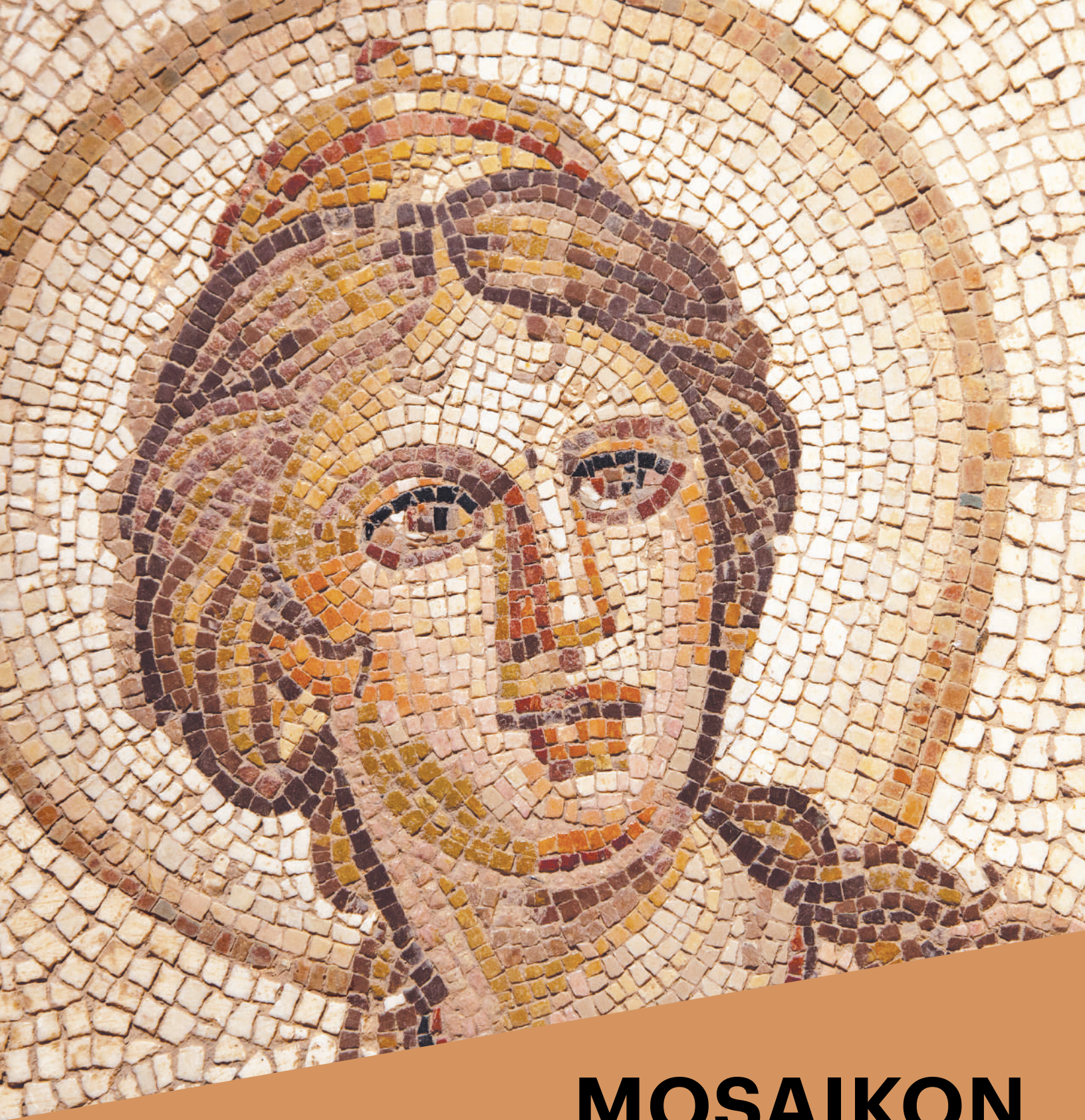




MOSAIKON

Final Report



INTERNATIONAL COMMITTEE FOR
THE CONSERVATION OF MOSAICS



ΑΡΙΑΔΗ

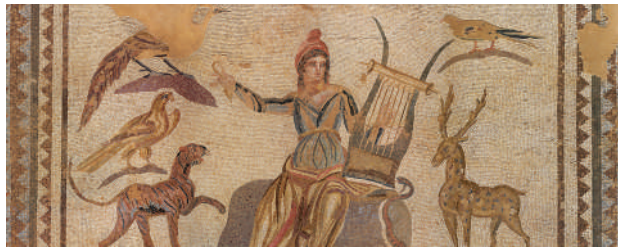
ΛΑΒΥ

ΡΙΝΘ

ΘΗ
CEYC



“**MOSAIKON** was born from an ambitious and aspirational goal—simply stated, to improve the conservation and management of archaeological mosaics in the Mediterranean region.” —JEANNE MARIE TEUTONICO



01 Foreword



03 Overview



07 Project Components



23 Outcomes



27 Looking Ahead



31 Appendices

ΕΠΙΝΥΜΕ
ΠΕΛΤΙΟΙ ΤΟΙΣ ΕΠΙΘΕΙ



FOREWORD

We are pleased to present this final report on MOSAIKON, a strategic regional initiative dedicated to improving conditions for the conservation and management of archaeological mosaics in the southern and eastern Mediterranean. MOSAIKON was launched in 2008 as a collaborative endeavor of the Getty Conservation Institute (GCI), the Getty Foundation, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), and the International Committee for the Conservation of Mosaics (ICCM). Over more than a decade, each organization brought its unique skills and resources to the effort in collaboration with regional government authorities and a talented group of conservation professionals and consultants. Through training, capacity building, research, model projects, publications, and support for the professional community, MOSAIKON has had a transformative effect on the region and helped prepare the next generation of decision-makers, site managers, and conservation technicians to protect and conserve the region's extraordinary archaeological heritage.

The report describes MOSAIKON's objectives, approach, activities, and accomplishments as well as the challenges that lie ahead. The latter are many and varied—from political and social unrest to the lack of adequate economic resources and the increasing impacts of climate change. It is hoped that this summary will highlight what has been achieved to date but also encourage future efforts that build on MOSAIKON's foundation.

Of course, it is impossible with an initiative of such scope and complexity to acknowledge individually all those responsible for its success. We would like to thank the leadership of our respective institutions for their sustained support, both financial and otherwise, especially as the region experienced serious political upheaval and many other organizations abandoned their efforts. Our profound gratitude as well to the Directors General and the other heritage professionals in the cultural ministries of the MOSAIKON partner countries who stayed the course and brought such energy and commitment to the endeavor. Perhaps most importantly, we thank the incredibly talented teams at each of our institutions as well as the many exceptional colleagues and consultants who worked together to deliver MOSAIKON's programs with professional skill and generosity of spirit. MOSAIKON's regional coordinator, the archaeologist and scholar Dr. Aicha Ben Abed, deserves special mention and gratitude for her invaluable work throughout the life of the project in facilitating regional communication and helping us navigate linguistic, administrative, and other challenges in complex times. Finally, we thank the hundreds of MOSAIKON participants and trainees who came together over more than a decade to build a regional community of practice that continues to learn from and support each other. They are MOSAIKON's legacy and hope for the future.

—**Getty Conservation Institute, Getty Foundation,
ICCROM, ICCM**



MOSAIKON OVERVIEW

Background and Rationale

The Mediterranean region possesses an extraordinary range of archaeological heritage, evidence of complex histories, and cultures through time. Among these vestiges of the ancient past are vast numbers of mosaics, one of the defining artistic media of classical antiquity. Comprised of small pieces of marble, stone, glass, shell, and pottery fragments, mosaics were originally integral decorative features of Greek and Roman houses, baths, and other structures. From portraits of people and mythological figures to scenes from daily life, from depictions of animals and sea creatures to intricate geometric designs, the mosaics that have survived for thousands of years are not only artworks of great beauty but important records of life in the ancient Mediterranean.

Today, ancient mosaics are found in two distinctly different contexts. Some remain on sites in their original locations (in situ) while many others exist in museums and storage. Conservation of this heritage presents significant challenges. Mosaics in situ suffer from exposure to the elements (exacerbated more recently by the effects

of climate change), as well as human impacts such as looting and uncontrolled tourism. As for mosaics in museums, many were handled in harmful ways during their removal from archaeological sites, stored in poor conditions, or backed with materials that are ultimately damaging. In both circumstances, conservation needs exceed available human and financial resources, and mosaics continue to deteriorate at a rapid rate.

To address these issues, the Getty Conservation Institute (GCI), the Getty Foundation, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), and the International Committee for the Conservation of Mosaics (ICCM) joined forces in 2008 to create MOSAIKON, a strategic initiative dedicated to improving conditions for the conservation and management of archaeological mosaics in the Mediterranean region, with a focus on the countries of the south and east Mediterranean where the volume of significant mosaics is enormous and resources are in short supply.

RIGHT: Deteriorating mosaic floor in Maison de la Nouvelle Chasse, Bulla Regia, Tunisia, 2011. Photo by Scott Warren, © J. Paul Getty Trust.



PREVIOUS PAGE: Detail of the Maison d'Amphitrite Mosaic, Bulla Regia, Tunisia, 2011. Photo by Scott Warren, © J. Paul Getty Trust.

Goals and Objectives

The ultimate goal of MOSAIKON was the improved conservation, presentation, and management of mosaics in the Mediterranean region. Working in consultation with decision-makers and heritage professionals throughout the region, MOSAIKON identified four main objectives at the start of the initiative:

- **Improving the knowledge and skills** of conservation technicians, site managers, museum professionals, and decision-makers who care for mosaics through capacity building and training activities at various levels;
- **Developing locally sustainable and affordable conservation practices** through model field projects and research;
- **Strengthening the network of professionals** concerned with the conservation and management of archaeological mosaics; and
- **Promoting the dissemination and exchange of information** in several languages.

Over the course of the initiative, various MOSAIKON partners developed interrelated activities to support these objectives (see Project Components). To ensure a long-term commitment to the program at the highest level, the Directors General of Antiquities and other senior heritage professionals from each of the twelve MOSAIKON countries were brought together at regular intervals throughout the life of the initiative. These regional advisory meetings were instrumental in defining priorities, adapting to changing circumstances, and planning for the long-term sustainability of outcomes. “We involved the decision-makers throughout the process,” Jeanne Marie Teutonico, former Associate Director of the GCI, explains. “They told us what they needed and helped us evaluate the effectiveness of our efforts.”

BELOW: A student removes a protective facing from a mosaic after rebacking during the 2017–18 Technician Training Course for In Situ Mosaics, Volubilis, Morocco, 2018. © J. Paul Getty Trust.



Approach and Activities

MOSAIKON was conceived as a strategic, collaborative initiative among four different partners with unique resources, skills, and influence. From its inception, the MOSAIKON partners worked closely with decision-makers and heritage professionals from each country to establish priorities, develop strategies, and encourage lasting investment in the preservation and promotion of the region's rich archaeological heritage.

Addressing the conservation needs of mosaics served as an entry point to building broader skills related to heritage conservation and developing regional collaboration and interpersonal connections that superseded national boundaries. "Mosaics are not just beautiful items," says Sarkis El Khoury, Director General of Antiquities for Lebanon. "They are a powerful archive of the past that let us know our history better." Through understanding the past, MOSAIKON recognized that people can better understand each other in the present. Or, as Fadi Balawi, Secretary General of Jordan's Ministry of Tourism and Antiquities, puts it: "National identity is really world identity when we're talking about cultural heritage."

MOSAIKON supported a variety of activities including:

- online and on-site training courses
- innovative training ateliers and workshops

- long-distance coaching and mentoring
- technical conservation research
- a model field project
- international conferences
- collaborations with government agencies
- the formation of a new NGO
- multilingual publications and didactic materials, exhibitions, and more

With its four-pronged paradigm, MOSAIKON advanced the practice of archaeological heritage conservation in the region, exemplifying what can be created when dedicated people come together with significant institutional support and how enduring change comes about through sustained commitment to the development of relationships and community. As Dr. Aicha Ben Abed, MOSAIKON's Regional Coordinator notes: "Building on some initial training collaboration in Tunisia, MOSAIKON developed a regional, strategic approach to mosaic conservation that involved local heritage professionals in the entire decision-making process. The partners realized from the outset that introducing and sustaining best practices in the region would be a long and complex process that demanded significant investment and the development of a strong community of practice."



● Locations of major training courses and field projects, including: Algiers, Algeria; Paphos, Cyprus; Arles, France; Belmonte, Italy; Marco Simone, Italy; Amman, Jordan; Byblos, Lebanon; Sidon, Lebanon; Tyre, Lebanon; Sabratha, Libya; Volubilis, Morocco; El Jem, Tunisia; and Ephesus, Turkey.

■ MOSAIKON partner countries.



