RESEARCH ARTICLE



An Overview to a Collaborative Project for the Conservation of Ottoman Period Wall Paintings in Albania and Türkiye

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ABSTRACT

The bilateral research project "Conservation Problems and Preservation Methods of Wall Paintings in Monumental and Civil Architecture Examples in Albania and Türkiye during the Ottoman Period," funded by TÜBİTAK and AKKSHI (15 April 2023-2015 April 2025), investigates the conservation challenges and preservation strategies for Ottoman-era wall paintings. These artworks, emblematic of the shared cultural heritage of Albania and Türkiye, face significant risks due to environmental factors, material degradation, and inappropriate restoration approaches. The study focuses on key sites in Türkiye (Istanbul, Bursa, and Safranbolu) and in Albania (Tiranë, Berat, Gjirokastër, and Krujë) employing a multidisciplinary methodology that integrates archival research, literature review, on-site surveys, and advanced conservation techniques. The research identifies patterns of artistic composition, deterioration mechanisms, restoration techniques and the impact of past restoration interventions. Results highlight the challenges of balancing authenticity with contemporary conservation practices and emphasize the necessity of culturally sensitive and scientifically informed approaches. Deliverables include scholarly publications, workshops, exhibition, online seminars, contributing to the dissemination of knowledge and awareness of Ottomanera wall paintings. This research not only advances the understanding of conservation methodologies for historic murals but also establishes a replicable framework for preserving shared cultural heritage, fostering resilience, and promoting interdisciplinary collaboration in heritage conservation.

Keywords: Albania-Türkiye, conservation, ottoman period wall paintings, scientific project.

Submitted: December 30, 2024 **Published:** May 08, 2025



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1. Introduction

The cultural and historical ties between Albania and Türkiye, particularly during the Ottoman period, have become a significant focus for academic research and conservation initiatives. The bilateral project titled "Research on Conservation Problems and Preservation Methods of Wall Paintings in Monumental and Civil Architecture Examples in Albania and Türkiye in the Ottoman Period," supported by The Scientific and Technological Research Council of Türkiye (TÜBİTAK) and the National Agency for Scientific Research and Innovation of Albania (AKKSHI), underscores the importance of this collaboration in addressing shared heritage conservation challenges. This initiative fosters international cooperation through the exchange of expertise and resources, aiming to advance research and restoration practices for wall paintings.

The project started at 15 April 2023 addresses the urgent need for specialized knowledge in the conservation of Ottoman-era wall paintings, a significant but often overlooked facet of cultural heritage in both nations. These artworks, often showing European artistic influences from the 19th century, reflect the Westernization trends of the Ottoman Empire and embody a synthesis of local and itinerant artistic traditions. By focusing on the conservation and restoration of these paintings,

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the study not only highlights their artistic and historical importance but also develops comprehensive strategies and techniques for their sustainable preservation.

Key sites for this research include monumental and civic structures in Albania (Tiranë, Berat, Gjirokastër, and Krujë) and Türkiye (Istanbul, Bursa, and Safranbolu). These locations, renowned for their rich architectural and cultural legacies, feature wall paintings that serve as vital records of the cultural transitions during the Ottoman Empire's Westernization era. Many of these structures are in UNESCO World Heritage Sites or prominent cultural landmarks requiring specialized conservation approaches.

The scope of the project includes a detailed examination of wall paintings on plastered surfaces, targeting both recently restored works and those in urgent need of intervention. Despite progress in conserving cultural assets, the conservation of wall paintings remains a niche field with limited expertise and inadequate scientific documentation.

Through this bilateral collaboration, the project seeks to bridge these gaps by promoting knowledge exchange among multidisciplinary teams, including conservation specialists, architects, philologists, and researchers. Advanced scientific conservation techniques, combined with on-site observation, are explored to refine methodologies and enhance long-term preservation practices. The outcomes of this research are expected to contribute significantly to the understanding and safeguarding of this shared cultural heritage, ensuring its resilience for future generations.

In recent years, it has been observed that different approaches have been adopted in the restoration of monumental structures such as mosques, prayer rooms, and madrasas—particularly those under the responsibility of the General Directorate for Foundations in Türkiye regarding the repair wall paintings conducted through tenders. Conservation-focused approaches are encountered in a limited number of examples. On plastered or stone surfaces, large-scale completions, integrations, and reconstructions have been more commonly preferred. Similar approaches, albeit at varying scales, are also observed in structures such as palaces, pavilions, and mansions, whether under the management of official institutions or private ownership.

In Albania, over the past decade, the Turkish Cooperation and Coordination Agency (TİKA) has significantly contributed to the restoration of Ottoman-era mosques through agreements with the Albanian National Institute of Cultural Monuments (IMK). However, as highlighted by Margjeka (2020) some restorations have introduced minor deviations from the original interior decorations. This underscores the need for more rigorous, multidisciplinary approaches to conservation.

Building on this context, the current project advances collaborative research by bringing together experts from diverse disciplines to investigate historical and contemporary conservation practices in Albania and Türkiye. This involves the systematic study of selected sites through historical documentation, literature review, technical evaluations and assessments of material deterioration on site. The findings will inform the development of conservation strategies, adhering to internationally recognized scientific standards to ensure applicability across similar contexts worldwide. The project aspires to raise awareness of the cultural and artistic significance of Ottoman-era wall paintings, contribute to scholarly discourse on their historical and aesthetic value, and establish systematic, evidence-based methodologies for their conservation. By addressing the preservation challenges of wall paintings in monumental and civic structures, it seeks to deepen the understanding of Ottoman architectural heritage in the Balkans and Anatolia.

This work contributes to global discussions on heritage conservation and emphasizes the importance of wall paintings as a cultural asset. Anticipated deliverables include peer-reviewed scientific publications, online seminars, workshops, and exhibitions. These outputs aim to foster greater awareness of the importance of conserving Ottoman-era wall paintings and encourage sustained academic and practical collaborations. The digital dissemination will extend the project's impact by engaging a global audience in heritage preservation dialogues.

