



# BILAD AL-SHAM

## TRAINING COURSE IN MOSAIC RESTORATION

Madaba JORDAN - Shahba SYRIA - Jerusalem PALESTINE  
August - September 2003

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



THE HASHEMITE KINGDOM  
OF JORDAN  
MINISTRY OF TOURISM & ANTIQUITIES  
Department of Antiquities



European Union



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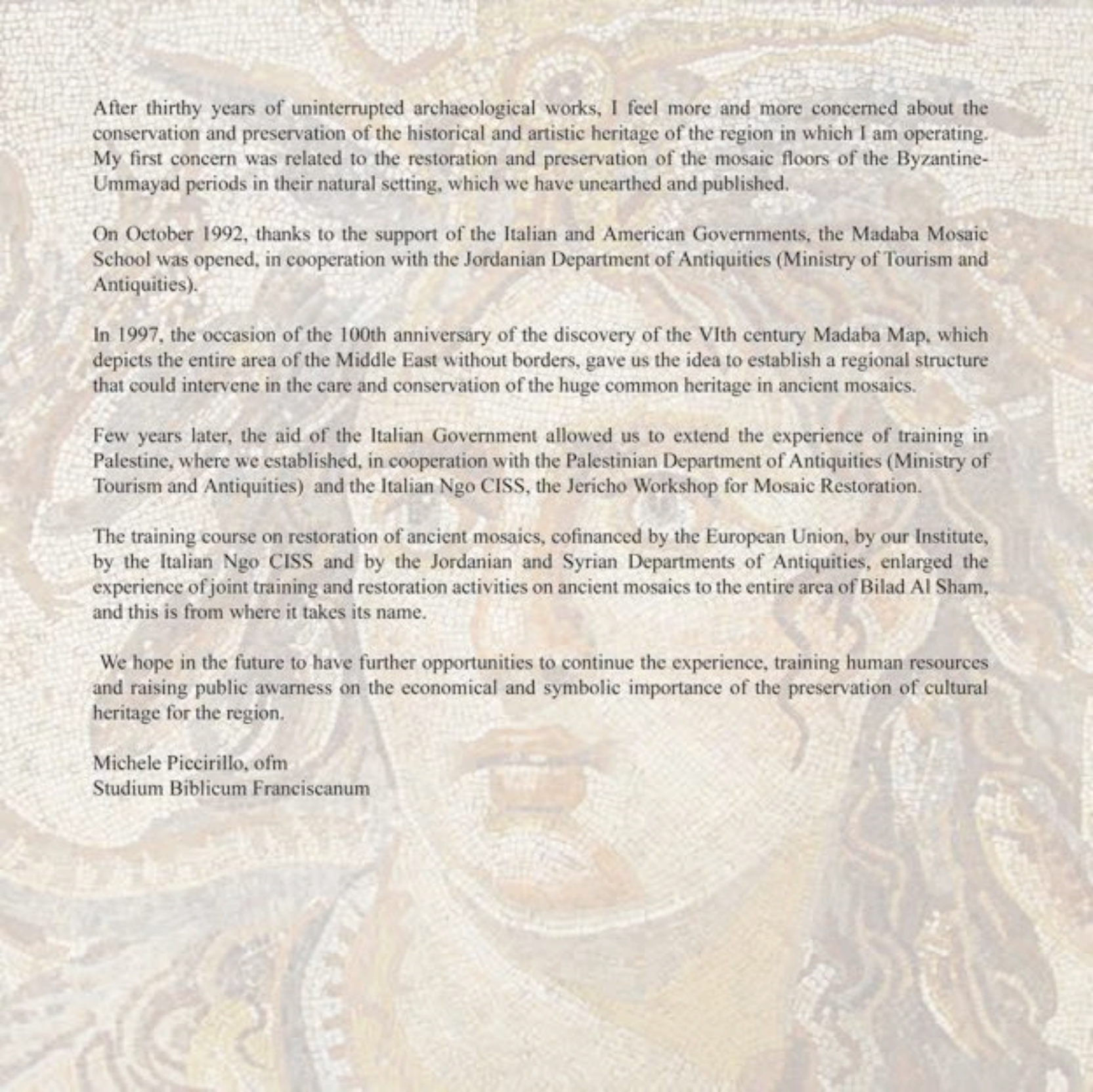
**BILAD AL-SHAM - TRAINING COURSE IN  
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**Prepared by:  
Osama Hamdan - Carla Benelli  
CISS**

**March - 2004**

The background of the entire page is a large, detailed mosaic of a human face, likely a religious figure, rendered in shades of gold, brown, and white. The face is the central focus, with intricate details in the eyes, nose, and mouth. The mosaic style is characteristic of Byzantine or Islamic art.

After thirty years of uninterrupted archaeological works, I feel more and more concerned about the conservation and preservation of the historical and artistic heritage of the region in which I am operating. My first concern was related to the restoration and preservation of the mosaic floors of the Byzantine-Ummayyad periods in their natural setting, which we have unearthed and published.

On October 1992, thanks to the support of the Italian and American Governments, the Madaba Mosaic School was opened, in cooperation with the Jordanian Department of Antiquities (Ministry of Tourism and Antiquities).

In 1997, the occasion of the 100th anniversary of the discovery of the VIth century Madaba Map, which depicts the entire area of the Middle East without borders, gave us the idea to establish a regional structure that could intervene in the care and conservation of the huge common heritage in ancient mosaics.