PROJECT COMPONENTS

Training and Capacity Building

Through numerous training and fieldwork programs during its fifteen years, MOSAIKON prepared over two hundred mosaic technicians, site managers, museum professionals, and decision-makers to conserve, manage, and present both in situ and lifted archaeological mosaics. With in-person programs in ten countries and remotely during the pandemic, MOSAIKON built knowledge and skills in local, affordable, and sustainable best practices that continue to be replicated in the region. It also created a regional network of young professionals who can rely on each other for advice and support, as well as a significant body of didactic materials (in English, French, and Arabic) that other educators can access and use.

MOSAIKON focused on two main groups for its training activities: conservation technicians who work on both in situ and lifted mosaics, and site managers who oversee the conservation, management, and presentation of archaeological sites with significant mosaics.

Conservation Technicians

The GCI developed the first MOSAIKON regional training course for in situ mosaic conservation technicians from North Africa at the site of El Jem in Tunisia, training twelve people from four countries over a two-year period from

2012 to 2013. A second in-depth training course of this type was held at the site of Volubilis in Morocco, from 2017 to 2018, creating another cohort of technicians from the Maghreb. To expand skill sets and develop local teams, a number of the best technicians from each course also received advanced training. These training efforts were led by Thomas Roby, Senior Project Specialist at the GCI, with consultant conservators Livia Alberti, Ermanno Carbonara, and Cristina Caldi.

For technicians dealing primarily with lifted mosaics, the first MOSAIKON training program was carried out by the Centro di Conservazione Archeologica (CCA) under the direction of conservator Roberto Nardi, with funding from the Getty Foundation. From 2011 to 2016, the CCA organized a series of courses at its headquarters in Belmonte, Italy, for twenty-eight participants from Syria, Jordan, Tunisia, and Libya. Selected participants completed advanced training to develop the next generation of teachers and to strengthen regional relationships, including working on a project at Ephesus in Turkey. Additionally, Nardi later led a training program at Byblos in Lebanon. “The most important outcome for me is the network of dozens and dozens of conservation professionals from so many countries,” reflects Nardi on the program’s impact.

RIGHT: Participants in the MOSAIKON training course for Libyan mosaic technicians at the Centro di Conservazione Archeologica in Belmonte, Italy, work on the Pietra Papa mosaic, 2014. Photo by Araldo De Luca, © J. Paul Getty Trust.

PREVIOUS PAGE: Students stabilize a lifted mosaic being stored in Sidon, Lebanon as part of the MOSAIKON Training Course for the Conservation of Lifted Mosaics in Storage, 2022. Photo by Ermanno Carbonara, © J. Paul Getty Trust.



The Getty Foundation also funded a similar long course from 2016 to 2017 for twelve participants from Algeria, Lebanon, and Egypt, based at the Musée Départemental Arles Antiques in the south of France, led by conservator Patrick Blanc. In this case, advanced training took place in both Lebanon and Algeria through exchange programs partially supported by the host countries.

Hamadi Sillini, a technician working in Tunisia, began training with MOSAIKON in 2012. Since then, he says, he's learned "the importance of working within a group, sharing information, and developing a decision-making process to manage the work." He adds, "Our daily challenges are to contribute as much as possible, with the means at our disposal, to conserve our heritage for future generations."

Badr Albireeki, a technician in Libya who participated in several MOSAIKON training courses, likewise notes that the program "had a positive impact on learning about the differences between countries and ways to preserve and protect cultural heritage in its original location or in museums, and methods of displaying it to visitors."

Archaeological Site Managers

In addition to conservation technicians, MOSAIKON trained site managers from across the region through four courses and a variety of supplementary mentoring programs. At Tyre in Lebanon (2010–12), Nea Paphos in Cyprus (2014–15), Volubilis in Morocco (2017–18), and Amman in Jordan (2022), MOSAIKON partnered with the host countries' departments and ministries of culture and antiquities to bring together a multinational cohort of site managers. MOSAIKON emphasized essential heritage site management skills in these sessions, such as:

- Performing values-based assessments;
- Understanding deterioration mechanisms and the condition of mosaics and other site features;
- Implementing prioritized decisions for their sites including protective measures such as reburial and sheltering.

In addition, leadership and fundraising workshops were offered in person prior to ICCM conferences and virtually during the pandemic to select site managers. Following these initiatives, the MOSAIKON partners recognized that some workshop participants had the potential to build

sustained impact in their countries and would benefit from individually focused mentoring beyond what could be provided in a course setting. Through one-on-one working sessions as well as regionally focused virtual courses, participants gained skills and advice for positioning their work and sites to achieve funding from cross-border philanthropic sources, creating lasting impact beyond MOSAIKON's direct involvement.

Vesna Crnoglavac, a Serbian archaeologist and senior curator at the National Museum in Niš who participated in the training for site managers, highlights MOSAIKON's "huge impact" on global cultural property. She also credits the program with new knowledge that she gained regarding preventive mosaic conservation, the effective use of shelters, and site management.

Archaeological sites with mosaics are major draws for local and global tourism and provide unique opportunities for sustainable development and education. Site managers gained valuable expertise not only in fundraising and administration, but also in site interpretation, visitor experience, and education for all ages to help the public relate to these significant locations.

Site managers continue to build upon MOSAIKON's work in the face of emerging issues such as climate change, which has exacerbated flooding, sea-level rise, fires, and temperature fluctuations that impact sites and their material remains. MOSAIKON participants have taken their expertise from these courses and from one-on-one mentoring to create new initiatives, raise significant funds, and communicate about best practices for maintaining their sites and organizations in a changing world.

"As participants in the site management courses become more senior, they're enacting changes at a higher level. They are much more responsible, and they know what questions to ask." —JOHN STEWART

John Stewart, a lead instructor for several site management courses, emphasizes that one of MOSAIKON's distinguishing characteristics is that rather than "parachuting" educators in, the program focused on building a lasting network and following trainees over several years. "You need to put years of work into developing this training for it to stick. And for people to really feel confident in using it and then adding to it," he says. "As participants in the site management courses become more senior, they're

enacting changes at a higher level. They are much more responsible, and they know what questions to ask." Or, as Sarkis El Khoury, Director General of Antiquities for Lebanon, notes of the MOSAIKON trainees, "Not only can they diagnose problems and propose solutions, but they also know when to seek out additional expertise. They know what they don't know. They have access to a network they didn't have before. They know how to be decision-makers."

Participants conduct a condition survey exercise of the Achilles Mosaic during the Conservation and Management of Archaeological Sites with Mosaics course, Nea Paphos, Cyprus, 2014. Photo by Scott Warren, © J. Paul Getty Trust.



TRAINING CASE STUDY 1

Conservation Technician Training for In Situ Mosaics: Volubilis, Morocco

After the success of the two-year training program in El Jem, Tunisia, from 2012 to 2013, the GCI developed a course for in situ mosaic conservation in Volubilis, Morocco, in cooperation with the Moroccan Ministry of Culture. From spring 2017 to fall 2018, conservation technicians from Morocco came together for several four-to-six-week training modules for both theoretical lessons and supervised practical work on documentation and conservation. A final advanced training module dealing with the conservation of mosaics in storage and relaying lifted mosaics on site brought together selected trainees from Tunisia, Algeria, and Morocco.

Volubilis, near the city of Meknes in northern Morocco, features more than half of the mosaics in the country.

The site spans more than a millennium of history and today represents a cultural palimpsest of Mauritanian, Roman, Christian, and Islamic influences. For its significance, Volubilis was designated a UNESCO World Heritage Site in 1997 and is a major tourism destination in Morocco.

Course participants began with a documentation-focused module designed to overlap with a regional course for site managers, so that the site managers could become familiar with how technicians worked on the ground. In the next module, the conservation technicians learned about preventive measures, such as reburial, to help preserve mosaics. At the request of the site director at Volubilis, the third module (spring 2018) focused on the stabilization of other remains at

Students engage in a cleaning exercise during the Maintenance of In Situ Mosaics training course at Volubilis, Morocco, 2017. Photo by Ermanno Carbonara, © J. Paul Getty Trust.





Students document the condition of a mosaic during the Maintenance of In Situ Mosaics training course at Volubilis, Morocco, 2017–2018. © J. Paul Getty Trust.

archaeological sites such as walls and wall plasters, as well as re-laid mosaics and documentation prior to the conservation of zellige tile decoration. Participants gained classroom experience in addition to practical training and had opportunities to visit a variety of sites and locations to see diverse conditions and potential conservation approaches. Several technicians were selected for advanced training to create a stronger foundation for independent work and to help ensure the sustainability of MOSAIKON's efforts.

Abdeslam Zizouni, a conservation technician who was based at the archaeological site of Banasa-Thamusida and trained at El Jem and Volubilis, noted that he was drawn to the chance to learn both theory and practice from the Getty as well as through the experiences of other North African colleagues. "Among the most important results is being able to manage the entire

process of a mosaic conservation project . . . from the assessment of condition to the interventions, including, of course, the documentation of each intervention," he says. "Such courses should be repeated in Morocco with universities or other institutions that can train more technicians in the field." Zizouni has now created his own private conservation firm that works in a consulting capacity on the conservation of heritage sites in Morocco.

"The most important thing about the conservation technician training was that the Moroccan authorities created ten new employment positions specifically for us to then train the people as mosaic conservation technicians," Thomas Roby, Senior Project Specialist at the GCI, recalls. "This showed a real commitment of the government to building its capacity to conserve mosaics."

TRAINING CASE STUDY 2

Technician Training for Lifted Mosaics: Ateliers in Tipasa, Algeria; Byblos, Lebanon; and Pupput, Tunisia

Following training courses for participants from seven countries carried out by the Centro di Conservazione Archeologica (Italy, 2011–16) and the Musée Départemental Arles Antiques (France, 2016–17), MOSAIKON recognized the need for ongoing support on the ground in MOSAIKON countries. Therefore, in MOSAIKON's final phase, two permanent ateliers for lifted mosaic conservation were created at the sites of Tipasa in Algeria and Byblos in Lebanon with support from the Getty Foundation. Recognizing the success of these efforts, and with the lessons learned, a third atelier was launched at Pupput in Tunisia.

The ateliers were designed as conservation labs or workshops—outfitted with equipment such as microscopes, basic chemicals, and specialized worktables—that could be continuously used to conserve lifted mosaics. The ateliers served not only as active workspaces, but as training grounds—hybrid sites to develop skills and put them into practice.

The ateliers have remained active beyond the completion of MOSAIKON and—if adequately resourced by their home institutions—can continue to serve as centers for the conservation of not only mosaics, but other archaeological objects, should conservation technicians acquire the needed skills. The ateliers have become focal points for mosaic conservation in each nation, serving as models for methods and practices that could be deployed by others in the future.

“We envisioned the ateliers as places where technicians could meet each other and have a place to work on different problems related to the conservation of mosaics,” explains Ermanno Carbonara, a consultant conservator who helped to deliver MOSAIKON training in Lebanon, Morocco, and Tunisia. “But the other goal was to reconnect all these people that had had training and to support them by building up a space for teaching and working.”

MOSAIKON training participants present their work to government officials touring the new mosaics conservation laboratory in Tipasa, Algeria. Image courtesy the Conservation and Restoration Workshop of the Arles Antiquities Museum.



TRAINING CASE STUDY 3

Advanced Training for Conservation Technicians: Ephesus, Turkey

The advanced training for conservation technicians followed the first phase of the Mosaic Conservation Course (MCC), run by the Centro di Conservazione Archeologica (CCA) from 2011 to 2016 for participants from Jordan, Libya, Syria, and Tunisia. This specialized part of the program represented a level of advanced studies for professional conservators and trainers and was offered to a select group of trainees from the previous MCC course. The advanced training was implemented as a series of four modules of four weeks each, carried out from 2015 to 2016.

At the specific request of the course participants, the last one of these four modules was organized in situ at the UNESCO World Heritage Site of Ephesus, Turkey,

with a particular focus on Terrace House 2. The aim was to put into practice the principles and techniques learned during previous MCC courses, as well as to provide an occasion for the exchange of ideas and experiences as an international professional team. The on-site work allowed the participants to experience the conservation issues that are commonly encountered when working with mosaics on archaeological sites, and to implement specific solutions on different typologies of mosaics and opus sectile floors that presented a range of conservation conditions.

Bringing together the participants from different countries was the culmination of a five-year-long process that created a strong and cohesive professional network.

Participants of the MCC Advanced Training for Lifted Mosaics course conduct injection grouting on a mosaic in the Terrace House, Domus 2, at the archaeological site of Ephesus, Turkey, 2016. Image courtesy Centro di Conservazione Archeologica.