The project team comprises experts from both Türkiye and Albania, each bringing valuable experience in the field of conservation. The Turkish team includes conservation architects from Yildiz Technical University, with extensive field experience in Istanbul and more broadly. They actively contribute to conservation education through lectures and publications and are affiliated with ICOMOS International and ICOMOS Türkiye. The Albanian team, affiliated with the University of New York Tirana (UNYT), brings together expertise from three complementary disciplines. The team includes an architect specializing in the history and theory of architecture, as well as adaptive reuse, who has extensive experience teaching and researching architectural heritage. Another team member is a restoration expert with specialized knowledge in the conservation of Ottoman-era structures. Completing the team is a linguist with a focus on Albanian and Turkish culture and language, whose expertise bridges cultural and historical contexts. This diverse composition enables a comprehensive approach to the project, combining architectural, restoration, and linguistic perspectives to enhance the understanding and conservation of shared heritage.

2. METHODOLOGY

The project's methodology adopts a structured and multidisciplinary approach to assess and conserve Ottoman wall paintings in Albania and Türkiye. The process begins with preparatory research, including an extensive review of written and visual archives and existing literature, to establish a foundation for understanding the selected buildings and their wall paintings. Detailed site descriptions are prepared, outlining their historical context, architectural significance, and specific locations of the wall paintings. Hereafter, desk studies focus on analyzing historical records and previous conservation efforts, documenting past interventions along with the materials and techniques employed. This stage includes the development of site-specific conservation histories to contextualize the current state of the wall paintings. Throughout the research, field surveys and technical inspections provide a handson assessment of the wall paintings, incorporating photographic documentation, material analysis, and evaluations of original techniques. These inspections also examine environmental conditions affecting the paintings and identify patterns of deterioration. Finally, the collected data is synthesized into a comprehensive inventory and analytical report. This final output not only provides tailored conservation strategies for the studied sites but also advances the broader understanding of the cultural and artistic The tasks carried out during the project for the purposes of collecting, evaluating, and interpreting information have been grouped under the four main headings listed below. Each heading is elaborated upon in the text:

- 1. Preparation for the project proposal
- 2. Research in the archives of official institutions
- 3. Office-based studies
- 4. Technical field surveys

The activities conducted under these headings are detailed below.

2.1. Preparation for the Project Proposal

After the project topic was determined, an extensive literature review was conducted to reveal the originality of the subject and the associated issues. Before submitting the project proposal, two online meetings were held to make decisions regarding the project proposal and to assign tasks. Prior to the official application to TÜBİTAK (The Scientific and Technological Research Council of Türkiye) in March 2023, the necessary permissions for the structures planned to be examined on-site in Türkiye were obtained from the relevant official authorities and private property owners, as per TÜBİTAK's requirements.

2.1.1. Literature Review

Within the scope of the project, all accessible sources on wall paintings from the Ottoman period to the present in Türkiye and Albania were reviewed. The sources were analyzed under four main headings, focusing on the characteristics of wall paintings, their documentation, the identification of conservation issues, the development of conservation proposals, and conservation/restoration techniques.

2.1.1.1. The Characteristics of Ottoman Period Wall Paintings

Under this heading, sources containing information on wall paintings from the Ottoman period were examined. It has been observed that early studies focused on the transformation of artistic perspectives under Western influence during the Ottoman period and discussed wall paintings within this context (Arık, 1976; Renda, 1977; 1996, n.d.). Similarly, there are publications focusing on the art of Ottoman painting (Bağcı et al., 2006) or examining thematic subjects, such as depictions of Istanbul, in wall paintings alongside various other fields (Demirarslan, 2016; Gürçağlar, 1996, 2018; Okçuoğlu, 2021; Uluengin, 2020). Additionally, studies that specifically focus on wall paintings from the Ottoman period and describe wall paintings in various examples of monumental or civil architecture were also examined as part of the literature review (Okçuoğçlu, 2000; Renda, 1985; Şahin Tekinalp, 2002).

2.1.1.2. Ottoman Period Wall Paintings in Albania

Ottoman-period wall paintings in Albania have been the subject of numerous academic studies, reflecting their significance as a shared cultural heritage. In some publications, these artworks are discussed within the broader context of Balkan countries (İbrahimgil, 1997; İbrahimgil, 2007; İbrahimgil & Naldan, 2020; Kurşun, 2013; Uçar, 2013; Arapi, 2015) or architecture in Albanian (Meksi et al., 2016). Other studies focus specifically on the documentation and analysis of wall paintings within individual Ottoman buildings in Albania, highlighting their artistic and historical value (Riza & Nallbani, 1975; Riza, 1981; Riza et al., 1988; Meksi, 2018).

2.1.1.3. Ottoman Period Wall Paintings in Türkiye

When compared to Albania, academic studies on wall paintings made in the Ottoman Period in Türkiye are seen to be more in number. Within the scope of the project, books (Kurşun, 2013; Kurtoğlu, 2020, 2021a, 2021b, 2021c; Say, 2016; Say & Kurtoğlu, 2018; Tanman & Tanman, 2015; Uçar, 2015), book chapters (Coskun, 2021), articles (Erçin Koçer, 2019; Karaaslan, 2016; Özbek, 2014; Özkeçeci et al., 2018; Şahin, 1996; Uçar & İlden, 2017; Uluçam Kırbağ, 2019; Uzun, 2023; Yavaş, 2016) and papers (Şavkar & Kabalcı, 2019; Yetiş, 2015) on Ottoman wall paintings in structures of civil and religious architecture in various provinces of Istanbul and Anatolia were examined.

2.1.1.4. Techniques Related to the Conservation of Wall Paintings

In order to document the wall paintings, identify conservation problems, develop conservation proposals and examine conservation/restoration techniques, relevant international literature was scanned; primary sources prepared by conservation experts from the past to the present were examined (Cather, 1996; ICOMOS, 2003; Gowing et al., 2005; Heritage et al., 2002b, 2002a; Historic England, 2018; Mora, 1974; Mora et al., 1984; Schmid, 2000). Additionally, in the context of Albania, articles by local experts directly involved in the restoration of wall paintings were examined to gain insights into region-specific methodologies and practices (Nallbani, 1972; Meksi, 1979; Riza, 1977; 1981, Drishti & Devolli, 1989; Riza et al., 1988; Meksi, 2018; Merkaj & Civici, 2019).