Few years later, the aid of the Italian Government allowed us to extend the experience of training in Palestine, where we established, in cooperation with the Palestinian Department of Antiquities (Ministry of Tourism and Antiquities) and the Italian Ngo CISS, the Jericho Workshop for Mosaic Restoration.

The training course on restoration of ancient mosaics, cofinanced by the European Union, by our Institute, by the Italian Ngo CISS and by the Jordanian and Syrian Departments of Antiquities, enlarged the experience of joint training and restoration activities on ancient mosaics to the entire area of Bilad Al Sham, and this is from where it takes its name.

We hope in the future to have further opportunities to continue the experience, training human resources and raising public awareness on the economical and symbolic importance of the preservation of cultural heritage for the region.

Michele Piccirillo, ofm  
Studium Biblicum Franciscanum

For the past 15 years, the Italian Ngo CISS has been working in Palestine in cooperation projects, recently giving priority to cultural heritage conservation and enhancement.

Cultural heritage is the tangible memory of a people, and represents a fundamental aspect of its collective identity. It can also become, if well managed, a real booster of development and economic well-being.

To preserve the historical and cultural heritage of a people represents a triple investment: in education, because memory is the key to train new generations; in peace, because cultural sharing is the main contribution of any civilization to the whole humanity; in sustainable development, because it is evidence of what is possible to gain by preserving resources instead of destroying and consuming them.

For this reason, CISS – in cooperation with other institutions such as the Palestinian Ministry of Tourism and Antiquities and the Studium Biblicum Franciscanum in Jerusalem – has already carried out training interventions that preserved precious mosaics, such as the Umayyad mosaics of Qasr Hisham in Jericho, the mosaics of the Holy Sepulcher in Jerusalem, the mosaics of 'Ayn Duk Synagogue in Na'aran.

While working for the establishment of the Jericho Workshop for Mosaic Restoration, co-financed by the Italian Ministry of Foreign Affairs, we came into contact with the Madaba Mosaic School, the Jordanian and the Syrian Departments of Antiquities. Together we organized this new project, Bilad Al Sham. The project, executed thanks to the contribution of the European Union, involved fifteen trainees from Iraq, Jordan, Lebanon, Palestine and Syria.

The project includes an exhibition, which displays copies of ancient mosaics representing Palestinian cities all over the region. The copies have been produced by young Palestinian mosaicists, trained in the Jericho Workshop for Mosaic Restoration.

Recognition goes to the trainees, who were able to reach a high skill level while facing enormous challenges in a very difficult context and also to the trainers, who went far beyond their professional engagement.

Sergio Cipolla  
CISS President



## **Bilad Al Sham - Training Course in ancient mosaics restoration**

Since 2000 the Jericho Workshop for Mosaic Restoration and the Madaba Mosaic School have carried out, during the summer, joint training courses on mosaic restoration. The experience was very successful and in 2002 Palestinian and Jordanian trainees were joined by Syrian and Lebanese students. Based on this experience, the Bilad Al-Sham project organized, for the summer of 2003, a training course for experts in ancient mosaic restoration, held in the Madaba School in Jordan and in the Shahba Museum in Syria.

Fifteen trainees, coming from Iraq, Jordan, Lebanon, Palestine and Syria, participated in the course. Prepared by the Jordanian and Syrian Department of Antiquities and by the Italian Ngo CISS, the project has been supported by European Commission Technical Assistance Office for West Bank and Gaza Strip and Studium Biblicum Franciscanum.

### **Objectives**

1. To train local specialized staff to intervene on the local cultural resources.
2. To preserve important archaeological remains thanks to practical experience of restoration.



3. To enhance the huge cultural heritage in ancient mosaic and to develop tourist attractions.

4. To spread awareness among local population about the importance of the preservation of their cultural heritage.

### Activities

The training course lasted two months and was structured in four parts: on-the-job training, theory, educational site visits and restoration activities.

Restoration work was an integral part of the training program. The staff and the trainees carried out and documented all the activities of the intervention, which was conducted in Jordan: in the Church of the Virgin Mary, the Hippolytus Hall and the Crypt of Saint Elianos in the Archaeological Park in Madaba; in the Church of Saint George in Khirbet Al Mukhayyat and in the Church of Saint Stephen in Umm Al-Rasas and in Syria on the mosaics of the Roman villa in Shahba Museum and on a detached mosaic from Aphamea.

The trainees enjoyed the course, which improved their skills and allowed them to take advantage of the rich cultural diversity in the group.



## Staff and Trainees

The Jordanian Department of Antiquities, directed by Dr. Fawwaz Al-Kraysheh, participated in the project thanks to Mr. Khalil Hamdan, director of the Madaba Mosaic School and Ms. Catherine Hamarne.

The Syrian Department of Antiquities, directed by Dr. Tammam Fakouch, participated thanks to Dr. 'Amro Al Adem, Dr. Tagrid Shaaban and Ms. Loda Mahfudh.

Architect Osama Hamdan directed the project, under the scientific supervision of Father Michele Piccirillo of the Studium Biblicum Franciscanum. Ms Carla Benelli coordinated the project, as local representative of the Italian Ngo CISS. The mosaic expert, Mr. Franco Sciorilli, followed the training and restoration activities.