TRAINING CASE STUDY 4

Advanced Training for Site Managers: Amman, Jordan

To build on the skills developed in previous courses, MOSAIKON delivered a series of advanced training courses across programmatic areas. In fall 2022, a select group of previously trained archaeological site managers convened in Amman, Jordan, for a two-week intensive course on advanced conservation issues with a focus on shelters and reburial for the protection of in situ archaeological mosaics. Reburial can be especially useful in the absence of adequate resources for regular conservation and maintenance. For further information on reburial, see *The Reburial of Mosaics: Literature Review and Training and Planning Documents* at http://hdl.handle.net/10020/gci_pubs_reburial_mosaics.

The advanced training program in Jordan was led by Leslie Friedman, conservator and project specialist at the GCI, and Zaki Aslan, former Director of ICCROM-Sharjah. Participants from Albania, Serbia, Morocco, Palestine, Algeria, Tunisia, Lebanon, Jordan, Saudi Arabia, and Greece learned best practices in shelter design and evaluation, maintenance, and monitoring through coursework, practical exercises, and site visits.

At the Madaba Archaeological Park, a Roman and Byzantine town in Jordan, the participants practiced using environmental monitoring tools to develop techniques they could take to their home countries. During the course's second week, the focus turned



Assessing the impact of the shelter on the mosaics inside Hippolytus Hall and Church of the Virgin Mary at the archaeological site of Madaba, Jordan, 2022. Photo by Dalia Naber, © J. Paul Getty Trust.



Participants of the Advanced Training in Site Conservation and Management of Archaeological Sites with Mosaics course in Jordan learn about different reburial materials with GCI staff member Thomas Roby, 2022. Photo by Dalia Naber, © J. Paul Getty Trust.

to reburial and trainees completed classroom exercises as well as hypothetical training at the Church of Bishop Isaiah in Jerash, to learn best practices and techniques for reburial. They visited the Church of St. George and the Artemis mosaics to evaluate reburial that had been undertaken at those locations. For their final projects, participants created a protection plan for the site of the Church of Bishop Isaiah, employing lessons learned about shelters and reburial, as well as knowledge obtained from previous courses on value-based decision-making.

Mustapha Atki, formerly the site manager of Volubilis in Morocco and now the founding director of the Moroccan Association for Natural and Cultural Heritage, notes that at a fundamental level, new training in skills

like documentation transformed conservation and restoration efforts at his site. Additionally, “MOSAICON demonstrated that asking for help and having collaborative partnerships is key to success, and we were able to change the attitudes at the Ministry of Culture and Communication.”

Erjona Qilla, an archaeologist and site manager at Butrint National Park, a UNESCO World Heritage Site in Albania, reports: “This training helped me by allowing me to work in other countries. I’m more open-minded, and I understand more approaches to solving different problems.” With the skills she learned, Qilla is now developing new project management and leadership skills as Butrint transitions to a new management structure.

Sustainable Conservation Practices

To ensure that MOSAIKON training efforts would be sustainable in the long term, it was essential to develop locally available and affordable conservation methods for both in situ and museum conservation. To this end, MOSAIKON developed two parallel activities—one focused on in situ mosaics and the other on lifted mosaics in museums and storage.

Model Conservation Project at Bulla Regia, Tunisia

The activity focused on in situ mosaics was a model conservation project at the site of Bulla Regia in north-western Tunisia—led by the GCI in partnership with Tunisia’s Institut National du Patrimoine (INP) and the World Monuments Fund (WMF) from 2010 to 2017.

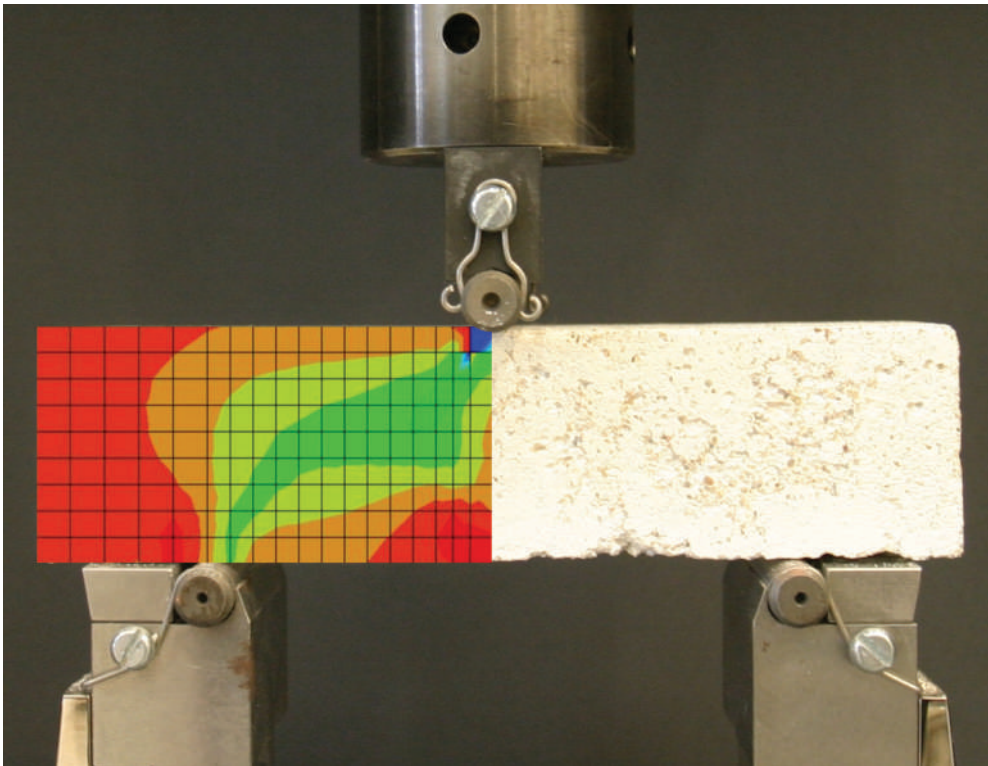
An ancient city, which was part of the Roman empire from the first to fifth centuries, Bulla Regia features almost 400 mosaics decorating the remains of elaborate houses, villas, and public buildings. While mosaics in subterranean areas were well preserved, those exposed to the elements faced urgent conservation needs. The site is also challenged by a changing climate and increasing tourism demands.

It was clear from previous training courses that participants would benefit from practice on in situ mosaic conservation at a larger scale. Bulla Regia was chosen as an ideal site for several reasons. Not only were there large numbers of in situ mosaics to conserve, but there were also entire buildings in need of stabilization, which could be appreciated by the public if properly and safely presented. The site staff included three mosaic conservation technicians, a site director, and an architect, all of whom had participated in previous GCI and MOSAIKON training. The partners also recognized the opportunity to create a replicable model of best practice for other sites with significant collections of in situ mosaics.

The project had two main components. The first was the completion of a holistic and comprehensive conservation plan for the nearly 400 excavated mosaics at the site. This involved a thorough topographic and metric survey of the site, which was used to create a site map and a geographic information system (GIS) to store and analyze all the information collected about the site. This was a critical first step since, despite the site’s long excavation history, no detailed plans or maps of the entire site previously existed.

Consultant Livia Alberti and conservation technician Mondher Habachi conserve a mosaic in Maison de la Chasse, Bulla Regia, Tunisia, 2011. Photo by Scott Warren, © J. Paul Getty Trust.





A mortar specimen undergoing a 3-point bending test for the assessment of the mechanical properties. © J. Paul Getty Trust.

The project team also developed and implemented a rapid condition survey and assessment for all the mosaics (employing a form that records basic information such as significance, condition, and degree of exposure), as well as a system for photographing the mosaics in an effective yet relatively simple way. With the help of the GIS, all this information could then be sorted by mosaic, house, or building as well as by condition or other variables in order to develop specific conservation interventions for each mosaic pavement—from stabilization to reburial to more complete conservation and presentation—based on prioritized needs and available resources.

The second component of the project was to develop and implement examples of conservation treatment that could serve as models of best practice at Bulla Regia and elsewhere. These included a complete conservation and presentation strategy for the Maison de la Chasse (named for a mosaic depicting a hunting scene), one of the more significant and visited buildings on the site, as well as the conservation and reburial of a building not intended for presentation, Maison 4. Most of the conservation work on these two buildings was carried out by GCI-trained mosaic conservation technicians who are employed at

the site. In addition to the conservation of mosaics, the project also included measures to improve site drainage (in some cases by re-activating the ancient drainage systems), address structural issues, and stabilize masonry and plasters.

For greater detail on the Bulla Regia model conservation project, see *Bulla Regia Mosaic Conservation Project: A Model Field Project of the MOSAIKON Initiative* at https://www.getty.edu/conservation/publications_resources/pdf_publications/bulla-regia-mosaic-conservation-project.html.

Research in Alternative Backing Materials and Methods

In the activity focused on lifted mosaics in museums and storage, the GCI developed a scientific research project to examine more cost-effective methods for backing lifted mosaics using widely available lime-based materials and inexpensive reinforcements. The results provided some interesting avenues for further research and potential field testing. Greater detail on the project can be found at <https://www.getty.edu/projects/alternative-backing-methods-lifted-mosaics>.

Strengthening the Professional Network

In order to sustain its efforts, MOSAIKON needed to ensure that a support system remained in place for those trained through its programs. This entailed cultivating a vibrant professional network and greater information exchange, both within and beyond the Mediterranean region. It was also important to secure the continued support of government decision-makers for the gains made during MOSAIKON and the enhanced skills of their staff.

Support for the ICCM

Recognizing the central role of the International Committee for the Conservation of Mosaics (ICCM) in connecting the field, the Getty Foundation provided grant support at the outset of the initiative to strengthen and formalize the committee's governance and to enhance its website as an essential hub for information on mosaic conservation in multiple languages. As a result, the ICCM was able to draft its first official statutes and to achieve NGO status in Italy. The organization is now positioned to develop strategic goals that can be supported through membership, programs, and fundraising.

The Getty Foundation also supported delegates from under-represented countries to attend ICCM's triennial conferences and sponsored MOSAIKON alumni to participate in specialized pre-conference grant-writing workshops where they could share experiences and learn new skills. Over the course of the initiative, more than 150 MOSAIKON participants attended ICCM conferences in Morocco (2011), Italy (2014), Spain (2017), Bulgaria (2022), and Greece (2025). These occasions allowed the participants to both showcase their work through papers and posters and to connect with the wider global community of mosaic conservation professionals. Several MOSAIKON alumni now play roles in ICCM board leadership and have had success in securing significant funding for their sites.

All of this work has made the ICCM a more secure, robust, and representative organization that can better support the interests and needs of its members and the broader conservation community.



Conference attendees visit Volubilis during the ICCM Conference in Meknes, Morocco, 2011. Image courtesy ICCM.

Participants of the 2021–22 Advanced Training in Site Conservation and Management of Archaeological Sites with Mosaics course visit the Al-Maghtas site in Jordan. Photo by Dalia Naber, © J. Paul Getty Trust.



Regional Advisory Meetings

Significantly, the Getty Foundation also provided support to bring together the Directors General and other senior heritage professionals from the twelve MOSAIKON partner countries at various times throughout the life of the project. “The importance of being together in person to talk through common challenges and build trust can’t be overstated,” noted Getty Foundation Director Joan Weinstein. “It set the stage for lasting dialogue and collaboration.”

Together, these leaders discussed their accomplishments and needs, set priorities for MOSAIKON, and helped the project adapt to new challenges and evaluate outcomes. As the initiative neared conclusion, the meeting focused on ways that each partner country could sustain the achievements to date and potentially collaborate in regional or sub-regional groups to move the work forward.

Since the start of MOSAIKON, Sarkis El Khoury, the Director General of Antiquities in Lebanon, says that he has “met many times with fellow Directors General,” leading to increased collaboration. “I and my colleague in Algeria had always waited for project invitations. After meeting, we realized we could start joint projects together.”

Abdellah Alaoui, former Director General of Culture and Communication in Morocco, recalls that “there was a bit of competition between us, which is entirely normal in these types of meetings—each director tried to showcase as many achievements from their own country as they could. Personally, I remember my exchanges with colleagues in other countries, and it was a privilege to host a MOSAIKON training course.” Now, he says, Morocco has “put in place a system of rules that preserve this common heritage with the perspective that it can be transmitted to future generations, through legislative measures and through good infrastructure and management.”

MOSAIKON Alumni

MOSAIKON focused not only on skills building, but on creating robust and sustainable connections between trained individuals at every level. After working together over many years and in many countries, not only have MOSAIKON alumni created professional relationships and partnerships, but they also keep in touch informally through email, WhatsApp, social media, professional networks, and new organizations formed by participants. “They are not alone as they were before,” Roberto Nardi concludes, but can rely on each other for support and advice.