2.2. Research in the Archives of Official Institutions

To obtain detailed information about the buildings studied on-site in Istanbul, in April 2024, the documents of Yahya Efendi Dervish Lodge and Hatice Turhan Valide Sultan Mausoleum were examined from the archives of the Republic of Türkiye Directorate General for Foundations, Istanbul 1st Regional Directorate. The architectural projects provided insights into the deterioration of painted surfaces and the methodsused for intervention. Similarly, in July 2024, research conducted in the archives of the Bursa Directorate of Surveying and Monuments and the Bursa Preservation Board yielded access to the architectural survey drawings, restitution, restoration, and art history reports of the Semaki House and the Ottoman House Museum.

For the buildings studied in Albania, our research included a thorough examination of primary sources held at the National Archive and the library of the Institute of Cultural Monuments in Tirana. These sources primarily comprised historical photographs of the monuments, which proved essential for documenting their original conditions and tracking changes over time. Furthermore, reports on previous restoration efforts were sourced from key institutions involved in the implementation of these projects, including the Turkish Cooperation and Coordination Agency (TIKA), Cultural Heritage without Borders (CHwB), and the United Nations Office for Project Services (UNOPS) in Albania.

2.2.1. Office-Based Studies

Office-based studies continued at regular intervals and varying intensities throughout the project duration, except during the periods when technical visits were conducted. These studies comprised various tasks, as outlined below:

2.2.2. Establishing Communication with Relevant Institutions, Organizations, and Individuals Regarding the Project

During the project application phase and afterward, a detailed communication chart was prepared to ensure easy access to relevant official institutions and organizations, property owners, and individuals involved in the restoration of the buildings to be examined on-site in Türkiye and in Albania.

2.2.3. Collection and Documentation of Written and Visual Materials

All written and visual resources related to the project accessed, all correspondence regarding the project, daily work plans for each field study, evaluation notes, photographs, videos, and all obtained documents were recorded on Google Drive and in folders created on YTU (Yıldız Technical University) and University of New York Tirana, OneDrive's online cloud storage.

2.2.4. Studies Conducted with a Part-Time Student and a Scholarship Recipient

For the project, a part-time student from Yıldız Technical University, the Department of Architecture, Faculty of Architecture, put support behind the project between February 2023 and July 2023 by classifying the previously conducted literature review and processing the information into tables after thorough examination.

As a result of the application to the 2247-C Intern Researcher Scholarship Program, 2nd Term of 2023 (TÜBİTAK Star Program), an undergraduate student from the same university assisted the project between March 1, 2024, and June 26, 2024. The student prepared the promotional poster for

the online seminar, created participant certificates, and contributed to the classification of the literature reviewed.

2.2.5. Preparation of a Terminology Glossary Related to the Project Topic

A terminology glossary consisting of English-Turkish terms was prepared as part of the project to establish a common language for on-site evaluations, interim reports, and publications to be produced from the project, ensuring the correct use of professional terminology.

2.2.6. Preparation of a Building Inspection (Inventory) form for Fieldwork

Building inspection (inventory) forms were prepared in the A4-size format for use in fieldwork to collect information on the plans, materials, and construction techniques of structures containing wall paintings. The forms included sections on building information, wall painting techniques, causes and types of deterioration, and evaluations of past conservation efforts and inappropriate interventions, utilizing expert experiences and relevant literature.

2.2.7. Preparation of the Survey Form and Obtaining Approval from the Ethics Committee

A 23-question survey was prepared to measure awareness of the topics researched within the project at undergraduate and graduate levels. For the implementation of the survey, the Turkish team obtained the necessary ethics committee approval from the Yıldız Technical University Social and Humanities Research Ethics Committee, while the Albanian team received authorization from the Rectorate to conduct the survey with students.

The survey forms were distributed to students enrolled in three different programs in Türkiye: the Undergraduate Program in the Department of Architecture, the Undergraduate Program in the Department of Conservation and Restoration of Cultural Properties, both under the Faculty of Architecture at Yıldız Technical University, and the Graduate Program in Surveying and Restoration under the Institute of Science, Department of Architecture at Yıldız Technical University. The Albanian team, on the other hand, sent the survey to undergraduate students enrolled in Architecture, Interior Design, and Graphic Design programs within the Department of Architecture and Design at the University of New York Tirana. The survey results provide significant insights into the awareness levels between the two countries and across different educational levels.

2.2.8. Attendance to the Seminar

The project coordinator of the Turkish team, Aynur Ciftçi, participated in an online seminar titled "On the Restoration of Ottoman Monuments in Albania," delivered by Prof. Dr. Bekir Eskici and organized by the Anatolian Art Historians Association on May 17, 2023. During the seminar, she invited the speaker to participate in the seminar to be organized within the scope of the project. The presentation, uploaded to the association's YouTube channel, was also listened to by other team members.

2.2.9. Preparation of the Interim Report

The Turkish team uploaded the first interim report, prepared in the format specified by TÜBİTAK (Scientific and Technological Research Council of Türkiye), to the system on April 15, 2024. The interim report included information about the project, the collected data, and the activities carried out. Visual materials were referenced within the text to establish connections and were additionally presented as annexes to the report. Similarly, the tables prepared as part of the project were provided as annexes due to their size. Positive feedback and some suggestions were received regarding the report.

The Albanian team submitted the first interim report to the National Agency for Scientific Research and Innovation (AKKSHI) on April 15, 2024, in the requested format, accompanied by an official letter. The report provided a comprehensive overview of the project's activities and progress to date. It included detailed descriptions of each activity, supported by relevant annexes corresponding to specific tasks. The report received positive feedback in June 2024.