The trainees were: Mr. Ghaib Fadel and Mr. Manhal Jaber from Iraq; Mr. Yusef Abu Fardeh, Mr. Ahmad Qassual and Mr. Nemer Zoubi from Jordan; Dr. Hasan Badawi as coordinator, Ms. Muna Sabati and Ms. Safa 'Burgi from Lebanon; Mr. Muattaz Ismail, Mr. Munther Al Ais, Mr. Mustafa Al Omar, Mr. Maher Jabai and Ms. Leila Atturk from Syria; Mr. Khaldon Al Balbool, Mr. Mohammad Hamdan and Mr. Mosab Owde from Palestine.

Mr. Nader Haj was responsible for logistics and cooking.







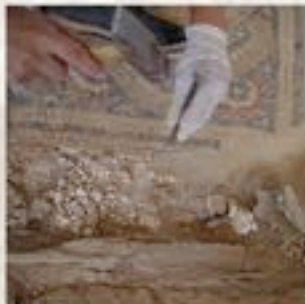
## Restoration of the mosaics of the Church of Saint Stephen - Umm Al-Rasas - Madaba

The town of Umm Al-Rasas is located 30 km south-east of Madaba. Due to the wealth of inscriptions and the quality of the mosaics, the Church of Saint Stephen, discovered in 1986, is one of the most important archaeological sites in Jordan. The church was built above an older monument. A small section of a lower mosaic floor was found under the base of the church's altar.

The presbyterium of the church was paved with mosaics in A.D. 756, as stated in the dedicatory inscriptions. All the figures in the hunting, agricultural and pastoral scenes of the mosaics, as well as the benefactors, portrayed as giftbearers, were destroyed by iconoclasts. In the frame of the central carpet and in the four panels of the intercolumnar spaces, a series of city plans remain untouched: ten cities in the Nile Delta, eight west of the Jordan river and seven cities east of the river.

### Restoration activities

The main objective of the 2003 training program was to teach trainees the concept of ordinary maintenance of cultural heritage in general, and on mosaics in particular.



A theoretical and practical program was developed to increase their understanding about the importance of this approach in modern philosophy of conservation, and to avoid future radical intervention on restoration, which is always traumatic for cultural heritage. Constant action of ordinary maintenance is particularly important for sites which have already experienced, in the past, restoration or protection works.

Activities carried out by trainees have followed methodologies of control and monitoring over already existing documents:

1. Collection of historical information, maps, drawings, photographs, documents and reports over previous restoration activities.

2. Studies and analysis of the state of conservation of the mosaics, recording it over existing graphic documents. As a result of this activity, the following problems were underscored:

- crumbling tesserae
- loose tesserae
- patina
- swelling
- lacunae
- cement strips
- depression
- chromatic variation by fire



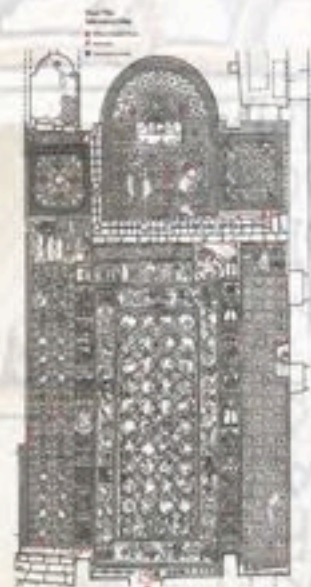
3. Due to lack of time, the maintenance intervention over the mosaic could not deal with all the problems. In any case, they were documented over graphic maps, for future intervention.

During the training course the intervention works concerned the following:

- Filling the existing lacunae by compatible mortar
- Removing of incompatible material (cement in lacunae and mortar strips)
- Setting of mortar strip by compatible materials
- Consolidation by Primal
- Reinforcing of sections where different levels of mosaic are exposed
- Cleaning of the entire surface from dust and light concretions and from bird excrements
- Taking measures of protection against birds entering the site
- Consolidation of some plaster walls

4. Trainees prepared graphic documents concerning all the interventions carried out over the mosaic.

Work was realized by four trainees under the supervision of expert Franco Sciorilli, during the month of August 2003.





## Restoration of the Crypt of Saint Elianus - Madaba, Jordan

From the above church of the Prophet Elias, two stairways descend into the crypt. Both stairways terminate in square landings decorated with mosaics. A vault covers the crypt area which receives light through a window in the apse.

The floor of the apse was originally decorated with two sheep facing a small tree. Most of this panel has been destroyed in recent years.

In the nave, a border of winged ribbons enclosed a geometric pattern decorated with birds and a dedicatory inscription which dates the mosaic at 595/596 A.D.

This small mosaics floor vividly demonstrates the technical mastery and imagination of the mosaicists of Madaba. The artisans employed the rainbow technique in which the entire range of color spectrum is utilized.

The exquisitely rich and varied design of the geometric composition makes this small area especially beautiful.

