Getty

ICCROM

ICCM
International Committee
for the Conservation of Mosaics

Institut national du patrimoine

المملكة المغربية
وزارة الثقافة
Royaume du Maroc
Ministère de la Culture

وزارة الثقافة
Ministry of Culture
المديرية العامة للآثار – لبنان
Directorate General of Antiquities

MOSAIKON
Getty Conservation Institute Getty Foundation ICCM ICCROM

TECHNICIAN TRAINING FOR THE CONSERVATION OF MOSAICS

PART 1
THE CONSERVATION OF IN SITU MOSAICS

Water drainage interventions

Livia Alberti, Ermanno Carbonara, Thomas Roby

Main Cause of Water Pooling

Atmospheric precipitation: rain, snow, etc.

in relation to mosaic surface depressions and
lack of shelter.

Mechanisms and deterioration phenomena linked to water pooling

Salt crystallization due to wetting/drying cycles

Efflorescences/incrustations

Damaged tesserae and mortar

Thermal and hydric contraction/dilatation cycles

Detachments/Bulges

Cracks/Lacunae

Mechanical stress due to freeze/thaw cycles

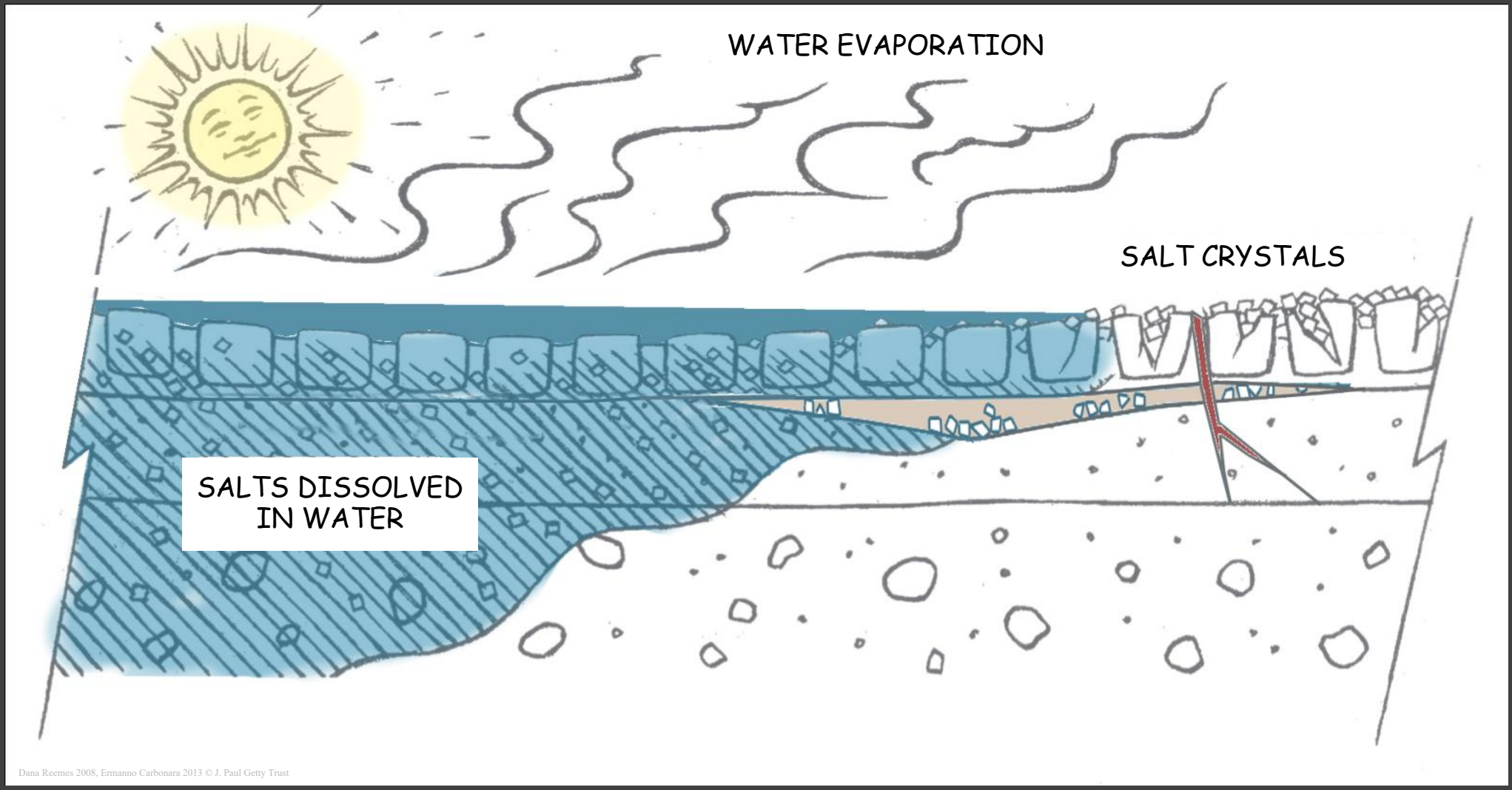
Damaged tesserae and mortar

Mechanical stress due to vegetation growth

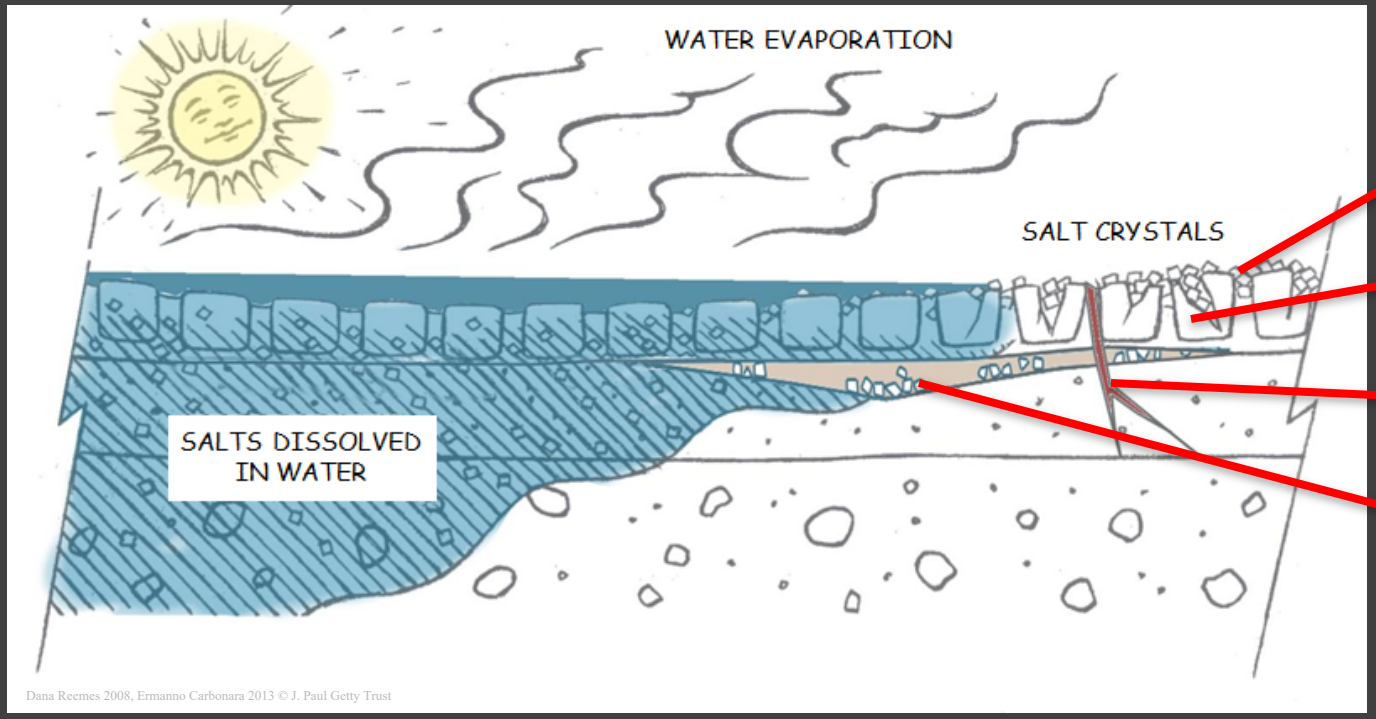
Detachments/Bulges