2.2.10. Online Project Meetings

During the project process, five online meetings were held with team members from both countries via a virtual meeting platform. These meetings addressed project-related topics, facilitated exchanges of ideas, and included evaluations. As it was deemed necessary, two meetings were conducted before the project's approval and start date, while the subsequent three were held within the first year of the project.

2.2.11. An Informational Seminar for Project Members

On July 12, 2023, a seminar was conducted by Drahsan Uğuryol from the project team to train experts from various disciplines involved in the project. The goal was to enable them to assess the



Fig. 1. Poster of the first online seminar.

conservation issues and types of deterioration observed in the wall painting examples identified during field studies. The seminar focused on assessing the appropriateness of previous conservation and restoration efforts through external observation and analysis.

2.2.12. Organization of the Online Seminar

Within the scope of the project, a seminar was organized with two experts from Türkiye and two experts from Albania invited as speakers. Care was taken to select speakers who had conducted research, studies, and applications in the fields of wall paintings in Albania and Türkiye. The presentation, held on March 25, 2024, utilized Yıldız Technical University's online technical infrastructure, and the seminar poster was promoted through various channels (Fig. 1).

2.2.13. Workshops and Exhibitions

An online exhibition was initially planned to promote the project. However, it was later deemed beneficial to organize a physical exhibition to enhance the project's visibility and raise awareness. Two separate workshops were conducted in preparation for the exhibition:

• During the spring semester of 2023–2024, within the lecture "Wall Painting Mosaic Conservation and Restoration" offered by the Department of Conservation and Restoration of Cultural Properties at the Faculty of Architecture, Yıldız Technical University, a workshop involving 22 students was conducted, resulting in the production of nine panels measuring 50 cm × 70 cm. On these panels, wall paintings depicting vegetal motifs from the Ethem Bey Mosque in Tirana, Albania, and scenes focusing on Istanbul were drawn and painted using fresco and secco techniques (Fig. 2).





Fig. 2. Pictures from the workshop "Wall painting mosaic conservation and restoration" (Source: D. Uğuryol).



Fig. 3. Pictures and students work from workshop illustrating ottoman mural paintings: from history to modern merchandise (Source: Student O. Kraja).

In the workshop, ancient wall painting production techniques were first explained, and the selected motifs were drawn on $50 \text{ cm} \times 70 \text{ cm}$ tracing paper. The motifs were perforated for the dusting process. Two types of mortar—coarse and fine—were prepared using lime as a binder and aggregates with different grain sizes. The coarse mortar was initially placed into 50 cm × 70 cm frames, and after being compressed and leveled, the fine mortar, on which the painting would be applied, was spread over it. Those working with the fresco technique transferred the perforated motifs onto wet plaster using charcoal powder, while those working with the secco technique transferred the perforated motifs onto the dried plaster. The groups employing the fresco technique painted the transferred motifs using a mixture of dry pigment and water, whereas the groups using the secco technique painted them with gouache paints.

• During the spring semester of 2023–2024, a workshop titled "Illustrating Ottoman Mural Paintings: From History to Modern Merchandise" was organized at the University of New York Tirana to raise student awareness of the cultural and historical significance of Ottoman wall paintings and their potential role in contemporary design. Led by Dorina Papa, PhD, and Brunilda Basha, PhD Cand., the workshop aimed to encourage students to reinterpret traditional Ottoman mural motifs into modern design patterns.

The workshop started with a comprehensive lecture on the history and artistic significance of Ottoman mural paintings. Students were then given the opportunity to engage directly with these artworks through a field visit to the Ethem Beu Mosque in Tirana, where they photographed the wall paintings to inspire their creative work. Hereafter, they engaged in a creative process where they digitally reinterpreted the historical motifs, integrating modern design elements such as color and form. These reimagined designs were applied to various merchandise items, including teacups, plates, T-shirts, tote bags, and mugs. The workshop aimed to deepen students' understanding of how historical cultural heritage can be reinterpreted and recontextualized within contemporary design practices, fostering a connection between the past and the present (Figs. 3 and 4).



Fig. 4. Students work from workshop illustrating ottoman mural paintings: from history to modern merchandise (Source: Student K. Xhafa).





Fig. 5. Site visits in Türkiye (Source: authors).

2.2.14. Preparations for Scientific Publications

In addition to this article, which provides a general overview of the project, other scientific papers are planned to be written as project outputs. The topics that project team members aim to address by forming different groups can be outlined as follows:

- Comparative analysis of wall painting restoration practices in Türkiye and Albania,
- Assessment of education and awareness on wall painting conservation,
- An alternative analysing method: detecting the deterioration of wall paintings,
- Experiences of wall painting conservators/restorers.

2.3. Technical Inspection Trips

Technical inspection trips were conducted on four separate occasions in Türkiye (Istanbul, Bursa, Safranbolu) and Albania (Tirana, Krujë, Berat, and Gjirokastër) (Figs. 5 and 6, Table I). A total of 38 buildings were examined on-site, including 33 accessed from the interior and five observed from the exterior. In selecting the sites, attention was given to including settlements from both countries listed on the UNESCO World Heritage List; incorporating cities such as Berat and Safranbolu that share common architectural characteristics; prioritizing the most significant examples of monumental structures with different functions and civil architecture; and visiting notable buildings frequently mentioned in the literature. Existing sources were exploited for examples that could not be accessed due to permission problems. The technical visits aimed to identify the conservation issues and past inappropriate interventions related to wall paintings and to provide recommendations for future conservation and restoration efforts. The on-site visits were structured as a methodical process consisting of three stages: preliminary preparation, site visits/data collection, and classification and reporting:

- 1. Preliminary preparation: Before the fieldwork, a literature review was conducted, and relevant documents and reports were examined to gather information on the wall paintings and previous conservation efforts. For each trip, a file containing details about the buildings to be visited was prepared and shared with team members both digitally and in printed form.
- 2. Site visits/data collection: In the structures containing wall paintings, the prepared building inspection forms were completed based on visual observations. During the technical visits, meetings were held with local administrators, architects, civil engineers, art historians, conservators, and other experts. Notes, photographs and videos were taken by team members during the visits. Observations made during data collection included the condition of the structure housing the wall paintings, the location of the wall paintings, the original production technique,





Fig. 6. Site visits in Albania (Source: authors).

identifiable preparation layers, colors and patterns used in the wall paintings, causes and types of deterioration, their depth and distribution, the appropriateness of previous restorations from a conservation perspective, added and altered parts from past interventions, and non-original materials observed in the wall paintings. These observations were systematically documented.