### Restoration activities in the Crypt of Saint Elianus

The program of the course focused on importance, means and methods of ordinary maintenance for the preservation of cultural heritage,



especially mosaics, to prevent radical future restoration works. Staff and trainees worked over previous documentation concerning the site and performed the following:

1. Collection of already existing historical, graphic and photographic documentation and past restoration reports concerning the Crypt.
2. Studies and analyses of the state of conservation of mosaics and walls, recording it over already existing graphic documentation.
3. Intervention of maintenance over the mosaics, carrying out the following activities:
  - a. Removal of materials (cement and metallic nails) incompatible with original ones
  - b. Consolidation of mosaic borders through the installation of compatible mortar strips
  - c. Consolidation and fixing of loose tesserae
  - d. Consolidation and installation of mortar strips inside the lacunae of the mosaic (in the statumen) by compatible materials
  - e. Consolidation works in the swelling by injection
  - f. Integration of small lacunae in the mosaic by natural mortar
  - g. Cleaning of the entire mosaic surface and removal of dust deposit



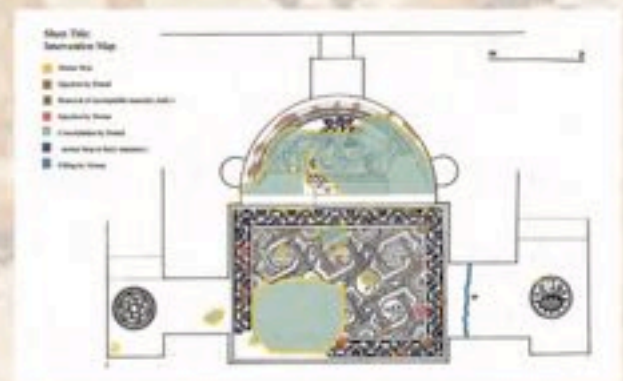
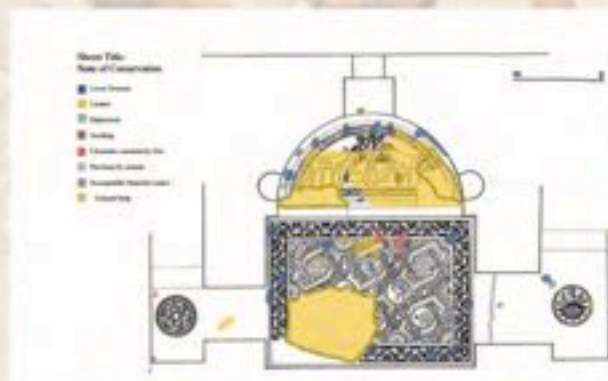
4. During the intervention we noticed that the huge dust and earth deposit over the mosaic surface was due to the bad condition of walls. So we decided to consolidate the degraded parts of stones, plaster and to intervene also among joints of the walls of the Crypt, to stop the degradation and at the same time to preserve the mosaic in the best way. This intervention was new for the trainees, because they had no previous experience in consolidation of wall structures. It was part of the training process to define causes of degradation and understand how to intervene directly over them to solve the problems which affect, in indirect ways, the mosaics.



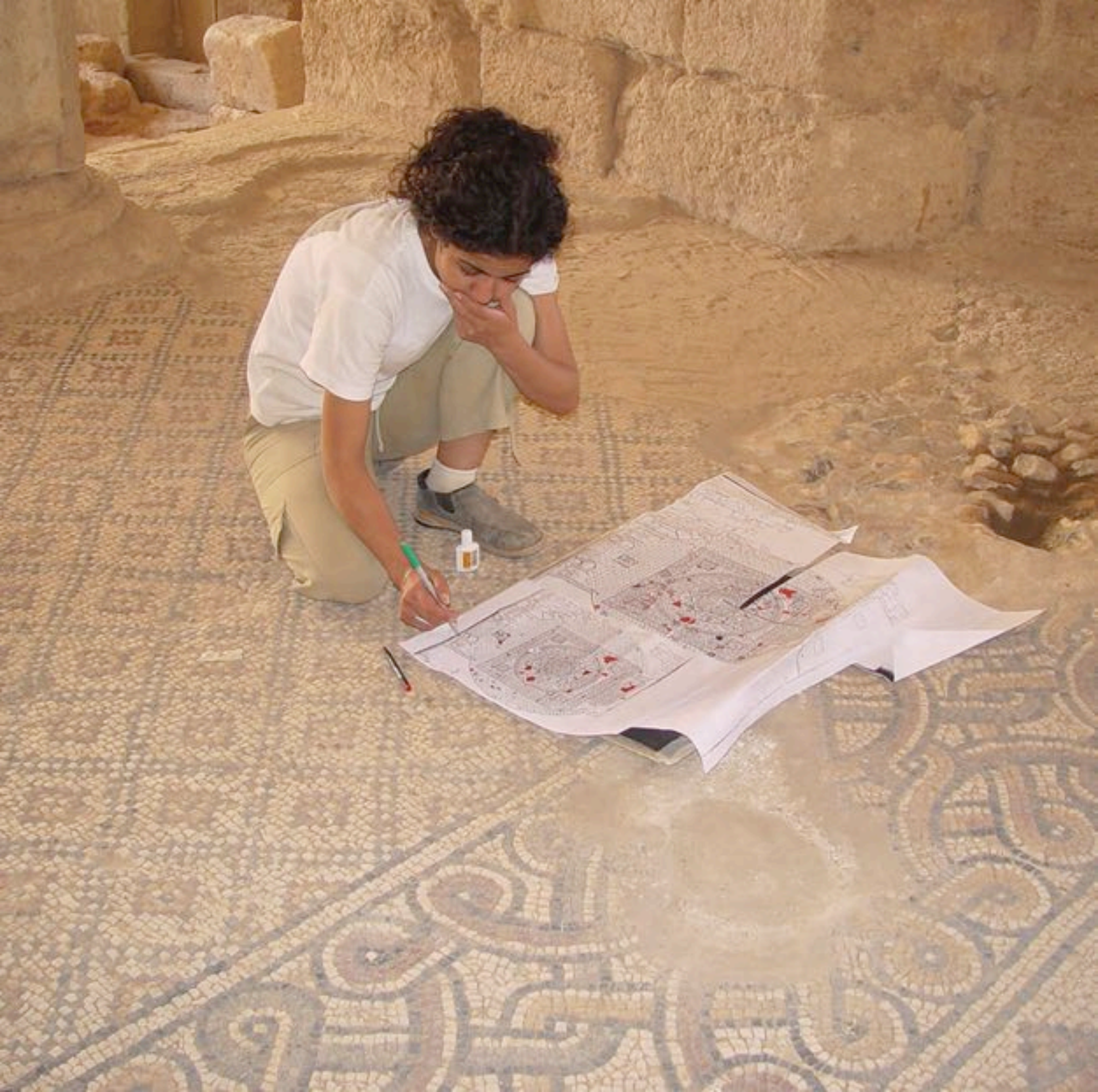
5. A map on the entire intervention over mosaics and walls has been prepared, to teach trainees how to prepare documents and maps in restoration activities. We stressed during the course the importance of this action as a fundamental phase in the restoration activity. It is a phase of control of results, and it is needed to leave information for future intervention. In fact, the results of our work will be useful for any other future intervention on the mosaics. We think that even our training courses will be an opportunity to check and monitor the results of our previous intervention.