Dissemination and Information Exchange

Dissemination and information exchange are crucial to sustaining outcomes and ensuring lasting impact. Over the course of the initiative, MOSAIKON produced a significant body of multilingual publications, didactic materials, guidelines, and other practical tools to be used not only by participants but by conservation professionals across the globe. “MOSAIKON created an intellectual community that goes beyond the practice and material results. It represents an investment in scholarship and discourse,” says former ICCM president Demetrios Michaelides.

Digital Publications and Translations

From 2011 to 2013, MOSAIKON published a bilingual (English and Arabic) e-bulletin with updates on the project that was sent to over one thousand heritage professionals in the region. In order to make the publications widely accessible, nearly all the ICCM conference proceedings (which contain most of the literature on mosaic conservation) are now freely available online on the ICCM and other partner websites.

In addition, ICCROM led a project to translate key texts on mosaic conservation into Arabic. This publication is now available for free on the MOSAIKON partner websites and is widely used by both practitioners and educators in the Arabic-speaking world. (See https://www.getty.edu/foundation/pdfs/mosaikon_readings.pdf.)

Didactic Materials

Didactic materials in English, French, and Arabic from many of the MOSAIKON training programs have been made available for free download on the partner websites (See https://www.getty.edu/conservation/publications_resources/teaching/mosaics_conservation.html.)

These are intended to provide references for trainees as they carry out their work but also to assist other educators involved in mosaic conservation training. Thomas Roby, who led MOSAIKON’s conservation technician training for the GCI, notes: “Perhaps the most rewarding part of making our didactic materials more widely available was hearing from other teachers that they found them extremely useful for their own training work.”

“Apart from the trainings, these publications might be the best thing,” says Patrick Blanc, a conservator at the Musée Départemental Arles Antique, who led several MOSAIKON training courses. “I referred to them regularly. Even outside of the MOSAIKON project, when I went to other countries, I would use these publications to train and communicate with people.”

For a full list of MOSAIKON publications, see the bibliography on pages 50–53.



Examples of multilingual and didactic publications resulting from the work of MOSAIKON.

Nonprofit Leadership and Fundraising

As part of the advanced training for site managers, participants were invited to apply for mentoring on leadership and nonprofit management skills led by Buff Kavelman of The Kavelman Group. Based on their individual goals, each selected participant was advised for over a year or more in one-on-one sessions that examined how to best position their work to cultivate philanthropic prospects and compete for funding. This training has allowed participants to take advantage of growing cross-border philanthropy around the world, which has expanded significantly in the last ten years.

Investments in MOSAIKON were a catalyst for attracting funding from other sources. To date, MOSAIKON site managers have pursued support from a broad base of funders including the United States Ambassadors Fund for Cultural Preservation, the South Korean Embassy, the Italian Agency for Development Cooperation, Barakat Trust,

the J. M. Kaplan Fund, Cultural Emergency Response, the Arcadia Fund, the Council for British Research in the Levant, the Commonwealth Heritage Forum, L'Œuvre d'Orient, and the National Geographic Society. In aggregate, they have received nearly \$3 million in funding. This has included, for example, a grant to develop a conservation and management plan for the site of Volubilis in Morocco, funds for research and valorization of the landscape and archaeological heritage of Masser el-Shouf village in Lebanon, and several heritage documentation projects in Jordan.

Clearly, the investment that MOSAIKON made in leadership and nonprofit management training and mentoring has already yielded significant results and will be an important part of MOSAIKON's legacy. Participants have pursued expanded professional visions and been helped to succeed as leaders in public, academic, nonprofit, and private-sector roles.

“MOSAIKON created an intellectual community that goes beyond the practice and material results. It represents an investment in scholarship and discourse.” —DEMETRIOS MICHAELIDES



OUTCOMES

MOSAIKON was not just about immediate results, but strategic long-term impact. Despite considerable social, political, and economic upheaval affecting the region over the last fifteen years, MOSAIKON persevered and adapted to fulfill its aims. In all aspects of its program, MOSAIKON prioritized sustainability and the construction of a professional community in order to achieve lasting change. Its collaborative and regional approach led to inclusive decision-making and clearly defined outcomes that could be monitored and evaluated as the initiative progressed. Over the course of the initiative, MOSAIKON achieved the following outcomes:

A Critical Mass of Trained Heritage Practitioners

MOSAIKON has trained over two hundred people, including conservation technicians and site managers, who gained new knowledge and skills to better preserve the region's extraordinary archaeological heritage. Many

site managers also received advanced training to further develop their technical, management, and leadership skills.

Enhanced Fundraising Capacity

The advanced training programs also included fundraising skills to assist participants in building partnerships and supporting their ongoing work. To date, these participants have raised nearly \$3 million from a variety of funders in the United States, Western Europe, East Asia, and the Middle East.

Mosaic Conservation “Ateliers” or Workshops

National mosaic conservation ateliers or workshops have been created in Algeria, Lebanon, and Tunisia with support from national governments, international partners, and the Getty. These provide dedicated and well-equipped

RIGHT: Participants conserve a mosaic during the Mosaic Conservation Course held in Belmonte at the Convento di San Nicola, CCA's headquarters, in 2011. Image courtesy CCA Roma.



PREVIOUS PAGE: Work is conducted at the archaeological site of Ephesus, Turkey, in 2016. Image courtesy Centro di Conservazione Archeologica.

spaces for ongoing conservation, training, and effective teamwork. They also provide models that can be adopted in other locations.

Replicable Models of Best Practice

Through training, research, and a model field project, MOSAIKON created replicable models of best practice that demonstrate local, affordable, and sustainable conservation approaches for both in situ and museum conservation. These methods have been widely adopted in the region and also have broader applicability to sites in other locations.

One specific example of MOSAIKON's influence is work underway at the World Heritage Site of Nea Paphos, Cyprus, where the Getty Conservation Institute has had a longstanding relationship with the heritage authorities and the University of Cyprus. Following a 2014 site management course, MOSAIKON made initial steps with the Cypriot Department of Antiquities to develop a conservation and management plan for the site. This project has continued beyond MOSAIKON, with further advances in site conservation and management, especially regarding the design and evaluation of protective shelters.

Kite aerial photograph of Nea Paphos, Cyprus, 2007. © Thomas Sagory
www.du-ciel.com.



Free Publications and Didactic Materials

Over the course of the initiative, MOSAIKON produced a significant body of publications and didactic materials in English, French, and Arabic that are available for free online, including the first comprehensive translation into Arabic of key texts related to mosaic conservation. These publications served as important reference materials for the MOSAIKON trainees but also provide significant resources to the broader conservation community.

Strong Communication Networks for Practitioners

MOSAIKON helped strengthen the ICCM as a professional organization, provided support for MOSAIKON participants to attend ICCM's international conferences, and cultivated a robust online community. In addition, through regular meetings of the Directors General and other senior heritage professionals in each MOSAIKON country throughout the life of the project, MOSAIKON

fostered regional dialogue and created communication channels at governmental and institutional levels.

"There are so many conservation needs in the region," reflects Zaki Aslan, former Director of ICCROM Athar and Founding Director of the ICCROM Regional Conservation Centre in Sharjah, "but close looking at mosaics has spawned a depth of practice and connection that goes beyond the individual mosaics, objects, and sites." He adds, "These best practices are being applied to all kinds of things. They have become a template or methodology, and they have gotten countries' leaders to think about why they should collaborate with one another and invest in cultural heritage preservation."

Follow-up meeting at the archaeological site of Herculaneum in Italy, 2015, for the 2014 Conservation and Management of Archaeological Sites with Mosaics course held in Nea Paphos, Cyprus. Photo by Thomas Roby, © J. Paul Getty Trust.





LOOKING AHEAD

The MOSAIKON initiative took place during a particularly challenging period, politically and economically, for many countries in the Mediterranean region. Partners and participants had to adapt to dramatic political upheavals, a global pandemic, and the increasing impact of climate change on all heritage sites. Making progress in this context required a high degree of creativity and commitment on the part of the initiative's organizing institutions as well as the serious engagement of MOSAIKON's partners in the region. As the initiative concludes, a few key lessons have been learned that were critical to the overall success of MOSAIKON.

Embrace Flexibility and Adaptability in the Face of Changing Circumstances

Even though MOSAIKON's goals remained the same, strategies often had to be adapted to achieve desired outcomes. For example, when faced with difficulties caused by political conflict, partners worked to adjust the location of training activities rather than postpone or cancel them. Monitoring and evaluation throughout the project were crucial in recognizing what was and was not working and in making needed adjustments to the program. And staying the course, even in the most challenging circumstances, mattered.

Invest in People and Give It Time

In terms of capacity building, it is evident that effective training requires significant investment of time and resources. Only by creating a critical mass of trained individuals and supporting their continued professional

development could stakeholders ensure that the work begun through MOSAIKON would continue and bear fruit in the long term. It was also essential to build robust communities of practice and to supply participants with the tools and equipment needed to continue their work independently.

Engage Regional Leaders for Continued Success

MOSAIKON would not have been successful without the support and engagement of in-country leaders. These advocates are ensuring the sustainability of mosaic conservation efforts throughout the region and providing continued support for those trained through the initiative.

Challenges and Future Opportunities

Of course, despite all of the initiative's significant gains, many challenges remain that MOSAIKON participants and leaders shared through dozens of interviews. These include:

Building Capacity and Professional Networks:

- Continued support for materials and equipment at the three regional ateliers and throughout the region;
- Ongoing training at a variety of levels, including preparing technicians to educate the next generation;
- Continued support for convenings of past participants to maintain a robust community of practice.

PREVIOUS PAGE: Students document panels of lifted mosaics at the new mosaic conservation laboratory at Pupput, Tunisia, 2023. Photo by Ermanno Carbonara, © J. Paul Getty Trust.

Conservation Practice and Resources:

- Additional model projects to serve as international examples of best practice and interdisciplinary collaboration in archaeological site conservation and management;
- Increased investment in developing locally available and affordable materials and methods for mosaic conservation, particularly re-backing;
- Resources to design, build, evaluate, and monitor effective protective shelters;
- Engagement with private-public partnerships and new models of support.

Participants also identified several challenges related to, but beyond the original goals of, MOSAIKON. These included the need for university training in the region for conservators and site managers in a sustainable and integrated manner, as well as resources to study climate change threats to global heritage and to develop new techniques for mitigating and adapting to its impacts.

In summary, MOSAIKON was born from an ambitious and aspirational goal—simply stated, to improve the conservation and management of archaeological mosaics in the

Mediterranean region. Despite significant challenges over the last fifteen years, MOSAIKON continued to operate in the region and made measurable progress toward achieving its objectives. It trained hundreds of heritage practitioners, created replicable models of best practice, produced and disseminated publications and didactic materials in several languages, and developed strong communication networks for practitioners. In the end, it is this community of practice that will be MOSAIKON's enduring legacy, and its success will be measured in great part by the professional relationships that it created and helped maintain.

Much remains to be done, but there is reason to believe that the strategic, collaborative efforts of MOSAIKON will continue to reap benefits long into the future—not just for mosaics but for the preservation of Mediterranean archaeological heritage in general. “Heritage conservation is a profoundly human endeavor,” notes Jeanne Marie Teutonico. “The relationships that were formed, the collective activities and shared values that informed our work throughout the MOSAIKON initiative, were fundamental to our approach and success.” More broadly, a strengthened commitment to heritage conservation will contribute to sustainable development, economic opportunities, and the building of inclusive and resilient communities.

Consultant Ermanno Carbonara leads an exercise in applying facing to an in-situ mosaic during the Training for In-Situ Mosaics course in El Jem, Tunisia, 2012–2013. Photo by Abdeslam Zizouni, © J. Paul Getty Trust.



A participant in the MOSAIKON training course for Libyan mosaic technicians at the Centro di Conservazione Archeologica removes gauze facing from the Pietra Papa Mosaic. Photo by Araldo De Luca, © J. Paul Getty Trust.





APPENDICES

This section contains additional information detailing the range of activities, convenings, and participants of the MOSAIKON initiative, as follows:

- 32** Regional Advisory Meetings:
Partner Country Attendees
- 38** Directors General by Country
- 40** Participants by Country
- 43** Partner Institution Team Members
- 44** Instructors and Consultants
- 46** Activities
- 48** Getty Foundation Grantees
- 49** ICCM Conferences
- 50** Bibliography

PREVIOUS PAGE: GCI staff member Thomas Roby surveys inside the Maison d'Amphitrite, Bulla Regia, Tunisia, 2011. Photo by Scott Warren, © J. Paul Getty Trust.