3. Classification and reporting: After the technical inspections, all written and visual documents containing the findings and observations of the technical visits were classified and recorded, making them ready for the detailed report writing stage.

TABLE I: LIST OF VISITED BUILDINGS

Fieldworks	Name of the building		Location	Expert's title	Content of the expert interview
				Date of the expert	
1st Fieldwork	1	C 1, A1 , M	Istanbul/Türkiye	interview	T.C. (1. 1. 1. 1.
(Istanbul—July 18–20, 2023)	1	Sultan Ahmet Mosque	Istanbul/ I urkiye	Civil Engineer July 18, 2023	Information about the wall paintings observed particularly on the stone wall surfaces of the mosque.
	2	Tomb of Abdul Hamid I	Istanbul/Türkiye		
	3	Tomb of Hatice Turhan Sultan	Istanbul/Türkiye		
	4	Süleymaniye Mosque	Istanbul/Türkiye		
	5	Yıldız Palace Prince Pavilions	Istanbul/Türkiye	Conservator-restorer July 20, 2023	Information about the painting tradition of the period preferred on the wall paintings observed on the walls and ceilings of the pavilions, depiction styles, and the conservation of wall paintings.
	6	Yıldız Hamidiye Mosque	Istanbul/Türkiye		
2 nd Fieldwork (Tirana, Berat, Krujë—September 28–October 2, 2023)	1	Toptaniler mansion	Krujë/Albania	Conservation architect September 29, 2023	The general conservation issues of the mansion and the repairs it has undergone.
				Curator September 29, 2023	Exhibition project of the mansion reorganized as a museum space.
				Civil Engineer September 29, 2023	The methods of restoration applied to the wall paintings observed on the walls and ceilings of the mansion.
	2	Tekke of Dollmë and Shrine	Krujë/Albania		
	3	Murad Bey Mosque	Krujë/Albania		
	4	Kuçe house	Krujë/Albania		
	5	Edhem Bey Mosque	Tirana/Albania		
	6	Tower house	Berat/Albania	Archaeologist and	The art-historical interpretation
	7	Bekarlar mosque	Berat/Albania	Restorer	of the wall paintings observed on the walls and ceilings of the
	8	Sultan Bayezid II Mosque	Berat/Albania	October 1, 2023	on the walls and ceilings of the structures, the stylistic characteristics of the period, and
	9	Kurt Ahmet Pasha Celveti Lodge	Berat/Albania		the decorative compositions.

TABLE I. CONTRIGED

			TABLE I: CONTINUE)	
Fieldworks		Name of the building	Location	Expert's title	Content of the expert interview
				Date of the expert interview	
3 rd Fieldwork (Bursa,	1	Ulu mosque	Bursa/Türkiye	interview	
Safranbolu—July	2	Orhan Gazi Mosque	Bursa/Türkiye		
29-August 1, 2024)	3	Yenişehir Şemaki House	Bursa/Türkiye		
	4	Muradiye Ottoman Museum House	Bursa/Türkiye		
	5	Muradiye tombs	Bursa/Türkiye	Conservation Architect (Ph.D. thesis on Muradiye Tombs) July 30, 2024	The architecture of the tombs, the repairs they have undergone, general conservation issues, the decorative styles and techniques of the period, and the restoration of the decorations in the tombs.
	6	Osman Fevzi Efendi Mansion	Bursa/Türkiye	Restorer (The person who carried out the restoration of the wall paintings) July 31, 2024	The conservation methods for the wall paintings observed on the walls and ceilings, with a particular focus on the method of cutting and reattaching the original decorated surfaces.
	7	Emir Sultan Mosque	Bursa/Türkiye	Restorer (The person who carried out the restoration of the wall paintings) July 31, 2024	The conservation methods for the wall paintings observed on the walls and ceilings, with a particular focus on the method of cutting and reattaching the original decorated surfaces.
	8	Sipahiler mansion (Yörük Village)	Safranbolu/Türkiye	August 1, 2024	
	9	Memişoğlu mansion	Safranbolu/Türkiye	August 1, 2024	
	10	Kavsalar mansion	Safranbolu/Türkiye	August 1, 2024	
	11	Gül house (3 mansions)	Safranbolu/Türkiye	August 1, 2024	
	12	Macun Ağası İzzet Efendi mansion	Safranbolu/Türkiye	August 1, 2024	
	13	Kaymakamlar house	Safranbolu/Türkiye	August 1, 2024	
	14	Mektepçiler mansion	Safranbolu/Türkiye	August 1, 2024	
4 th Fieldwork	1	Skenduli house	Gjirokastër/Albania	Civil Engineer and	
(Gjirokastër—October 10–14, 2024)	2	Barbaramo (Jaho) House	Gjirokastër/Albania	Restorer (Responsible for	
	3	Paceli, Polo house	Gjirokastër/Albania	Minor Restorations	
	4	Fico house	Gjirokastër/Albania	and Maintenance of	
	5	Belaj house	Gjirokastër/Albania	Historical Buildings at the Regional Directorate of Cultural Monuments,	Uncovered mural paintings during restoration process and subsequent conservation.
	6	Zekate house	Gjirokastër/Albania	Gjirokastra) October	Information on recent
	7	Gjirokastër mosque	Gjirokastër/Albania	11, 2024	restoration efforts
	,	-Jironaster mosque	5jii o i i i o i i i i o i i i i o i i i i		

3. Conclusion

This project started at 15 April 2023 for two years aims to contribute to the transfer of the common cultural heritage of both countries to future generations with a holistic approach. It is hoped that this cooperation will have a positive impact on the cultural policies of both countries and create a new awareness among all relevant stakeholders and actors.