Works were realized by three trainees under the supervision of expert Franco Sciorilli, during the month of August 2003.







## The church of the Virgin and Hippolytus Hall - Madaba

The mosaic of the church of the Virgin Mary was the first mosaic floor of Madaba to become known to scholars in XIXth century.

The edifice is identified by the inscriptions. The main pavement is a re-making of a previous mosaic floor which had been laid at the time of the construction of the church. The later mosaic was constructed during the Umayyad period when the church was restored.

Archaeological research conducted in recent years shows that the church of the Virgin was built above the hall of a Madaba mansion, decorated with lavish mosaics, built in the first half of VIth century.

The mosaic of the hall is inspired by the Greek tragedy Hippolytus and shows some of its major characters among which Phaedra and Hippolytus, Aphrodite and Adonis.

### Restoration activities

The restoration work in the church of the Virgin and in the Hippolytus Hall was chosen to teach trainees the use of ordinary maintenance methodology to preserve cultural heritage in general and mosaics in particular and to enhance the importance of this concept to stop the process of degradation, safeguarding cultural heritage through simple and minimum intervention.



Staff and trainees worked over previous documentation concerning the site and carried out the following intervention:

- Collection of already existing historical, graphic and photographic documentation and past restoration reports.
- Studies and analyses over the state of conservation, recording it over already existing graphic documentation. This phase is considered a fundamental part of the training and allows the trainees to understand the importance of documentation in the restoration process.

As result of the process of studies and analyses over the state of conservation, what emerges is that the mosaics were suffering from:

- lacunae, some of which filled by cement during previous intervention. The lacunae had their borders consolidated by cement and were big in dimension in the southern part of the mosaic.
- detachment of the mosaic from its original bed, especially around the borders of the mosaic.
- loose tesserae
- presence of delamination in the north-west part of the mosaic
- limited swelling along the borders, in the western part of the mosaic
- cracks of medium and small size, spread all over the surface
- crumbling tesserae were spread all over the surface
- fracturing tesserae were spread all over the surface

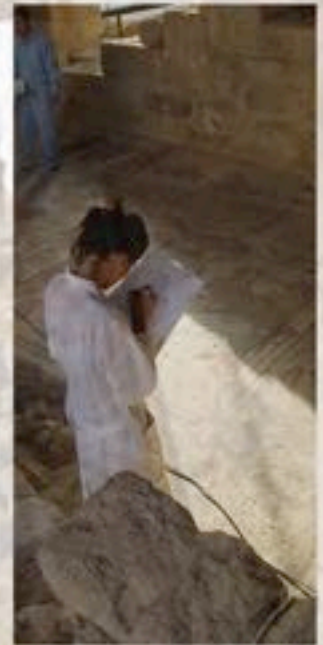


- Intervention of maintenance over the mosaic, carrying out the following:

- a. removal of incompatible material (cement)
- b. consolidation and fixing of mosaic borders by setting of strips made by compatible material
- c. consolidation and fixing of loose tesserae
- d. consolidation by injection
- e. cleaning of the entire surface and removal of dust deposit
- f. consolidation of the mosaic bed, into the lacunae
- g. consolidation of the walls of the original structure, especially in the southern and northern parts, by injection to consolidate original plaster and mortar and by strip mortar

- A map of the intervention has been prepared by trainees. They also wrote reports with their recommendations over ordinary maintenance and future interventions. This phase has been of special interest because trainees are part of the staff who takes care daily of cultural heritage in their own countries.

Restoration work in the church of the Virgin and Hippolytus Hall was carried out by three trainees under the supervision of expert Franco Sciorilli, during the month of August 2003.





## Restoration of the mosaics of the church of Saint George, Khirbet al-Mukhayyat, Jordan

The restoration of the mosaics of Saint George was the first activity carried out as part of the joint training courses organised by the Madaba School of Mosaic of the Jordan Department of Antiquities and the Jericho Workshop for Mosaic Restoration. Works started in 2000 and continued during the whole experience of training.