Regional Advisory Meetings: Partner Country Attendees

ALGERIA	Mourad Betrouni Directeur du Patrimoine, Office national de Gestion et d'exploitation et bien culturel protégé	Rome, Italy, 2008
	Mourad Bouteflika Directeur de la Conservation et de la Restauration du Patrimoine Culturel, Ministère de la communication et de la culture	Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
	Sabah Ferdi Maître de recherche habilité, Centre national de recherches en archéologie	Rome, Italy, 2008 Ravello, Italy, 2014
	Naima Abdelouahab Directrice École de conservation et de restauration des biens culturels	Venice, Italy, 2016
	Nadhera Hebbache Sous Directrice de la Conservation et de la Restauration des Biens Culturels Mobiliers, Ministère de la communication et de la culture	Rome, Italy, 2019
CYPRUS	Despina Pilides Acting Director, Curator of Antiquities, Department of Antiquities	Ravello, Italy, 2014
	Marina Solomidou-Ieronymidou Acting Director, Director, Department of Antiquities	Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
	Eleftherios Charalambous Conservator, Responsible for Mosaics, Department of Antiquities	Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
EGYPT	Ibrahim Attia Darwish Director-General of Alexandria Museums, Ministry of State for Antiquities	Rome, Italy, 2008
	Amira El Khoust Director-General of Restoration, Alexandria and Marsa Matrouh; Greco-Roman Museum, Ministry of State for Antiquities	Rome, Italy, 2008
	Mostafa Amin Secretary General Supreme Council of Antiquities	Ravello, Italy, 2014 Venice, Italy, 2016

	Eman El Shahawy Mosaic Specialist/Archaeologist, Alexandria National Museum, Alexandria Department for Antiquities	Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
ISRAEL	Ra'anan Kislev Director Conservation Department, Conservation Department, Israel Antiquities Authority	Rome, Italy, 2008 Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
	Jacques Neguer Head of Art Conservation, Conservation Department, Israel Antiquities Authority	Rome, Italy, 2008 Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
JORDAN	Suzy Bouran Acting Director, Madaba Institute for Mosaic Art and Restoration	Rome, Italy, 2008
	Catreena Hamarneh Director of Archaeological Documentation Unit, Department of Antiquities of Jordan; Madaba Institute for Mosaic Art and Restoration	Rome, Italy, 2008
	Monther Dahash Jamhwai Director General Department of Antiquities Ministry of Tourism and Antiquities	Ravello, Italy, 2014 Venice, Italy, 2016
	Ahmad Farhan Al-Amaireh Dean Madaba Institute for Mosaic Art and Restoration	Rome, Italy, 2008 Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019
	Ali Al Khayyat Assistant General Manager Department of Antiquities of Jordan Ministry of Tourism and Antiquities	Rome, Italy, 2019
LEBANON	Carole Atallah Conservator, Direction Générale des Antiquités	Rome, Italy, 2008
	Ali Badawi Responsable, Tyre et sa region, Direction Générale des Antiquités	Rome, Italy, 2008
	Samar Karam Directrice régionale du Liban nord Direction Générale des Antiquités	Ravello, Italy, 2014 Venice, Italy, 2016 Rome, Italy, 2019

LEBANON	Myriam Ziade Directrice régionale du Saida et Sud de Mount Lebanon Direction Générale des Antiquités	Ravello, Italy, 2014 Rome, Italy, 2019
	Sarkis El-Khoury Directeur Général Direction Générale des Antiquités	Venice, Italy, 2016 Rome, Italy, 2019
LIBYA	Giwna Anag Director General, Department of Antiquities and Museums	Rome, Italy, 2008
	Mohamed Faraj Al-Shakshouki Director of Technical Affairs, Department of Antiquities and Museums	Rome, Italy, 2008
	Adel El-Turki Head of Conservation and Restoration Dept Department of Antiquities and Museums Jamahiriya Museum	Rome, Italy, 2008
	Abdulrahman Yatif Chairman Department of Antiquities and Museums Jamahiriya Museum	Ravello, Italy, 2014
	Mohamed Adel Othman Abdallah Manager of Mosaic Conservation, Shahat	Venice, Italy, 2016
	Ahmed Abdulkariem Chairman Department of Antiquities and Museums Jamahiriya Museum	Venice, Italy, 2016
	Abdulraheim Almabrok Head of Foreign Missions Affairs and International Organizations Libyan Department of Antiquities	Rome, Italy, 2019
MOROCCO	Mohammed Benhaddou Conservateur de sites archéologiques de Cotta et Zilil, Ministère de la culture	Rome, Italy, 2019
	Rachid Bouzidi Conservateur de sites archéologique de Volubilis, Ministère de la culture	Rome, Italy, 2008

	Abdellah Alaoui Directeur, Direction du Patrimoine Culturel, Ministère de la culture	Ravello, Italy, 2014 Venice, Italy, 2016
	Abdelkader Chergui Conservateur des sites de Chellah et des Oudayas	Ravello, Italy, 2014
	Hicham Rguig Conservateur Chellah, Parc Archéologique de Chellah	Ravello, Italy, 2014 Venice, Italy, 2016
	Mustapha Atki Conservateur Site de Volubilis	Rome, Italy, 2019
	Youssef Khiara Directeur Général Direction du Patrimoine Culturel Marocain Ministère de la culture	Rome, Italy, 2019
PALESTINE	Osama Hamdan Director, Jericho Institute for Mosaic Restoration	Rome, Italy, 2008
	Ahmed Rajoub Director-General of World Heritage, Sites Management Department (West Bank), Ministry of Tourism and Antiquities	Rome, Italy, 2008 Venice, Italy, 2016
	Ihab Daoud Vice Director General of Conservation and Sites Management, Ministry of Tourism and Antiquities	Venice, Italy, 2016
	Imad Dwden Head of Jericho Mosaic Laboratory Jericho Mosaic Library	Rome, Italy, 2019
SYRIA	Ashraf Abou Trabah Specialist in the field of conservation of mosaics; Director of Archaeological Excavation, Laboratory of Restoration of Mosaics; Direction des Antiquités de Suweida, Directorate General of Antiquities and Museums	Rome, Italy, 2008
	Ghias Klesly Director of Conservation Laboratory, Directorate General of Antiquities and Museums	Rome, Italy, 2008

SYRIA	Maamoun Abdulkarim Director-General of Antiquities and Museums, Directorate General of Antiquities and Museums	Venice, Italy, 2016
	Ahmed Deeb Director of Museums Affairs Department of Antiquity	Venice, Italy, 2016
TUNISIA	Mohamed Beji Ben Mami Directeur Général, Institut National du Patrimoine	Rome, Italy, 2008
	Nabil Kallala Directeur General de recherches, Institut National du Patrimoine	Rome, Italy, 2008
	Adnan Louhichi Directeur Général, Institut National du Patrimoine	Ravello, Italy, 2014
	Fatma Nait Yghil Chargée de Recherche Institut National du Patrimoine	Ravello, Italy, 2014
	Faouzi Mahfoudh Directeur Général, Institut National du Patrimoine	Rome, Italy, 2019
	Hamida Rhouma Architecte en chef Directeur du Centre des Sciences et Techniques du Patrimoine, Institut National du Patrimoine	Rome, Italy, 2019

TURKEY	Hande Kokten Professor/Director, Ankara University	Rome, Italy, 2008
	Mehmet Onal Director, Gaziantep Museum, Ministry of Culture and Tourism	Rome, Italy, 2008
	Ilknur Elyildirim Conservator–Restorer	Ravello, Italy, 2014
	Emin Erdem Assistant Operating Manager	Ravello, Italy, 2014
	Ece Ergüden Kiliç Conservator Restorer—Museums Department Ministry of Culture and Tourism General Directorate Cultural Heritage and Museums	Ravello, Italy, 2014
	Mustafa Yaşar Güneş Head of Museums Department Ministry of Culture and Tourism General Directorate Cultural Heritage and Museums	Ravello, Italy, 2014
	Ali Osman Avşar Director, Central and Regional Laboratory for Restoration and Conservation	Venice, Italy, 2016
	Özlem Toprak Cihan Restorer, Central and Regional Laboratory for Restoration and Conservation	Venice, Italy, 2016

Directors General by Country

ALGERIA	Mourad Bouteflika 2012–2022 Directeur de la Conservation et la Restauration du Patrimoine culturel	ISRAEL	Mustafa Waziri 2017–2024 Secretary General of Supreme Council of Egyptian Antiquities
	Nabila Cherchali 2022–present Directeur de la Conservation et la Restauration du Patrimoine culturel		Shuka Dorfman 2000–2014 Director General, Israel Antiquities Authority
CYPRUS	Pavlos Flourentzos 2004–2009 Director, Department of Antiquities	JORDAN	Yisrael Hasson 2014–2020 Director General, Israel Antiquities Authority
	Maria Hadjicosti 2009–2013 Director, Department of Antiquities		Eli Escusido 2021–present Director General, Israel Antiquities Authority
	Despina Pilides 2014 Acting Director, Curator of Antiquities, Department of Antiquities		Ziad al-Saad 2010–2011 Director General of Antiquities
EGYPT	Marina Solomidou-Ieronymidou 2014–2023 Director, Department of Antiquities		Faris al-Hamoud 2011–2013 Director General of Antiquities
	Zahi Hawass 2002–2011 Secretary General of Supreme Council of Egyptian Antiquities		Monther Dahash Jamhaoui 2013–2018 Director General of Antiquities
	Mohamed Abdel Fattah 2011 Secretary General of Supreme Council of Egyptian Antiquities		Ali Al Khayat 2018 Director General of Antiquities
	Mohamed Abdel Maqoud 2011–2012 Secretary General of Supreme Council of Egyptian Antiquities		Yazeed Alian 2018–2021 Director General of Antiquities
	Mohamed Mustafa Amin 2012–2017 Secretary General of Supreme Council of Egyptian Antiquities		Ahmed Shami 2021 Acting Director General of Antiquities
			Hisham al-Abadi 2021 Director General of Antiquities
			Fadi Balawi 2021–2025 Director General of Antiquities

LEBANON	Federic Hussein 2000–2010 Director General of Antiquities		Maamoun Abdulkarim 2012–2017 Director General of Antiquities and Museums
	Sarkis El-Khoury 2014–present Director General of Antiquities		Muhamed Hammud 2017–2020 Director General of Antiquities and Museums
LIBYA	Saleh Agab 2011–2014 Chairman of the Department of Antiquities, Tripoli		Muhamed Nadhir Aouadh 2020–present Director General of Antiquities and Museums
	Abdulrahman Yakhlef 2014–2017 Chairman of the Department of Antiquities, Tripoli		
	Ahmed Abdulkarim 2015–2020 Chairman of the Department of Antiquities, Benghazi		
	Mohamed Chakchouki 2017 Chairman of the Department of Antiquities, Benghazi		
MOROCCO	Abdellah Alaoui 2007–2018 Directeur, Direction du Patrimoine Culturel, Ministère de la culture	TUNISIA	Mohamed Béji Ben Mami 2002–2008 Directeur Général, Institut National du Patrimoine
	Yousef Khiara 2019–2023 Directeur, Direction du Patrimoine Culturel, Ministère de la culture		Adnan Louhichi 2012–2014 Directeur Général, Institut National du Patrimoine
	Mustapha Jlok 2023–present Directeur, Direction du Patrimoine Culturel, Ministère de la culture		Nabil Kallala 2014–2016 Directeur Général, Institut National du Patrimoine
SYRIA	Bassam Jamous 2005–2012 Director General of Antiquities and Museums	TURKEY	Fethi Bahri 2016–2017 Directeur Général, Institut National du Patrimoine
			Fawzi Mafoudh 2017–2023 Directeur Général, Institut National du Patrimoine
			Osman Murat Suslu 2008–present Director General of Cultural Heritage and Museums

Participants by Country

ALBANIA	Erjona Qilla		Akhwaldeh Ali
ALGERIA	Abbad Madjid Abdelkader Bensalah Abdelmadjid Belkares Ahmed Abdenour Ahmed Djellilahine Ammar Nouara Boubakeur Boukebouche Fatiha Bencouche Fethi Rihane Khaled Sahnouni Lotfi Azzeddine Madjid Abbad Mohamed Lamine Zeraka Réda Hakem Nacer Boulahia Yasmina Ameziane Youcef Haricha Zahra Cherdouh		Anal Al Momani Firas Tbayshtat Mahmoud Abu Joudeh Mashhour Altfiehat Mohammad Al-Shebli Nemer Alzouby Nihad Hendawi Qais Azmi Almomani Rana Zureikat Samaher Khames Sate Massadeh Shahin Shawah'en Shatha Mubaideen Ziyad Othman
BULGARIA	Adriana Lubenova Sevdalina Neykova	LEBANON	Ali Alkhwaldeh Badr Jabbour-Gedeon Berta Wakim Carole Atallah Elsy Trad Enas Saleh Ghida Hamadeh Grace Homsy-Gottwalles Hawraa Kaheil Jean El Khoury Kholoud Nasr Mohamad Sabeh Ayoun Mohammad Arrabi Myriam Ziade Nivin Akil Rabih El Baba Raffi Gergian Roula Reaidi Rouba El-Khoury Samar Karam Youssef El Eid Kholoud Nasr Zahraa Nemer
CYPRUS	Anthi Kaldeli Christakis Orphanos Eleni Loizides Fryni Hadjichristofi Stella Pissaridou		
EGYPT	Amira Abou Baker El Khousht Eman El Shahawy Hanaa (Mohamed) Tawfick Magdy Badawy Nadia Khedr Salah El Masekh Shaimaa Elsheshtawy		
GREECE	Christos Maris Elisavet (Elisabeth) Mantzana		
ISRAEL	Ghaleb Abu Diab Meir (Mark) Avrahami	LIBYA	Abdalsalam Salem Mohamed Sa'adoun Abdulaah Salah Abdulbaset Hamad Abdulfatah Omran Hwaita Abdusalam Abdulhakam Abdusalam Mohamed Adel Almaear Adel Alameen Arefi
JORDAN	Abdelrahim Hamzeh Tawfiz Aldwikat Abdullah Al Bawareed Adnan Mohammad Sh'yyab Ahmad Hammari		