Some of the buildings researched in the project are located in UNESCO World Heritage sites such as Berat, Gjirokastër, Istanbul, Bursa and Safranbolu. Since restoration activities have increased with the support received in these areas, the project will pave the way for new scientific project proposals.

The increase in restorations may also positively affect economic and commercial activities. Social and cultural ties can be further strengthened by raising awareness on common cultural heritage. Increasing the number and quality of conservation works on UNESCO World Heritage listed buildings may also coincide with the objectives of the site administrations and site management plans.

In recent years, it has been observed that in some restorations carried out in cooperation with TIKA in Albania (Ethem Bey Mosque, Bekarlar Mosque, Kurt Ahmet Paşa Celveti Lodge), wall paintings have been repaired with a conservation approach. However, this is not the case for every settlement or building.

In this context, it is recommended that the general approaches listed below be considered for addressing the conservation issues observed in the wall paintings during the project process, with reference to the ICOMOS, 2003:

- 1. Strategies for the conservation of wall paintings: The surfaces containing wall paintings should be visually documented in accordance with proper techniques; copies of the motifs should be made, and these records should be preserved in the archives of official institutions. Samples should be taken from the layers and paints that make up the wall paintings without damaging their originality, and the necessary analyses should be carried out. The physical conditions of the structures (humidity, temperature, light) should be controlled to establish an appropriate microclimate, ensuring structural preservation. Conservation and restoration methods for the wall paintings should be determined using traditional techniques that adhere to the original style and craftsmanship. Where necessary, modern materials and techniques may be employed; however, these methods must not harm the original structure.
- 2. Education and awareness: Educational programs should be prepared to inform the local community and relevant stakeholders about the importance and conservation of historically significant wall paintings. Workshops and seminars on conservation and restoration should be conducted by experts in the field.
- 3. Sustainable conservation plans: The condition of wall paintings should be monitored at regular intervals, and periodic maintenance work should be planned as needed. The necessary funds for conservation practices should be secured, and collaboration with local governments, NGOs, and international organizations should be established.
- 4. Research and development: Collaboration with universities and research institutions should be established to develop new methods for the conservation of wall paintings. Data obtained from conservation and restoration processes should be shared on national and international platforms.

It is hoped that this project will lead to the emergence of new scientific and academic co-operation in Albania and Türkiye, more effective and frequent transfer of experiences in the field of education and the practice of new projects, articles and theses. It is thought that the project will also create a synergistic cooperation for the protection of the common cultural heritage in the Balkans.

ACKNOWLEDGMENT

We would like to express our sincere gratitude to TÜBİTAK (Scientific and Technological Research Council of Türkiye, Project no: 122N334) and AKKSHI (Albanian National Agency for Scientific Research and Innovation) for their generous financial support, which has made this collaborative project possible. We extend our gratitude to all official institutions and organizations, private property owners who made the project possible by granting their permissions, as well as to all experts who shared their knowledge during and after the technical trips.

CONFLICT OF INTEREST

The authors declare that they do not have any conflict of interest.

REFERENCES

Arapi, D. (2015). Süleymaniye Mosque, Bosporus in Bosfor in Water in Arts and Crafts in Berat region, Project results. University of New York Tirana.

Arık, R. (1976). Batılılaşma Dönemi Anadolu Tasvir Sanatı (1. Baskı). Türkiye İş Bankası İş Kültür Yayınları.

Bağcı, S., Çağman, F., Renda, G., & Tanındı, Z. (2006). Osmanlı Resim Sanatı. 1st ed. T.C. Kültür ve Turizm Bakanlığı Yayınları. Cather, S. (Ed.). (1996). The Conservation of Wall Paintings. 2nd ed. London: The Getty Conservation Institute.

Coşkun, S. N. (2021). Anadolu-Türk House; Süsleme Ve Renk Unsurları (Birgi-Çakırağa Mansion Örneği, eds.; S. Sağlık, Gece Kitaplığı, Ankara, Aralık 2021, s.168-188. In E. Aydemir, & S. Sağlık (Eds.), Sosyal ve Beşeri Bilimlerde Araştırma ve Değerlendirmeler II (pp. 168-188). Gece Kitaplığı.

Demirarslan, D. (2016). 19. Yüzyıl Türk Sivil Mimarisinde Duvar Resmi Estetiği ve Istanbul Teması. Mimarlık ve Yaşam Dergisi, 1(1), 105–125. https://doi.

Drishti, Y., & Devolli, A. (1989). Dollma Tekke. Wall painting and its restoration (in Albanian). In Monumentet, No. 1, pp. 93, Tiranë: Instituti i Monumenteve të kulturës

Erçin Koçer, S. (2019). Salihli/Damatlı Köyü Eski Mosque'nin Kalem İşi Bezemeleri (Manisa). Turkish Studies, 14(6), 3211-228/turkishstudies.373

Gowing, R., Godfraind, S., English Heritage Building Conservation and Research Team, Howe, E., & Graduate Intern. (2005). Practical Information Leaflet III: Anticipating and Responding to the Discovery of Wall Paintings (M. Wood & English Heritage Publishing, Eds.) London: English Heritage.