The 6th century A.D. church of Saint George, situated in the highest point of the acropolis at Khirbet al-Mukhayyat, was discovered and excavated in 1935 by Brother Mihaic and published in 1949 by Father B. Bagatti and S. Saller of the Studium Biblicum Franciscanum. Its mosaic floor, one of the oldest in Madaba region, is characterized by the rich composition of motifs borrowed from the classical repertory: the hunting and agricultural scenes, the personification of the Earth and Seasons, the foliated mask, the portrait of the benefactor.

Due to the severe state of degradation of the mosaic floor - more than 40% of the original mosaic had already been destroyed - in 1977, the archaeological expedition directed by Father Michele Piccirillo removed the mosaic from its original location to prevent further damage, and relaid it on a reinforced concrete bed.



The mosaic was in extreme need of restoration. Bibliographical research was conducted over the site, the mosaic and its state of conservation was documented.

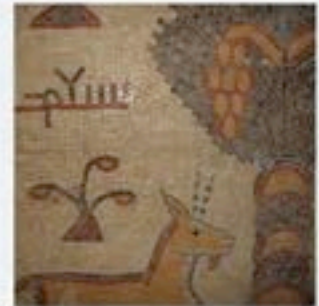
The restoration work was carried out in four phases, and it is still on. Various panels of the central nave of the mosaic floor, including the surrounding meander, were recovered from storage, washed, mapped and removed from cement bed. Then panels were relaid on aluminum supports of Aerolam.

Part of the restoration work was conducted in the laboratory of the Madaba School, to fix all the panels into the original position. The original design was drawn over plastic sheet following old photographic materials.

Then the restored panels were positioned over it. The void spaces among them were closed by compatible material and lost areas of the design were drawn by watercolors.

The project is mainly a training course for expert in mosaic restoration. Trainees from Jordan and Palestine participated to the project in the first and second phase. In the third year they were joined by trainees coming from Lebanon and Syria.

For this reason the course took the name of Bilad Al Sham project.



In the summer of 2003, thanks to the support of the Jordanian Department of Antiquities and the Syrian Department of Antiquities, the group of trainees were confirmed. Also two trainees from Iraq joined the group.

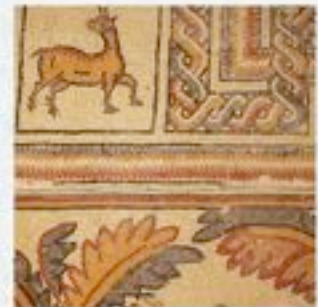
During this last phase a special attention was put on the mosaic of the apse of the church, which were stored, over a concrete bed, into the Memorial of Moses on Mount Nebo.

The old cement support was removed and mosaics were restored and relaid over a new compatible bed.

All the four phases of the intervention has been carefully conducted by the trainees, which gained experience year after year. Mosaics were restored under the supervision of experts, following a methodology which respected the integrity of the mosaic and its history.

Only reversible materials and techniques have been used, the entire process of intervention is identifiable and has been documented.

Due to the difficulties in the repositioning of the different pieces in their original place, the project is now working also in the original site from where mosaics were detached in 1977. We are documenting the church of Saint George and studying a future collocation as permanent exhibition for its mosaics.







## Mosaics from a tomb in Aphamea

The mosaics were discovered in a tomb, 500 meters out from the walls of Aphamea, in 1997.

The tomb was divided into three rooms: the first room was paved by a 2,15 x 2,47 m. white mosaic with a circle in the middle. The second room had a 4,00 x 2,40 m. decorated mosaic with three faces in the middle, each 68 x 85 cm. The first face was bordered by fishes and other sea animals. It represents the Water that encircles the earth. The second face represents a woman crowned by fruits and leaves. Under it, a Greek inscription identifies it as Earth. The third face is also crowned and it is in front of a circle. A greek inscription identifies it as Time. The third room was decorated just on the walls.

The mosaics probably date to the IV/Vth century A.D.

Partly stolen and rescued by the authorities, the mosaics were in a very poor condition. They had been stored in Damascus, in the Department of Antiquities, in less than ideal condition.

To start the conservation activities of the training course, the mosaics were transported from Damascus to the Shahba Museum.

For the trainees it was a very good opportunity to work on mosaics in such condition. They could work on mosaics, which have been detached from their original bed and not re-laid over a solid layer.



In fact the Syrian Department of Antiquities, worried for the safety of the mosaics after some parts were stolen, had proceeded to the detachment, gluing a cotton sheet over the mosaics and then enrolling them.

The bad condition of the mosaics influenced the work plan of the training course and special attention was given to save the tesserae which were detached during storage.

The conservation work carried out during the course was as follows:

1. The rolls were opened and the various pieces of mosaics were photographed to document their state of conservation.
2. Lot of tesserae were no longer glued over the cotton sheet. All the detached tesserae were collected, stored into plastic bags and catalogued following the area of origin.
3. The glue which was used for the detachment was very strong and it was not enough to clean the mosaics with water. To take out all the remains of glue and cotton, trainees had to use chemical products left over the mosaics for ten minutes and then washed by water or ammonium carbonate AB57 diluted by EDTA salts, left over the mosaics for ten minutes and then washed several time with water, to clean all the salts. Then trainees had to clean the surface carefully by water and brush or by chisel.

