that stories, even the most painful ones, are not forgotten.

REFERENCES

AMARAL, João Paulo Pereira do. Da colonialidade do Patrimônio ao Patrimônio decolonial no Brasil: Uma aproximação possível? *In:* **Discusiones, problemáticas y sentipensar latinoamericano: Tomo II – Estudios Descoloniales y Epistemologías del Sur *Global*.** -1a. ed. Buenos Aires/México D.F., 307-360, p. 2019.

CARDOSO, Danielle L.; LEÃO, Alexandre C.. Documentação fotográfica de escultura de Nossa Senhora do Carmo do século XIX. **Boletim do CEIB**, v. 20, n. 64, p. 1-6, 2016.

COMITÊ PARA CONSERVAÇÃO DO CONSELHO INTERNACIONAL DE MUSEUS – ICOM-CC. Terminologia para a definição da conservação-restauro do património cultural material. Resolução aprovada pelos membros do ICOM-CC durante o 15.º Encontro Trienal, Nova Dehli, 22-26 de Setembro de 2008. **Conservar Património**, n.6, p. 55-56, 2008.

FRONER, Yacy-Ara; GONÇALVES, Willi B.; SOUZA, Luiz A. C.; ROSADO, Alessandra. Mudanças climáticas, riscos ao patrimônio cultural e ambiental, políticas públicas e o papel das redes colaborativas: um olhar sobre o panorama brasileiro contemporâneo. **Revista Patrimônio e Memória**, v. 17, n. 2, p. 124-151, 2021.

FRUCHTENGARTEN, Luisa. **Museus de memória traumática e a musealização do imaterial.** 2021. Dissertação (Mestrado em Museologia e Museografia) – Faculdade de Belas Artes, Universidade de Lisboa, Lisboa, 2021.

GONÇALVES, Marina F.; JOTTA, Carlos A. R.; BRAGA, Solano S.. Museus universitários e preservação patrimonial: documentação científica por imagem de uma pintura mural do Museu de Arte Sacra da UFBA. In: SILVA, Luana M.; PIRES, Maria C.; COSTA, Everaldo B. (Org.). **Métodos e temas emergentes nos estudos sobre turismo e patrimônio**. Rio de Janeiro: Autografia, 2024.

GONÇALVES, Marina F.; BRAGA, Solano S.; JOTTA, Carlos A. R.; CÉSAR, Alexandre D.. Relato de experiência sobre a abertura do Ecomuseu do Off-Road. **Turismo e Sociedade**, v. 16, n. 1, p. 44-68, 2023.

GONÇALVES, Marina F. **Separados no nascimento: estudo de técnicas, materiais e estado de conservação de dois manuscritos iluminados do século XVIII**. 2015. Dissertação (Mestrado em Artes) – Escola de Belas Artes, Universidade Federal de Minas Gerais, Belo Horizonte, 2015.

HAMPÂTÉ BÂ, Amadou. A Tradição Viva. *In*: KI-ZERBO, Joseph. **História Geral da África I: Metodologia e pré-história da África.** Brasília: UNESCO, 2010.

LEÃO, Alexandre Cruz. Documentação científica por imagem de bens culturais: competências e desafios. In: A. Rosado & W.B. Gonçalves (Org.). **Ciências do Patrimônio: Horizontes Transdisciplinares** (p. 139-154). Belo Horizonte: Imprensa Oficial do Estado de Minas Gerais, 2015.

LEÃO, Alexandre Cruz. **Gerenciamento de cores para imagens digitais.** 2005. 135 f. Dissertação (Mestrado em Artes) – Escola de Belas Artes, Universidade Federal de Minas Gerais, Belo Horizonte, 2005.

MUSSI, R. F. F; FLORES, F. F.; ALMEIDA, C. B. Pressupostos para a elaboração de relato de experiência como conhecimento científico. **Revista Práxis Educacional**, vol. 17, n. 48, p. 60-70, 2021.

PINTO, Gabriela Maria De Lana.; ALVES, Kerley Dos Santos.; BRAGA, Solano De Souza. **Turismo de memória enquanto prática social de rememoração dos patrimônios sensíveis: possibilidades para a preservação da memória de Bento Rodrigues, Minas Gerais.** ***Marketing & Tourism Review***, *[S. l.]*, v. 10, n. 1, 2025. DOI: 10.29149/mtr.v10i1.8733. Disponível em: https://revistas.face.ufmg.br/index.php/mtr/article/view/8733. Acesso em: 16 jul. 2025.

POLLAK, Michael. **Memória, Esquecimento, Silêncio**. Estudos Históricos, Rio de Janeiro, v. 2, n. 3, p. 3-15, 1989.

SANTOS, Augusto C. Realidade aumentada como complemento técnico-artístico para obras expostas em museus. 2023. Tese (Doutorado em Educação, Arte e História da Cultura) –Universidade Presbiteriana Mackenzie, São Paulo, 2023.

SILVA, André Fabrício. Das ruínas à ressignificação: emoção e comunicação dos objetos sobreviventes do desastre de Bento Rodrigues. **Revista Memória em Rede**, v. 16, n. 31, 2024.

SILVA, André Fabrício. **Bento Rodrigues e as memórias que a lama não apagou: emoções patrimoniais na (re)construção das identidades no contexto pós-desastre.** 2023. Tese (Doutorado em Museologia e Patrimônio) – Programa de Pós-Graduação em Museologia e Patrimônio, Universidade

Federal do Estado do Rio de Janeiro; Museu de Astronomia e Ciências Afins, Rio de Janeiro, 2023.

VITA, Afonso. **Desenvolvimento do turismo cultural e de memória em Angola: a rota dos escravos.** Lisboa: Lisbon international press, 2024.