- Gürçağlar, A. (1996). Hayali İstanbul Manzaraları [Doktora Tezi]. London: İstanbul Teknik Üniversitesi.
- Gürçağlar, A. (2018). Hayali İstanbul Manzaraları. Yapı Kredi Yayınları
- Heritage, A., Gowing, R., & English Heritage Building Conservation and Research Team. (2002a). Practical Information Leaflet I. The Production of Wall Painting Conservation Documents (M. Wood & English Heritage Academic and Specialist Publications Branch, Eds.). London: English Heritage.
- Heritage, A., Gowing, R., & English Heritage Building Conservation and Research Team. (2002b). Practical Information Leaflet II: Temporary Protection of Wall Paintings During Building Works (M. Wood & English Heritage Academic and Specialist Publications Branch, Eds.). London: English Heritage.
- Historic England. (2018). Wall Paintings: Anticipating and Responding to their Discovery. London: Historic England.
- İbrahimgil, M. (1997). Kalkandeler (Tetovo) Alaca-Paşa Camii. Vakıflar Dergisi, 26, 249–266.
- İbrahimgil, M. Z. (2007). Bulgaristan'daki Türk Eserlerinde Duvar Süslemelerinden Örnekler. *Türk Kültürü ve Hacı Bektaş Veli* Dergisi, 43, 107-115.
- Ibrahimgil, M. Z., & Naldan, F. (2020). The reflection of florentine (Firenze) school of painting on muralpaintings of ottoman architecture in Balkans in the 19th Century. Atatürk Üniversitesi Güzel Sanatlar Enstitüsü Dergisi, 26(44), 10-20. https:// doi.org/10.32547/ataunigsed.541929.
- ICOMOS. (2003). Principles for the Preservation and Conservation/Restoration of national Council on Monuments and Sites. Retrieved February 23, 20 Wall Paintings. Inter-2022. https://www.icomos .org/en/what-we-do/focus/179-articles-en-francais/ressources/charters-and-standards/166-icomosprinciples-for-the-preser vation-and-conservationrestoration-of-wall-paintings.
- Karaaslan, M. (2016). Ankara'da Resimli Bir Ev; Dedebayrak House. Ankara Arastırmaları Dergisi, 4(1), 13–22.
- Kurtoğlu, M. (Ed.). (2020). Yıldız Hamidiye Camii: Bir Dönem Yapısının Restorasyonu 2013–2017. Vakıflar Genel Müdürlüğü Yayınları No:141.
- Kurtoğlu, M. (Ed.). (2021a). Cihangir Camii ve Restorasyon Sürecine Dair (2015–2018). Vakıflar Genel Müdürlüğü Yayınları No: 142
- Kurtoğlu, M. (Ed.). (2021b). Davut Paşa Camii ve Restorasyonuna İthaf (2015–2019). Vakıflar Genel Müdürlüğü Yayınları No: 145.
- Kurtoğlu, M. (Ed.). (2021c). Kocamustafa Paşa Külliyesi ve Restorasyon Çalışmaları (2015–2019). Vakıflar Genel Müdürlüğü Yayınları No: 143.
- Kurşun, Z. (Ed.). (2013). Mühr-i Istanbul, Kanuni Sinan, Süleymaniye Camii. Gürsoy Grup Kültür Yayınları No:2.
- Meksi, A. (1979). "Reinforcement restoration in Bachelor Mosque in Berat" (in Albanian). In Monumentet, No. 18, pp. 93, Tiranë: Instituti i Monumenteve të kulturës
- Meksi, A. (2018). Albanian Mosques. History and Architecture of the Centuries XV-XIX (in Albanian). Tiranë: Plejad.
- Meksi, A., Baçe, A., Riza, E., Kariskaj, G., & Thomo, P. (2016). History of Albanian Architecture (in Albanian). Tiranë: Akademia e Shkencave.
- Merkaj, E., & Civici, N. (2019). Micro-XRF decoration materials and painting techniques in three 18th-19th Century Mosques in Berat, Albania. Journal of Materials Science and Chemical Engineering, 7(5), 1–15 (in Albanian).
- Mora, P. (1974). Causes of Deterioration of Mural Paintings (H. J. Plenderleith, Trans.). International Centre for the Study of the Preservation and the Restoration of Cultural Property
- Mora, P., Mora, L., & Philippot, P. (1984). Conservation of Wall Painting. Butterworths.
- Nallbani, H. (1972). "Notes on the restoration measures in the painting of the Bachelor Mosque in Berat" (in Albanian). In Monumentet, No. 3, pp. 171, Tiranë: Instituti i Monumenteve të kulturës.
- Okçuoğçlu, T. (2000). 18. ve 19. Yüzyıllarda Osmanlı Duvar Resimlerinde Betimleme Anlayışı [The Concept of Description in Ottoman Wall Paintings in the 18th and 19th Centuries] [Yayınlanmamış Doktora Tezi] [Unpublished Doctoral Thesis]. Istanbul Üniversitesi.
- Okçuoğlu, T. (2021). Hayal ve Gerçek Arasında Osmanlı Resminde İstanbul İmgesi 18. ve 19. Yüzyıllar [Between Dream and Reality: The Image of Istanbul in Ottoman Painting-18th and 19th Centuries] (1. Baskı) (1st Edition). Istanbul Araştırmaları Enstitüsü.
- Özbek, Y. (2014). Kapadokya'da Osmanlı Dönemi Duvar Resimlerinde Kent Tasvirleri. Mediterranean Journal of Humanities, 4(1), 215–230. https://doi.org/10.13114/MJH.20
- Özkeçeci, İ., Gül Durukan, S. N., & Alacalı, H. (2018). XVII–XIX. Yüzyıllarda Osmanlı Dönemi Konut Mimarisi İçMekân Tasarımlarında Tavan Dekorlarına Genel Bir Bakış [A General Look at Ceiling Decorations in Interior Designs of Ottoman Period Residential Architecture in the 17th-19th Centuries]. İnsan ve İnsan Dergisi, 17, 214-232. https://doi. org/10.29224/insanveinsan.39895
- Renda, G. (1977). Batılılaşma Döneminde Türk Resim Sanatı 1700–1850 [Turkish Painting in the Westernization Period 1700– 1850]. Ankara: Hacettepe Üniversitesi Yayınları.
- Renda, G. (1985). 19. yy'da Kalemişi Nakış-Duvar Resmi. In Tanzimattan Cumhuriyet'e Türkiye Ansiklopedisi [Encyclopedia of Türkiye from Tanzimat to Republic] (vol. 6, pp. 1530–1534). İstanbul: İstanbul Büyükşehir Belediyesi Yayınları.
- Renda, G. (1996). Westernisms in ottoman art: wall paintings in 19th century houses. In S. Ireland, & W. Bechhoefer (Eds.), The amasya symposium (pp. 103-109). The British Institute of Archaeology at Ankara, The University of Warwick
- Renda, G. (n.d.). Osmanlı'dan Cumhuriyet'e İstanbul'da Batı Tarzında Resim: Yeni Denemeler, Yeni Teknikler [Western Style Painting in Istanbul from the Ottoman Empire to the Republic: New Experiments, New Techniques]. In Büyük Istanbul Tarihi (pp. 402–421). İstanbul: İstanbul Büyükşehir Belediyesi Yayınları. Retrieved November 4, 2024. https:// istanbultarihi.ist/276-osmanlidan-cumhuriyete-istanbulda-bati-tarzinda-resim-yeni-denemeler-yeni-teknikle
- Riza, E. (1977). Arkitektura dhe restaurimi i banesës së Zekateve—Gjirokastër. Revista Monumentet, Nr. 13. Tiranë: Instituti i Monumenteve të kulturës
- Riza, E. (1981). Banesa dyfamiljare në qytet. Revista Monumentet, Nr. 22. Tiranë: Instituti i Monumenteve të kulturës.
- Riza, E., & Nallbani, H. (1975). Një ndërtim i tipit kullë në Berat. Revista Monumentet, Nr. 10. Tiranë: Instituti i Monumenteve të kulturës.
- Riza, E., Meksi, A., & Baçe, A. (1988). Berat, History and Architecture (in Albanian). 8 Nëntori, Tiranë.
- Şahin, P. (1996). Yenişehir, Şemaki House'ndeki Kalem İşi Nakışlar [Pen Embroidery in Şemaki House, Yenişehir]. Sanat Tarihi Dergisi [Art History Journal], 8(8), 111–116.
- Şahin Tekinalp, P. (2002). Batılılaşma Dönemi duvar resmi [Westernization Period Wall Painting]. In H. C. Güzel, K. Çiçek, & S. Koca (Eds.), Türkler [Turks] (vol. 15, pp. 718–730). Yeni Türkiye Yayınlar.
- Şavkar, F., & Kabalcı, O. (2019). Safranbolu Evlerindeki Kalemişi Süsleme Motifleri. In A. Işık, T. Aydeniz, & İ. H. İmamoğlu (Eds.), Uluslararası Geçmişten Günümüze Karabük ve Çevresinde Dini, İlmi ve Kültürel Hayat Sempozyumu [International Symposium on Religious, Scientific and Cultural Life in Karabük and Surroundings from Past to Present] (pp. 320-335). Karabük Üniversitesi Yayınları-51.
- Sav, M. (Ed.). (2016). Nuruosmaniye Camii, Külliyeni Algısı ve 2010-2014 Restorasyon Çalışmaları [Nuruosmaniye Mosque, Perception of the Complex and 2010–2014 Restoration Works]. Vakıflar Genel Müdürlüğü Yayınları.
- Sav, M., & Kurtoğlu, M. (Eds.). (2018). Molla Çelebi Camii Restorasyon Süreci (2013–2017). Vakıflar Genel Müdürlüğü Yayınları No: 132.