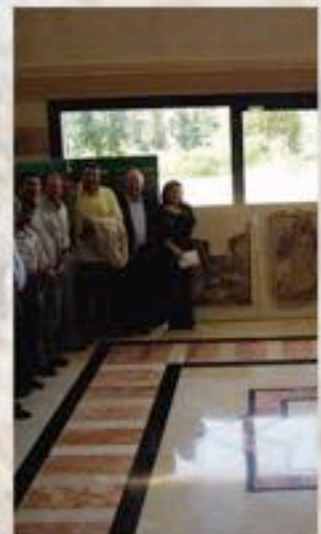


4. The mosaics were cleaned from the remains of mortar and sand.
5. Loose tesserae were consolidated.
6. Then mosaics were cut into sections and numbered. The mosaic of the first room was divided into seven sections, while the mosaic of the second room, the one decorated with the three faces, was divided into eleven sections to which two sections were added, the ones concerning the stolen pieces.
7. Panels of Aerolam were prepared to host the different pieces of mosaics. The mosaics were laid over a layer of mortar made up by materials compatible to conservation.

These actions were carried out over the mosaics representing the three faces. In a second phase we hope to integrate them with the original recovered tesserae. All the other pieces of mosaics were laid over Aerolam panels so as to be preserved safely in storage, waiting for a future intervention. They were stored in the Sweida museum.

The conservation activity was carried out during the month of September 2003. All the trainees took part in all the phases of conservation.

The restored mosaics were presented to the public during the 2003 Conference on Al Sasi and Hama and during the closing day of the training course held in Damascus.





## The Mosaics in Shahba

Shahba was the birthplace of the Roman emperor Philip the Arab (244-249 A.D.) who renamed his hometown Philippopolis. He embellished the town with fine public buildings such as temples, palaces, baths and theatres. At the same time the great families of the town built luxurious and richly decorated houses.

A Roman villa of 28 rooms, discovered in 1962, contains some of the finest mosaics found in Syria, which go back to the second quarter of 4th century AD.

To preserve them in situ, the Syrian DGAM decided to protect them with a permanent structure, and this now constitutes the museum.

### Documentation and restoration on in situ mosaics:

The mosaics represents unusual and extremely interesting subjects taken from Greek mythology.

### Tethys, goddess of the sea

Represented in the mosaic panel is Tethys, goddess of the sea, bride of Okeanos, characterized as usual by thick hair entwined with fishes, by its traditional little wings on the forehead where a starfish is resting, a dog-headed sea monster, symbol of ocean depths, around her neck and an oar against her shoulder.



### The Wedding of Ariadne and Dionysos

Ariadne and Dionysos with haloes are shown in the center of the picture, seated on a rock, side by side. Behind them, Eros unites the newly married couple. Herakles, seated on the earth, appears to be drunk. The grapes that decorate the border, filled by running animals, putti and faces, are an invitation to drink and are a perfect decoration for a banquet hall.



### Orpheus and the animals

Orpheus, seated on a rock in the center of the picture, towers over the animals which surround him. Dressed in oriental fashion the inspired poet plays the lyre while the animals seems to be under the spell of his music. At his back the beautiful peacock, the eagle and the gryphon.



During the training course the work on the mosaics of Shahba focused over the concept of ordinary maintenance, within the framework of the objectives of the project.

Trainees were divided into groups, and worked over the different mosaics, experiencing how ordinary maintenance should be carried out on *in situ* mosaics.

Over the three *in situ* mosaics inside the the Museum, they carried out a series of restoration activities.



1. Documentation of the mosaics through digital photos at scale.

2. Preparation of free hand sketches over the mosaics, to work over the state of conservation of mosaics, and conservation activities to carry out.

These first two phases were necessary not only for the present work but also for the future, especially because for these mosaics, no graphic documentation or high quality photographs were available in the past.

3. The state of conservation of the mosaics has been analyzed and reports of the trainees have underscored that all the mosaics had the same problems:

- lacunae filled by black or white cement
- areas which had suffered by fire
- depressions
- residues of lime and varnish, due to lack of attention during the painting and varnishing of the walls and the handrails that surround the mosaics
- detachment of the mosaic from its original bed
- missing tesserae
- black patina, light and dark concretions
- swellings





ΔΑΡΩΝ ΑΡΙΑΔΝΗ ΠΟΘΟΣ ΔΙΟΝΥΣΟΣ



ΑΡΙΑΔΝΗ

4. Due to time constraints, the intervention carried out focused on the following:

a. Mechanical and chemical cleaning.

Concretions were hardly attached to the mosaics. Various tests were carried out to check the results of mechanical and chemical interventions. The chemical cleaning, carried out by EDTA salts diluted in water, did not give relevant results. So we decided to limit the cleaning to the dirt of soft nature and to clean the mosaics by water.

b. Removal of lacunae

Lacunae which have been filled in the past by black or white cement were removed and the void were filled by new compatible mortar.

c. Consolidation work was carried out by injection.

5. All the actions of cleaning and consolidation have been documented over the sketches.

Works have been carried out during the month of September 2003 by all the trainees.