Adel Mohamed Imbarak
 Ahmed Mahjub
 Ammer Saad Mohamed Naser
 Anias Abdullah
 Anis Fathi Abdullah
 Muhammed
 Ashraf Aqeelah
 Ashraf Suleiman Bulgacem
 Muhammad
 Atea Alharabi
 Aymeen Areafi
 Omar Albireeki
 Belgasam Omer Almodaf
 Belgaseem Kara Maryam
 Belgasem Muftah Almabruk
 Ehab Melad
 Elhadi Usah
 Essam Mustafa Ali Baridan
 Fadal Allah Soliman
 Faraj Salah
 Gumma Sefao Garsha
 Hessam Agouri
 Idris Hamad
 Idris Madi
 ImhemedAmara
 Isam Amar Abdusallam
 Isam Mustafa Bradan
 Jaber Matug
 Jalal Abaedi
 Khaled Omar Khalleefah
 Almasalati
 Khaled Sadaq Abojreda
 Khamis Ibrahim
 Mahmoud Khelifa Hadya
 Mahmoud Milad R Abuhlega
 Mari Saad
 Maryam Belgaseem Kara
 Meloud Ben Nasser
 Meloud Aoagaela Hobhob
 Mohamed Alagnaf
 Mohamed Dabdoub
 Mohamed Khalefa
 Mohamed Aboagaela
 Rahouma
 Mohamed Elhadi Al-Tabaab
 Mohamed Elhadi Mhadi
 Mohamed Milad Saleh
 Meghiri
 Mohamed Omar Salah

Mouthaz Aouad
 Muftah Qunean
 Mustapha Ali
 Najmi Osman
 Nasser Ammari
 Nasser Mansour
 Omran Abdulsaeed
 Ousama Ibrahim
 Ramadan Alharabi
 Riyad Sadaga
 Saed Sharif
 Salem Ben Hamal
 Taher Mokhtar Al-Bakouash
 Walid Benzabea

MALI

Mamadou Cisse

MOROCCO

Abdelilah Sguiri
 Abdelkader Chergui
 Abderrahim El Bertai
 Abdessalem Zizouni
 Fatima Zahrae Cadi
 Hasna Doukali
 Hicham Hassini
 Hicham Rguig
 Jamal El Boukaa
 Khadija Bourchouk
 Mohamed Lazhar
 Mohammed Benhaddou
 Mohsine Anber
 Montaser Laoukili
 Mustapha Atki
 Mustapha Ramdani
 My Driss Elalaoui
 Nadia Ait Lhadj Lamin
 Omar Bouka
 Omar El Mansouri
 Rachid Arharbi
 Rachid Bouzidi
 Sara Doublani
 Taoufiq Ouzgane
 Tarik Moujoud
 Zakaria Azzab

PALESTINE

Manal Helou
 Montasser Moussa
 Salah Al Houdalieh Nasser
 Shafik Hassan Sherif
 Shabana

SAUDI ARABIA	Ruba AlRashed AlHanouf AlRassan		Anis Oueslati Fahd Maaleej Ferhani Chihaoui Fatma Naït Yghil Habib Yahyaoui Hamadi Sillini Hamida Rhouma Mouid Hani Hosni Ben Mohamed Jamel Lazid Lotfi Belhouchet Lotfi Layouni Mohamed Ali Chehidi Nejiba Ben Kraiem Nizar Ben Slimene Saïd Ben Trad Samira Arous Ouslati Soumaya Gharsallah-Hizem Tagrid Mohamad Taieb Belgacem
SERBIA	Elena Vasić Petrović Vesna Crnoglavac		
SYRIA	Alaa Hammound Ali Al Ahmed Ashraf Abou Trabah Ayham Alfakhri Ayham Zuobee Borhan Alzaraa Firas Alhahj Ali Jihan Souliman Maher Jbaee Mouhammad Kaied Moutaz Alshaieb Mohannad Al Taweel Mouhamad Al Sbeeh Nesreen Bouza		
TUNISIA	Abdelkarim Mzoughi Adnane Hidri	TURKEY	Avni Tarik Gucluturk

Partner Institution Team Members

GETTY FOUNDATION

Joan Weinstein	Director, Getty Foundation
Antoine Wilmering	Senior Program Officer, Getty Foundation (retired)

GETTY CONSERVATION INSTITUTE

Jeanne Marie Teutonico	Associate Director, Getty Conservation Institute (2001–2023)
Kathleen Dardes	Head, Education (retired)
Susan Macdonald	Head, Buildings and Sites
Martha Demas	Senior Project Specialist, Getty Conservation Institute (retired)
Thomas Roby	Senior Project Specialist, Getty Conservation Institute (retired)
Leslie Friedman	Project Specialist, Getty Conservation Institute
Beril Biçer-Şimşir	Associate Scientist, Getty Conservation Institute
Reem Baroody	Project Associate
Juliette Rafaelli	Senior Project Coordinator
Lucinda Schell	Senior Project Coordinator

ICCROM

Mounir Bouchenaki	Director-General of ICCROM (2006–2011)
Stefano De Caro	Director-General of ICCROM (2011–2017)
Webber Ndoro	Director-General of ICCROM (2017–2023)
Zaki Aslan	Director, ICCROM-Sharjah (2003–2023)
Joseph King	Sites Unit Director (retired)
Catherine Antomarchi	Collections Unit Director (retired)
Gaël de Guichen	Special Advisor to the Director-General of ICCROM
Shireen Sahouri	Program Officer, ICCROM-Sharjah

ICCM

Demetrios Michaelides	President Emeritus, ICCM
	President, ICCM (1996–2014)
Roberto Nardi	President, ICCM (2014–2025)
Stefania Chlouveraki	Vice President, ICCM (2014–2025)
Paraskevi Christodoulou	Coordinator, ICCM (2008–2014)

Instructors and Consultants

Livia Alberti	Conservator Consorzio Arké
Ana Almagro Vidal	Documentation Specialist Fundación Caja Madrid
Lori Anglin	Conservation Architect Anglin Associates
Darius Arya	Archaeologist American Institute for Roman Culture
Aicha Ben Abed	Archaeologist MOSAIKON Regional Coordinator, Tunis
Alessandro Betori	Archaeologist Soprintendenza per i Beni Archeologici del Lazio
Patrick Blanc	Conservator Musée départemental Arles Antique
Christina Caldi	Conservator University of Tuscia
Domenico Camardo	Archaeologist Herculaneum Conservation Project
Ermanno Carbonara	Conservator EC2 Conservation
Roberto Cassio	Mosaicist Vatican Museum
Evelyne Chantriaux	Conservator Musée de Saint-Romain-en-Gal (retired)
Eleftherios Charalambous	Conservator Department of Antiquities, Cyprus
Stefania Chlouveraki	Conservator University of West Attica
Maurizio Coladonato	Chemist Istituto Centrale del Restauro
Andreina Costanzi Cobau	Conservator Centro di Conservazione Archeologica, Rome
Sarah Court	Cultural Heritage Specialist Herculaneum Conservation Project (former)
Tobit Curteis	Conservator Tobit Curteis Associates
Ascanio D'Andrea	Documentation Specialist Herculaneum Conservation Project
Francesca Del Duca	Cultural Heritage Specialist Herculaneum Conservation Project
Antonio Valerio Di Michele	Hydraulic Engineer Independent
Maria Dikomitou-Eliadou	Archaeologist University of Cyprus (former)
Robert Ferguson	Professor Institute of Education, London
John Fidler	Conservation Architect John Fidler Preservation Technology Inc. (retired)

Gaël de Guichen	Chemical Engineer, Cultural Heritage Specialist ICCROM (retired)
Francesca Guiducci	Conservator Centro di Conservazione Archeologica, Rome
Alaa el Habashi	Conservation Architect Menoufia University
Buff Kavelman	Philanthropic Advisor The Kavelman Group
Nunzia Laino	Conservator Herculaneum Conservation Project
Alessandro Lugari	Conservator Soprintendenza Speciale per il Colosseo
Alessandro Massari	Hydraulic Engineer Studio Massari, Rome
Fatma Marii	Conservator The University of Jordan
Costantino Meucci	Chemist Istituto Centrale del Restauro
Roberto Nardi	Conservator Centro di Conservazione Archeologica, Rome
Gaetano Palumbo	Cultural Heritage Specialist University College London
Paola Pesaresi	Conservation Architect Diriyah Gate Development Authority
Fiorenza Piccolo	Conservator Herculaneum Conservation Project
Gian Mario Porcheddu	Conservator Centro di Conservazione Archeologica, Rome
Gionata Rizzi	Conservation Architect Studio Gionata Rizzi
Niki Savvides	Cultural Heritage Specialist ICCROM (former)
Werner Schmid	Conservator Private Practice, Rome
Kristian Schneider	Conservator Consorzio Kavaklik Restauro
Francesco Siravo	Conservation Architect Aga Khan Development Network
Isabelle Skaf	Conservator CONSERVATION SARL
John Stewart	Senior Architectural Conservator Historic England (retired)
Jane Thompson	Architect Herculaneum Conservation Project
Anjo Weichbrodt	Conservator Conservation Weichbrodt
Chiara Zizola	Conservator Centro di Conservazione Archeologica, Rome

Activities

TRAINING COURSES FOR CONSERVATION TECHNICIANS	Lead Institution	Funding Institution
MCC Training for Lifted Mosaics for Syria, Belmonte, Italy, 2011–2012	Centro di Conservazione Archeologica	Getty Foundation
MCC Training for Lifted Mosaics for Jordan and Tunisia, Belmonte, Italy, 2011–2012	Centro di Conservazione Archeologica	Getty Foundation
Training for In Situ Mosaics, El Jem, Tunisia, 2012–2013	GCI, Institut National du Patrimoine, Tunisia	GCI
Libyan Technician Training, Sabratha, Libya, 2012–2013	King's College London, Society for Libyan Studies	Getty Foundation
MCC Training for Lifted Mosaics, Belmonte, Italy, 2014	Centro di Conservazione Archeologica	Getty Foundation
MCC Training for Lifted Mosaics, Belmonte, Italy, 2015	Centro di Conservazione Archeologica	Getty Foundation
MCC Advanced Training for Lifted Mosaics, Belmonte, Italy, 2015	Centro di Conservazione Archeologica	Getty Foundation
MCC Advanced Training for Lifted Mosaics, Belmonte, Italy, 2016	Centro di Conservazione Archeologica	Getty Foundation
MCC Advanced Training for Lifted Mosaics, Marco Simone, Italy, 2016	Centro di Conservazione Archeologica	Getty Foundation
MCC Advanced Training for Lifted Mosaics, Ephesus, Turkey, 2016	Centro di Conservazione Archeologica	Getty Foundation
Training Course for Lifted Mosaics, Arles, France, 2016	Musée Départemental Arles Antique	Getty Foundation
Training Course for Lifted Mosaics, Algiers, Algeria, 2017	Musée Départemental Arles Antique, Conservation et la Restauration du Patrimoine Culturel, Algeria	Getty Foundation
MCC Advanced Training for Lifted Mosaics, Belmonte, Italy, 2017	Centro di Conservazione Archeologica	Getty Foundation
Training Course for the Maintenance of In Situ Mosaics, Volubilis, Morocco, 2017–2018	GCI, Direction du Patrimoine Culturel, Morocco	GCI
MCC Training for Lifted Mosaics, Belmonte, Italy, 2018	Centro di Conservazione Archeologica	Getty Foundation
MCC Training for Lifted Mosaics, Belmonte, Italy, 2018	Centro di Conservazione Archeologica	Getty Foundation
Conservation of In Situ Mosaics, Byblos, Lebanon, 2019	GCI, ICCROM-Sharjah, Department of Antiquities, Lebanon	GCI, ICCROM-Sharjah
Conservation of Lifted Mosaics in Storage, Sidon, Lebanon, 2022	GCI, Direction Générale des Antiquités, Lebanon	GCI
MCC Training for Lifted Mosaics, Byblos, Lebanon, 2022–2023	Centro di Conservazione Archeologica, Direction Générale des Antiquités, Lebanon	Getty Foundation
Conservation of Lifted Mosaics in Storage, Follow-Up Training, Sidon, Lebanon, 2023	GCI, Direction Générale des Antiquités, Lebanon	GCI