- Schmid, W. (Ed.). (2000). Graphic Documentation Systems in Mural Painting Conservation (GRADOC). ICCROM.
- Tanman, M. B., & Tanman, G. (Eds.). (2015). Meşk-i İstanbul, Yenikapı Mevlevihanesi Restorasyonu 2005–2010. İstanbul: İstanbul Büyükşehir Belediyesi Yayınları.
- Uçar, M. (2013). Arnavutluk'takii Osmanlı Dönemii Miimariisiinde Istanbul Tasviirlii Duvar Resiimleri [Istanbul Depicted Wall Paintings in Ottoman Architecture in Albania]. Turkish Studies-International Periodical for the Languages, Literature and History of Turkish or Turkic, 8, 671-686.
- Uçar, A. (Ed.). (2015). Nakş-ı İstanbul, Ortaköy Mecidiye Camii [Naqsh-i İstanbul, Ortaköy Mecidiye Mosque]. Gürsoy Grup Kültür Yayınları No:3.
- Uçar, M., & İlden, S. (2017). Arnavutluk'taki Osmanlı Dönemi Mimarisinde Edirnekari Bezeme Örnekleri [Examples of Edirnekari Decoration in Ottoman Architecture in Albania]. *Uluslararası Sosyal Araştırmalar Dergisi* [International Journal of Social Studies], 10(54), 499–507. https://doi.org/10.17719/jisr.20175434613.
- Uluengin, N. (2020). Ege'nin İki Yakasından İstanbul Manzaralı Evler [Houses with a View of Istanbul from Both Sides of the Aegean] (1. Baskı) (1st Ed.). YEM Yayınları.
- Uluçam Kırbağ, Z. M. (2019). Safranbolu Yörük Köyü Sipahioğlu Mansion Başodası Duvar Resmi'nde Bir Yanılgı [A Mistake in the Wall Painting in the Main Room of the Sipahioğlu Mansion in Safranbolu Yoruk Village]. Social Sciences Studies Journal, 5(50), 6661-6666. https://doi.org/10.26449/sssj
- Uzun, T. (2023). Osmanlı Duvar Resimlerinde Antik Kent Kalıntılarının Bir Tema Olarak Kullanılması Üzerine [On the Use of Ancient City Ruins as a Theme in Ottoman Wall Paintings]. Journal of Humanities and Tourism Research (JoHUT), 1(13), 152-174. https://doi.org/10.14230/johut138
- Yavaş, A. (2016). BayramiçHadimoğlu Konağı. Çanakkale Araştırmaları Türk Yıllığı, 20(20), 207–227.
- Yetiş, E. (2015). Samsun Büyük Mosque Duvar Resimleri: Onarım ve Değişiklikler [Samsun Büyük Mosque Wall Paintings: Repairs and Changes]. 5 Tarihi Eserlerin Güçlendirilmesi ve Geleceğe Güvenle Devredilmesi Sempozyumu [5th Symposium on Strengthening Historical Artifacts and Safely Transferring Them to the Future], pp. 323-332, TMMOB İnşaat Mühendisleri Odası, Erzurum.