## Documentation and Restoration on detached mosaics:

The Roman villa, now turned into Shahba Museum, hosts also some detached mosaics, representing mythological themes:

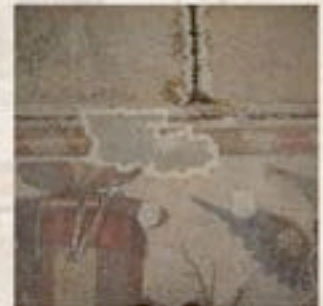
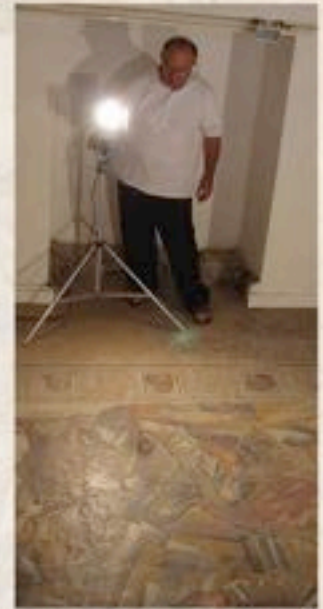
### Aphrodite and Ares

Behind Aphrodite is a young woman with her hair tied in a bun. The inscription informs us that she is *Charis* (Grace), and she is preparing to crown the goddess. Beside Ares, another female figure, soberly dressed with a rather severe face and a restrained hairstyle, symbolises *Decorum*. In the background, a female figure, labelled *Skope* in the inscription, leans nonchalantly on a rock observing the proceedings from afar. In the central foreground, putti quarrel over Ares weapons.

### The Three Graces

The Three Graces, in a ceremonial pose, are surrounded by panels decorated with human figures. The mosaic floor was discovered in an old house, elsewhere in Shahba, and transferred into a room of the Roman villa, whose floor was not decorated with mosaics.

Trainees, divided into groups, worked over these mosaics experiencing how to carry out documentation and studies of the state of conservation on detached mosaics.



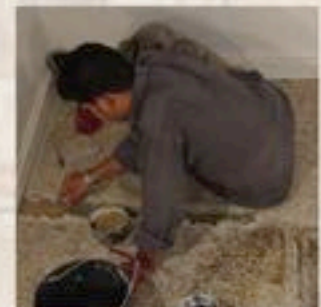
The following activities were carried out:

1. Documentation of the mosaics through digital photos at scale.
2. Preparation of free hand sketches over the mosaics, to work over the state of conservation of the mosaics, and conservation activities to carry out.

As for the *in situ* mosaics, these first two phases were necessary not only for the work of this year but also for the future because no graphic documentation or high quality photographs were available in the past.

3. Mosaics were detached in the past from their original site, divided into sections following their dimensions and then re-laid over a cement support. Their state of conservation has been analyzed and reports of the trainees have underlined that, comparing with *in situ* mosaics, they were suffering from different problems, among which:

- lacunae caused by detachment and re-laying were filled by black or white cement
- various cracks over the entire surface of the mosaics, caused by errors in the re-laying over cement support
- many tesserae were missing, due to the detachment, and many were fractured
- black patina, light and dark concretions concentrated in the external frame.
- residues of lime and varnish, due to lack of attention during the painting and varnishing of the walls and the handrails that surround the mosaics



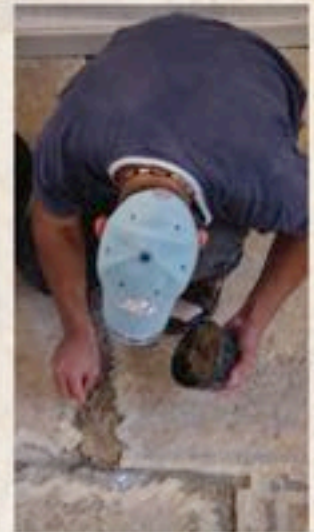
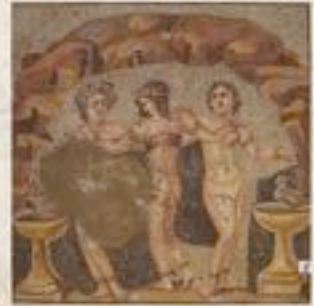
4. Due to the shortage of time, the intervention carried out focused over the following:

- a. Mechanical cleaning over all the surface of mosaics by plastic brushes, sponges and water.
- b. Lacunae which have been filled in the past by black or white cement were removed and the void were filled by new compatible mortar.
- c. Consolidation work was carried out around the borders of the lacunae by compatible mortar strips.

5. All the actions of cleaning and consolidation have been documented over the sketches.

In final reports, trainees recommended that the cement supports of the mosaics should be removed and mosaics re-laid over a compatible support, like we did during the training course for the mosaics from Aphamea.

Works over mosaics in Shahba Museum have been carried out during the month of September 2003 by all the trainees.





The training course was planned and organized among the different parties as a common project. Involved staff met several times in Jordan and Syria before the starting of the project, to organize the restoration yards and to check the conditions of local mosaics to restore. The decisional process was shared and all the decision agreed.

The training course lasted two months, following a time schedule of eight hours daily for five days, for a total of 320 hours.

The methodology of the conservation activity was based over the transfer of knowledge concerning documentation methods (graphic, photographic and written records) over the state of conservation of the mosaics. A clear documentation was realized for the intervention activities, monitoring and maintenance.

The intervention of restoration was based over principles of reversibility, using material that was compatible with the original material and the environment of the mosaics, trying not to modify their original aspect and their history. All the phases of the intervention were documented.

At the end of the restoration, all the information concerning the state of conservation of the mosaics and the intervention carried out were collected and computerized. All the computerized data, the digital photos and reliefs, were put in common among parties involved.

The project Bilad Al Sham is part of a process, which aims to safeguard common cultural heritage through local human resources, raising their awareness about the problems and improving their skill to face them.