TRAINING COURSES FOR SITE MANAGERS

	Lead Institution	Funding Institution
Conservation and Management of Archaeological Sites with Mosaics, Tyre, Lebanon, 2010–2011	GCI, ICCROM-Sharjah, Direction Générale des Antiquités, Lebanon	GCI, ICCROM-Sharjah
Museum Professionals Course, Saving Mosaics in Museums of the Southern and Eastern Mediterranean, Amman, Jordan, 2012	ICCROM, Department of Antiquities, Jordan	Getty Foundation
Conservation and Management of Archaeological Sites with Mosaics, Paphos, Cyprus, 2014–2015	GCI, University of Cyprus Archaeological Research Unit, Department of Antiquities, Cyprus	GCI
Conservation and Management of Archaeological Sites with Mosaics, Volubilis, Morocco, 2017–2018	GCI, Direction du Patrimoine Culturel, Morocco	GCI
Advanced Training in Site Conservation and Management of Archaeological Sites with Mosaics, Amman, Jordan, 2021–2022	GCI, ICCROM-Sharjah, Department of Antiquities, Jordan	GCI, ICCROM-Sharjah

FUNDRAISING WORKSHOPS FOR SITE MANAGERS

Grant Research and Writing Workshop, Sardinia, Italy, 2014	GCI	GCI
Introduction to Fundraising and Fiscal Sponsorship, online, 2015	GCI	GCI
Fundraising and Organizational Development Workshop, Barcelona, Spain, 2017	GCI	GCI
Introduction to Fundraising and Finding Prospects, online, 2023	GCI	GCI
Fundraising and Finding Prospects, Regional Workshops, online, 2023	GCI	GCI

SYMPOSIA

Shelters Symposium, Herculaneum, Italy, 2013	Herculaneum Conservation Project	Getty Foundation
--	----------------------------------	------------------

REGIONAL ADVISORY MEETINGS

Regional Advisory Meeting, Rome, Italy, 2008	MOSAICON partners	Getty Foundation
Regional Advisory Meeting, Ravello, Italy, 2014	MOSAICON partners	Getty Foundation
Regional Advisory Meeting, Venice, Italy, 2016	MOSAICON partners	Getty Foundation
Regional Advisory Meeting, Rome, Italy, 2019	MOSAICON partners	Getty Foundation

Getty Foundation Grantees

Centro di Conservazione Archeologica S.R.L. (2010–2022): Training programs for conservation technicians from Algeria, Jordan, Lebanon, Libya, Morocco, Syria, and Tunisia.

Consorzio Arké (2021): Training program for conservation technicians from Tunisia and Libya and the creation of a conservation studio in Pupput, Tunisia.

Israel Antiquities Authority (2020): Networking and skill-building workshops for professionals from Israel and Cyprus.

Fondazione Internazionale per la Conservazione del Mosaico (2017–2025): Regional convenings for MOSAIKON partners and travel support for MOSAIKON trainees and other regional professionals to attend ICCM conferences.

International Centre for the Study of the Preservation and Restoration of Cultural Property (2008–2018): MOSAIKON planning meetings and regional convenings, training workshops, and new publications translated for regional professionals.

Centre Interdisciplinaire de Conservation et Restauration (2013, 2018): Training courses in southern France, Lebanon, and Algeria for conservation technicians from Algeria, Lebanon, and Egypt and resources to establish a new conservation studio in Tipasa, Algeria.

University of Cyprus (2009–2014): Strengthening ICCM, regional convenings for MOSAIKON partners, and travel support for MOSAIKON trainees and other regional professionals to attend ICCM conferences.

The British School at Rome (2013): Workshop at the Italian sites of Herculaneum and Ercolano on protective shelters for mosaics at archaeological sites for professionals from North Africa and the Middle East.

King's College London (2010–2013): Training workshops in Libya for site managers, archaeologists, and conservation technicians.

ICCM Conferences

10th ICCM Conference

Conservation: An Act of Discovery, Palermo, Italy, October 20–26, 2008

11th ICCM Conference

Managing Archaeological Sites with Mosaics: From Real Problems to Practical Solutions, Meknes, Morocco, October 24–27, 2011

12th ICCM Conference

The Conservation and Presentation of Mosaics: At What Cost?, Sardinia, Italy, October 27–31, 2014

13th ICCM Conference

What Comes to Mind When You Hear Mosaics? Conserving Mosaics from Ancient to Modern, Barcelona, Spain, October 14–20, 2017

14th ICCM Conference

Conserving Mosaics in a Changing Environment: Challenges and Opportunities, Plovdiv, Bulgaria, October 24–28, 2022

15th ICCM Conference

Mosaic Conservation: Current Challenges and Future Prospects, Athens, Greece, October 19–24, 2025.

Bibliography

Over the course of the MOSAIKON project, staff at the partner organizations produced a range of publications. All the publications related to the project are listed below.

SCHOLARLY ARTICLES

- Aslan, Zaki, Sarah Court, Jeanne Marie Teutonico, and Jane Thompson, eds. 2018. *Protective Shelters for Archaeological Sites: Proceedings of a Symposium, Herculaneum, Italy, 23–27 September 2013*. London: British School at Rome. http://www.getty.edu/conservation/our_projects/education/shelters/protective.html
- Biçer-Şimşir, Beril, and Ertugrul Taciroglu. 2017. “Alternative Backing Methods for Lifted Mosaics: A Project of the MOSAIKON Initiative.” In *The Conservation and Preservation of Mosaics: At What Cost? Proceedings of the 12th ICCM Conference, Sardinia, October 27–31, 2014; La conservation et la préservation des mosaïques: À quel coût? Actes de la 12e Conference de l’ICCM, Sardinie, 27–31 octobre 2014*, edited by Jeanne Marie Teutonico, Leslie Friedman, Aïcha Ben Abed, and Roberto Nardi, 259–69. Los Angeles: Getty Conservation Institute. <https://iccm-mosaics.org/publication/at-what-cost/>
- Dardes, Kathleen, Leslie Friedman, Thomas Roby, and Zaki Aslan. 2017. Poster: Training of Archaeological Site Managers: MOSAIKON’s Approach to the Conservation and Management of Mosaics at Archaeological Sites in the Mediterranean Region. In *Managing Archaeological Sites with Mosaics: From Real Problems to Practical Solutions: The 11th Conference of the International Committee for the Conservation of Mosaics, Meknes, October 24–27, 2011*, edited by Demetrios Michaelides and Anne-Marie Guimier-Sorbets, 603–08. Firenze: Edifir edizioni. <https://iccm-mosaics.org/wp-content/uploads/2020/04/MEKNES-Proceedings.pdf#page=603>
- Dardes, Kathleen, Jeanne Marie Teutonico, Catherine Antomarchi, and Zaki Aslan. 2010. “Building Capacity for the Conservation of Mosaics in the Mediterranean: The MOSAIKON Initiative.” In *Conservation and the Eastern Mediterranean: Contributions to the Istanbul Congress, 20–24 September 2010*, edited by Christina Rozeik, Ashok Roy, and David Saunders, S30–34. *Studies in Conservation*, vol. 55, suppl. 2. London: International Institute for Conservation of Historic and Artistic Works.
- Friedman, Leslie. 2011. “Paving the Way: Mosaic Conservation Training in the Mediterranean Region.” *The Iris: The Online Magazine of the Getty* (blog). November 21, 2011. <https://web.archive.org/web/20111224070607/http://blogs.getty.edu/iris/paving-the-way-mosaic-conservation-training-in-the-mediterranean-region/>
- Friedman, Leslie, Kathleen Dardes, Thomas Roby, and Jeanne Marie Teutonico. 2014. “The MOSAIKON Initiative: Building Capacity at a Regional Level in the Conservation of Archaeological Mosaics.” In *ICOM-CC 17th Triennial Conference Preprints, Melbourne, 15–19 September 2014*, edited by Janet Bridgland, art. 1105. Paris: International Council of Museums. <https://www.icom-cc-publications-online.org/1559/The-MOSAIKON-Initiative--Building-Capacity-at-a-Regional-Level-in-the-Conservation-of-Archaeological-Mosaics->
- Friedman, Leslie, Sara Lardinois, Yael Alef, Jacques Neguer, and John Stewart. 2017. Poster: Protective Shelters for Archaeological Sites with Mosaics: A Project of the MOSAIKON Initiative.” 13th ICCM Conference—Poster Presentations (website). Accessed March 5, 2024. https://iccm-mosaics.org/wp-content/uploads/2017/12/Friedman-et-al_P1.pdf
- Friedman, Leslie, Thomas Roby, Martha Demas, John Stewart, and Zaki Aslan. 2017. Poster: An Update on Training in the Conservation and Management of Archaeological Sites with Mosaics: A project of the MOSAIKON Initiative. 13th ICCM Conference—Poster Presentations (website). Accessed March 5, 2024. https://iccm-mosaics.org/wp-content/uploads/2017/12/Friedman-et-al_P2.pdf
- Friedman, Leslie, Jeanne Marie Teutonico, Thomas Roby, Martha Demas, and Demetrios Michaelides. 2017. “Conservation and Management of Archaeological Sites with Mosaics: A Training Program of the MOSAIKON Initiative.” In *The Conservation and Preservation of Mosaics: At What Cost? Proceedings of the 12th ICCM Conference, Sardinia, October 27–31, 2014; La conservation et la préservation des mosaïques: À quel coût? Actes de la 12e Conference de l’ICCM, Sardinie, 27–31 octobre 2014*, edited by Jeanne Marie Teutonico, Leslie Friedman, Aïcha Ben Abed, and Roberto Nardi, 237–45. Los Angeles: Getty Conservation Institute. <https://iccm-mosaics.org/publication/at-what-cost/>
- J. Paul Getty Trust. 2014. MOSAIKON: Conserving the Mosaics of the Mediterranean Region. *The Getty* (Summer): 6–13. https://www.getty.edu/about/whatwedo/getty_magazine/GettyMag_Summer_2014.pdf#page=4
- Nardi, Roberto. 2017. “Mosaic Conservation Course (MCC) 2011–2016, A Program of the MOSAIKON Initiative: Mid-Program Review.” In *The Conservation and Preservation of Mosaics: At What Cost? Proceedings of the 12th ICCM Conference, Sardinia, October 27–31, 2014; La conservation et la préservation des mosaïques: À quel coût? Actes de la 12e Conference de l’ICCM, Sardinie, 27–31 octobre 2014*, edited by Jeanne Marie Teutonico, Leslie Friedman, Aïcha Ben Abed, and Roberto Nardi, 250–58. Los Angeles: Getty Conservation Institute. <https://iccm-mosaics.org/publication/at-what-cost/>
- Rebbani, Yousra. 2021. “Our Cultural Heritage Is Who We Are. It’s Our Identity.” *Getty News & Stories* (blog). September 28, 2021. <https://www.getty.edu/news/our-cultural-heritage-is-who-we-are-its-our-identity/>

Roby, Thomas. 2010. "Overcoming the Crisis in Mosaic Conservation." *Heritage, Conservation, and Archaeology (blog)*, Archaeological Institute of America. April 12, 2010. <https://www.archaeological.org/overcoming-the-crisis-in-mosaic-conservation/>

Roby, Thomas, and Leslie Friedman. 2013. "Getty Voices: Inside the Bulla Regia Model Field Project." *The Iris: The Online Magazine of the Getty (blog)*. November 19, 2013. <https://web.archive.org/web/20251114141044/http://blogs.getty.edu/iris/inside-the-bulla-regia-model-field-project-getty-voices/>

Roby, Thomas, Leslie Friedman, Livia Alberti, Cristina Caldi, Ermanno Carbonara, and Moheddine Chaouali. 2012. Poster: Mosaic Conservation Planning and Implementation at the Site of Bulla Regia, Tunisia. In *Contributions to the Vienna Congress, 10–14 September 2012; The Decorative: Conservation and the Applied Arts*, edited by Sharon Cather, Austin Nevin, Joyce H. Townsend, Marika Spring, Jo Kirby Atkinson, and Dinah Eastop, S374–75. *Studies in Conservation*, vol. 57, suppl.1. International Institute for Conservation of Historic and Artistic Works. <https://doi.org/10.1179/0039363012Z.00000000040>

Roby, Thomas, Leslie Friedman, Livia Alberti, Ermanno Carbonara, and Ascanio D'Andrea. 2024. *Bulla Regia Mosaic Conservation Project: A Model Field Project of the MOSAIKON Initiative*. Project Report. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie; New York: World Monuments Fund. https://hdl.handle.net/10020/gci_pubs_bulla_regia_mosaic

Roby, Thomas, Leslie Friedman, Moheddine Chaouali, Hamida Rhouma, Livia Alberti, and Ermanno Carbonara. 2020. "The Conservation Plan for Mosaics at Bulla Regia, A Component of the MOSAIKON Model Field Project." In *What Comes to Mind When You Hear Mosaic? Conserving Mosaics from Ancient to Modern. Proceedings of the 13th Conference of the International Committee for the Conservation of Mosaics, Barcelona, October 15–20, 2017*, edited by Roberto Nardi and Montserrat Pugès i Dorca, 337–348. Firenze: Edifir edizioni. https://iccm-mosaics.org/wp-content/uploads/2022/03/ICCM_BarcelonaActs-2.pdf#page=337

Roby, Thomas, Leslie Friedman, Hamida Rhouma, Moheddine Chaouali, Livia Alberti, Ermanno Carbonara, Cristina Caldi, Ascanio D'Andrea, and Daniele Sepio. 2017. "Conservation Planning for Excavated Mosaics at the Site of Bulla Regia, Tunisia: A Component of the MOSAIKON Initiative." In *The Conservation and Preservation of Mosaics: At What Cost? Proceedings of the 12th ICCM Conference, Sardinia, October 27–31, 2014; La conservation et la préservation des mosaïques: À quel coût? Actes de la 12e Conférence de l'ICCM, Sardinie, 27–31 octobre 2014*, edited by Jeanne Marie Teutonico, Leslie Friedman, Aïcha Ben Abed, and Roberto Nardi, 151–61. Los Angeles: Getty Conservation Institute. <https://iccm-mosaics.org/publication/at-what-cost/>

Roby, Thomas, Livia Alberti, and Aïcha Ben Abed. 2010. "A Preliminary Assessment of Mosaic Reburials in Tunisia." In *Conservation*

and the Eastern Mediterranean: Contributions to the Istanbul Congress, 20–24 September 2010, edited by Christina Rozeik, Ashok Roy, and David Saunders, S207–13. *Studies in Conservation*, vol. 55, suppl.2. London: International Institute for Conservation of Historic and Artistic Works.

Roby, Thomas, Livia Alberti, and Aïcha Ben Abed. 2014. "Costs and Benefits of In Situ Mosaic Conservation: An analysis of Technician Training and Conservation Work in Tunisia 2001–2008." In *Conservation: An Act of Discovery: The 10th Conference of the International Committee for the Conservation of Mosaics, Palermo October 20–26, 2008*, edited by Demetrios Michaelides, 284–95. Palermo: Centro Regionale per la Progettazione e il Restauro. <https://iccm-mosaics.org/publication/conservation-of-mosaics-an-act-of-discovery/>

Roby, Thomas, Livia Alberti, Cristina Caldi, Ermanno Carbonara, Mustapha Atki, and Myriam Ziade. 2020. "Addressing the Challenges of Conserving and Maintaining Mosaics in Storage." In *Current Practices and Challenges in Built Heritage Conservation: IIC 2020 Edinburgh Congress Preprints*, edited by Austin Nevin, Joyce H. Townsend, Barry Knight, David Saunders, Jo Kirby Atkinson, Sarah Staniforth, and Noëlle Streeton, 268–75. *Studies in Conservation*, vol. 65, suppl.1. London: International Institute for Conservation of Historic and Artistic Works. <https://doi.org/10.1080/00393630.2020.1753396>

Roby, Thomas, Livia Alberti, Cristina Caldi, Ermanno Carbonara, Moheddine Chaouali, Leslie Friedman, and Hamida Rhouma. 2017. "Mosaic Conservation Planning and Implementation at the Site of Bulla Regia, Tunisia." In *Managing Archaeological Sites with Mosaics: From Real Problems to Practical Solutions: The 11th Conference of the International Committee for the Conservation of Mosaics, Meknes, October 24–27, 2011*, edited by Demetrios Michaelides and Anne-Marie Guimier-Sorbets, 327–31. Firenze: Edifir edizioni. <https://iccm-mosaics.org/wp-content/uploads/2020/04/MEKNES-Proceedings.pdf#page=327>

Roby, Thomas, John Stewart, Martha Demas, and Livia Alberti. 2024. *The Reburial of Mosaics: Literature Review and Training and Planning Documents*. Los Angeles: Getty Conservation Institute. http://hdl.handle.net/10020/gci_pubs_reburial_mosaics

Teutonico, Jeanne Marie. 2010. "MOSAIKON: A Strategic Regional Program for the Conservation of Mosaics in the Mediterranean." *Conservation Perspectives: The GCI Newsletter* 25(2): 15–17. https://www.getty.edu/conservation/publications_resources/newsletters/pdf/v25n2.pdf#page=15

Teutonico, Jeanne Marie. 2025. "The MOSAIKON Initiative: Building and Sustaining a Community of Practice for the Conservation of Archaeological Mosaics in the Mediterranean Region." In *Conserving Mosaics in a Changing Environment: Challenges and Opportunities. Proceedings of the 14th Conference of the International Committee for the Conservation of Mosaics, Plovdiv, Bulgaria, October 24–28, 2022*, edited by Roberto Nardi, Stefania Chlouveraki, and Theodoras Katrakazis, 263–275. Firenze: Edifir edizioni.

Teutonico, Jeanne Marie, Mounir Bouchenaki, and Demetrios Michaelides. 2014. "MOSAIKON: A Regional Programme for the Conservation of Mosaics in the Mediterranean (2008–2012)." In *Conservation: An Act of Discovery: The 10th Conference of the International Committee for the Conservation of Mosaics, Palermo October 20–26, 2008*, edited by Demetrios Michaelides, 424–35. Palermo: Regione Siciliana. <https://iccm-mosaics.org/publication/conservation-of-mosaics-an-act-of-discovery/>

Teutonico, Jeanne Marie, and Leslie Friedman, on behalf of the MOSAIKON partners. 2017. "The MOSAIKON Initiative for the Conservation of Mosaics in the Mediterranean Region: An Update on Activities. In *Managing Archaeological Sites with Mosaics: From Real Problems to Practical Solutions: The 11th Conference of the International Committee for the Conservation of Mosaics, Meknes, October 24–27, 2011*, edited by Demetrios Michaelides and Anne-Marie Guimier-Sorbets, 365–74. Firenze: Edifir edizioni. <https://iccm-mosaics.org/wp-content/uploads/2020/04/MEKNES-Proceedings.pdf#page=365>

Teutonico, Jeanne Marie, and Leslie Friedman. 2018. "MOSAIKON 2008–2018: Objectives, Outcomes, Opportunities." In *Conservation Perspectives: The GCI Newsletter* 33 (1, Spring): 10–12. https://www.getty.edu/conservation/publications_resources/newsletters/pdf/v33n1.pdf#page=10

Teutonico, Jeanne Marie, and Leslie Friedman. 2020. "MOSAIKON 2008–2018: Objectives, Outcomes, Opportunities." In *What Comes to Mind When You Hear Mosaic? Conserving Mosaics from Ancient to Modern. Proceedings of the 13th Conference of the International Committee for the Conservation of Mosaics, Barcelona, October 15–20, 2017*, edited by Roberto Nardi and Montserrat Pugès i Dorca, 325–336. Firenze: Edifir edizioni. https://iccm-mosaics.org/wp-content/uploads/2022/03/ICCM_BarcelonaActs-2.pdf#page=325

Underwood, Katie. 2014. "Conserving Mosaics in the Middle East and North Africa: A Conversation with Mosaics Expert Roberto Nardi about Conservation Training." Getty News & Stories (blog). December 8, 2014. <https://www.getty.edu/news/conserving-mosaics-middle-east-north-africa-mosaikon/>

Weinstein, Joan. 2018. "A New Chapter in the Effort to Preserve Ancient Mosaics in the Mediterranean." In *Getty News & Stories* (blog). November 27, 2018. <https://www.getty.edu/news/a-new-chapter-in-the-effort-to-preserve-ancient-mosaics-in-the-mediterranean/>

WEBSITES

<https://www.getty.edu/projects/mosaikon/>
<https://iccm-mosaics.org/mosaikon/>
<https://www.iccrom.org/index.php/projects/mosaikon>

BOOKS AND DIDACTIC MATERIALS

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, and Amel Chabbi. 2013. *Supplemental Manuals for Digital Photographic Documentation: Technician Training for the Maintenance of In Situ Mosaics*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/manuels_english

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, and Amel Chabbi. 2013. *Manuels supplémentaires pour la documentation photographique numérique: Formation de techniciens à l'entretien de mosaïques in situ*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/manuels

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, and Amel Chabbi. 2013. *Supplemental Manuals for Digital Photographic Documentation: Technician Training for the Maintenance of In Situ Mosaics*. Arabic ed. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/manuels_arabic

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, and Amel Chabbi, eds. 2019. *Qirā'āt fī al-hifāz 'alā al-fusayfisā': maqālāt mukhtārāh mutarjamah ilā al-lughah al-'Arabīyah* [Readings in Mosaic Conservation: Selected Articles Translated into Arabic]. Rome: ICCROM; Los Angeles: Getty Foundation. https://www.getty.edu/foundation/pdfs/mosaikon_readings.pdf

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, Thomas Roby, and Juana Segura Escobar. 2013. *Illustrated Glossary: Technician Training for the Maintenance of In Situ Mosaics*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/glossaire_english

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, Thomas Roby, and Juana Segura Escobar. 2013. *Glossaire illustré: Formation de techniciens à l'entretien de mosaïques in situ*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/glossaire

Alberti, Livia, Elsa Bourguignon, Ermanno Carbonara, Thomas Roby, and Juana Segura Escobar. 2013. *Illustrated Glossary: Technician Training for the Maintenance of In Situ Mosaics*. Arabic ed. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/glossaire_arabic

Alberti, Livia, Elsa Bourguignon, and Thomas Roby. 2013. *Technician Training for the Maintenance of In Situ Mosaics*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/tech_training_english

Alberti, Livia, Elsa Bourguignon, and Thomas Roby. 2013. *Formation de techniciens à l'entretien de mosaïques in situ*. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/tech_training_french

Alberti, Livia, Elsa Bourguignon, and Thomas Roby. 2013. *Technician Training for the Maintenance of In Situ Mosaics*. Arabic ed. Los Angeles: Getty Conservation Institute; Tunis: Institut National du Patrimoine de Tunisie. http://hdl.handle.net/10020/gci_pubs/tech_training_arabic

Alberti, Livia, Ermanno Carbonara, and Thomas Roby. 2020. *MOSAICON Technician Training for the Conservation of Mosaics. Teaching and Learning Resources*, Getty Conservation Institute (website). https://www.getty.edu/conservation/publications_resources/teaching/mosaics_conservation.html

Biçer-Şimşir, Beril, Anjo Weichbrodt, and Thomas Roby. 2011. *MOSAICON: Alternative Backing Methods and Materials Research: Survey Results*. Los Angeles: Getty Conservation Institute. http://www.getty.edu/conservation/our_projects/education/backing/MOS_ABM_Materials_Survey_Result_Final.pdf

Roby, Thomas, and Martha Demas, eds. 2012. *Mosaics In Situ: An Overview of Literature on Conservation of Mosaics In Situ*. Los Angeles: Getty Conservation Institute. http://hdl.handle.net/10020/gci_pubs/lit_review

VIDEOS

Centro di Conservazione Archeologica. 2012–2022. “MOSAICON. Conservation Course at CCA.” YouTube playlist. Last modified September 10, 2022. https://youtube.com/playlist?list=PL0O4sxi_Dy0M7jkmMnQJPhPzoyf_8qdM3&si=PFNNBJ5iIMg8CCmH

Getty Conservation Institute. 2015. “Preserving a Mediterranean Heritage: The MOSAICON Initiative.” August 6, 2015. YouTube video, 9:30. Los Angeles: Getty Conservation Institute. <https://youtu.be/qStckodwXZE?si=bzQBmyXY9dvnC6Er>

Getty Conservation Institute. 2015. “Mosaic Technician Training.” YouTube playlist. Last modified January 25, 2022. <https://youtube.com/playlist?list=PL5ZJP2yRFa3ajDa7pTNSvnV5RHo4qcAEy&si=EcB7tnOeatuo3nVI>

Getty Conservation Institute and Institut National du Patrimoine de Tunisie. 2015. “Bulla Regia: A Model Conservation Project.” November 4, 2015. YouTube video, 3:55. Los Angeles: Getty Conservation Institute. https://youtu.be/LedaeWnjudE?si=Ha6Yavh-nq_ewAP

BACK COVER: Maison de la Chasse, Bulla Regia, Tunisia. Photo by Scott Warren, © J. Paul Getty Trust.