Cracks/Lacunae

Deterioration linked to water pooling



Deterioration phenomena linked to water pooling

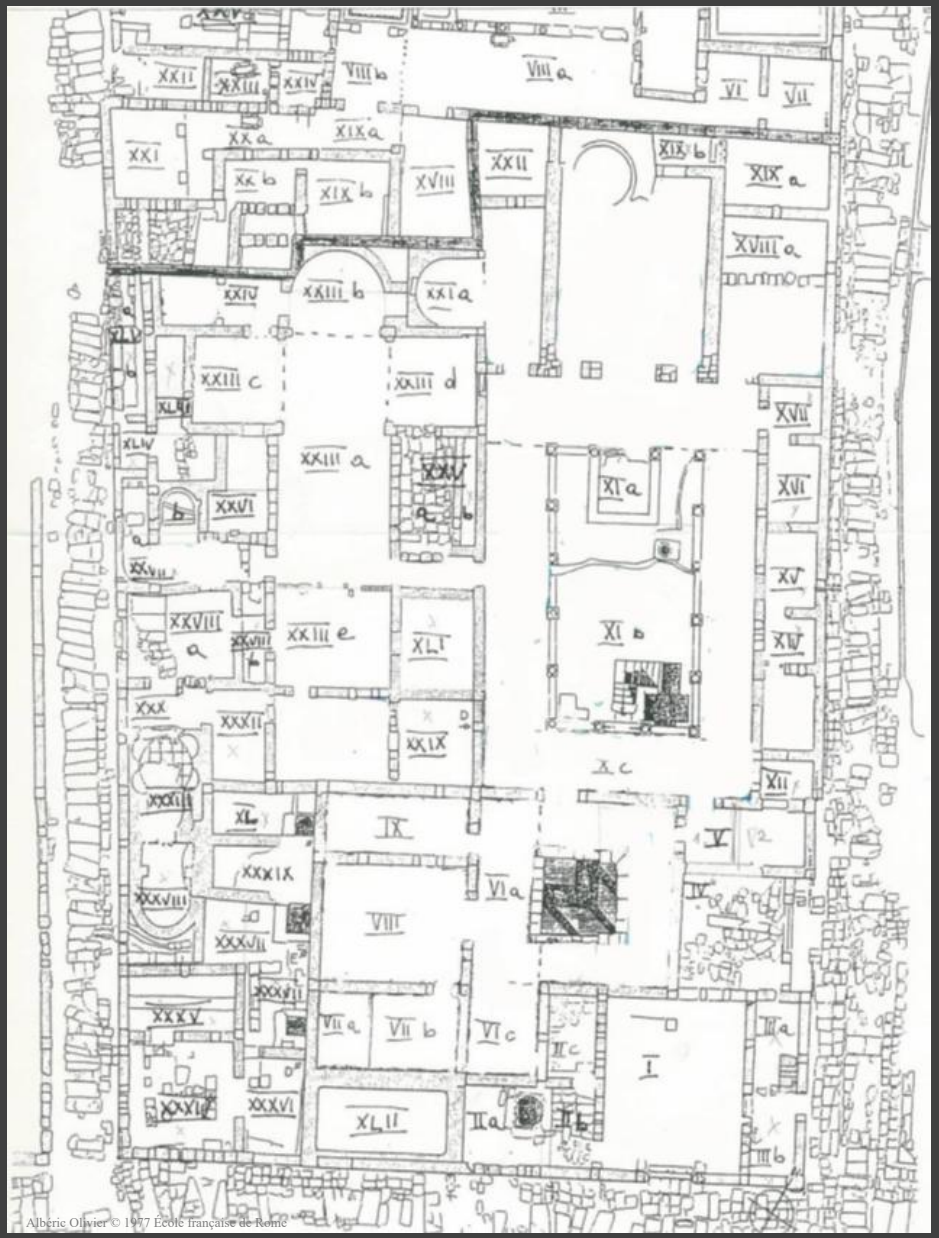


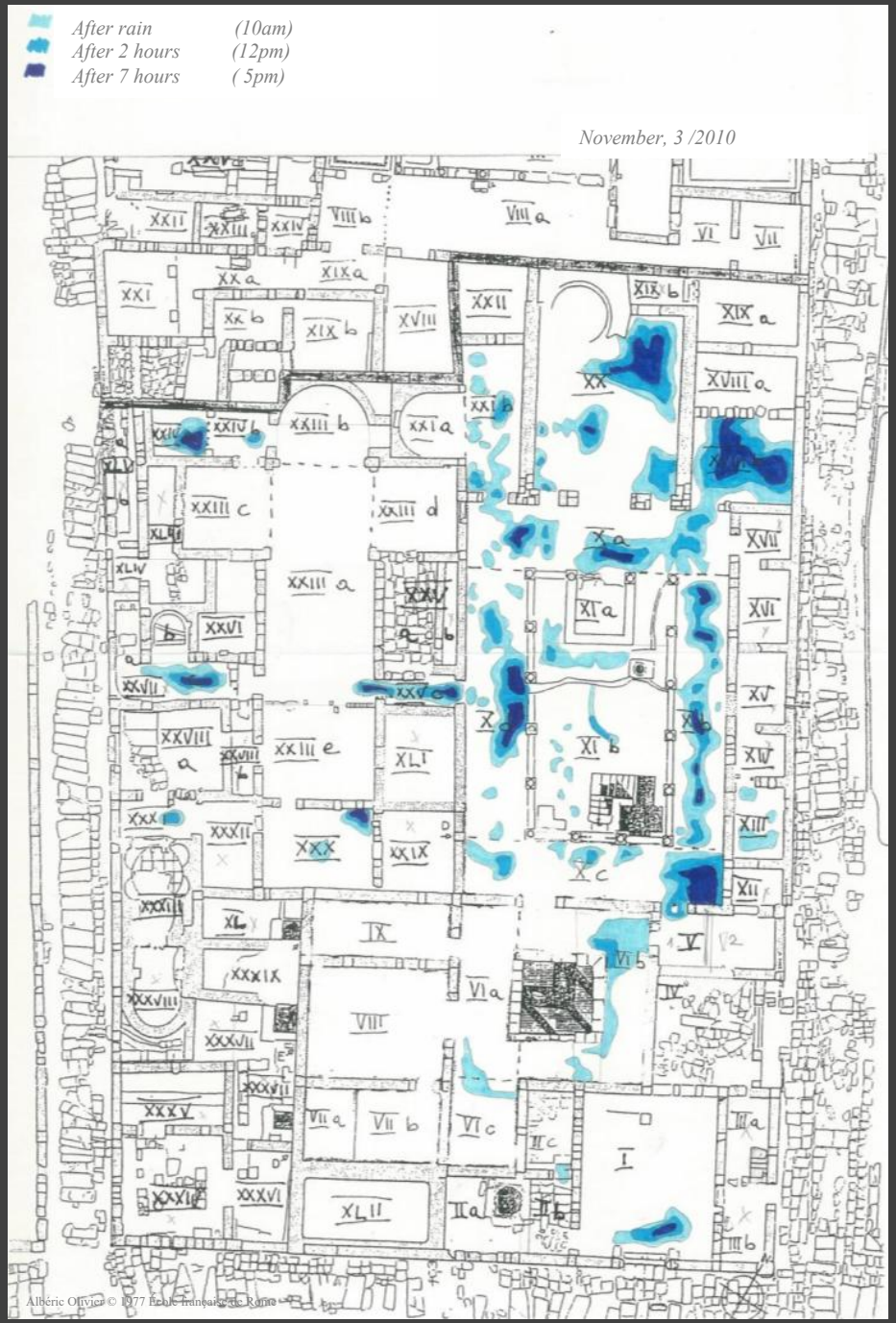
- Efflorescences/incrustations
- Damaged tesserae
- Cracks/lacunae
- Detachments

Water pooling on site

Documentation of water pooling

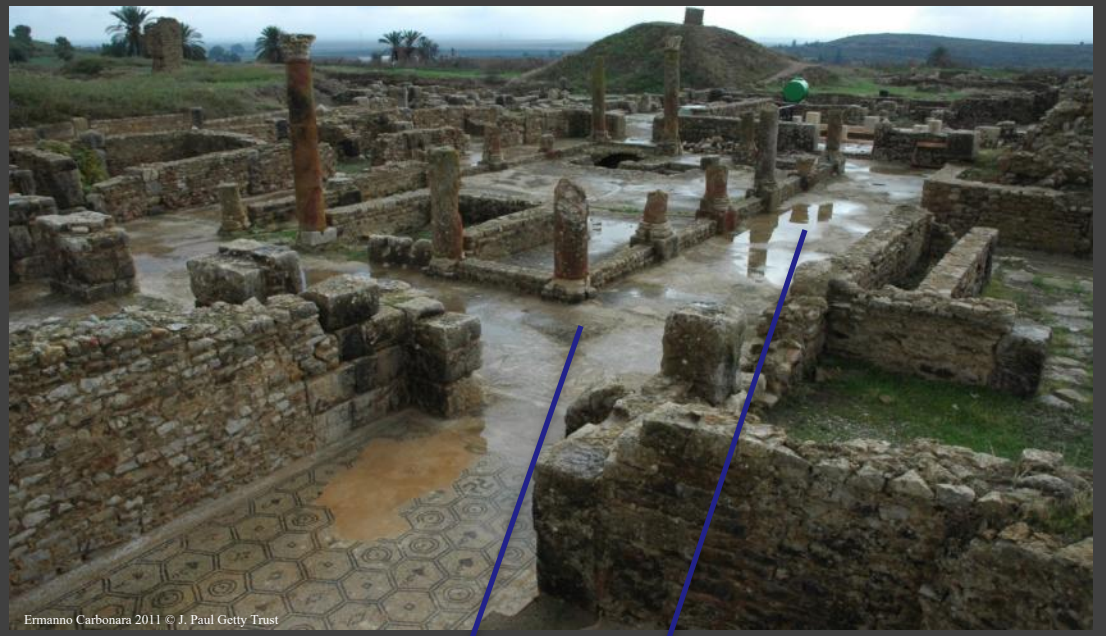
Water pooling map



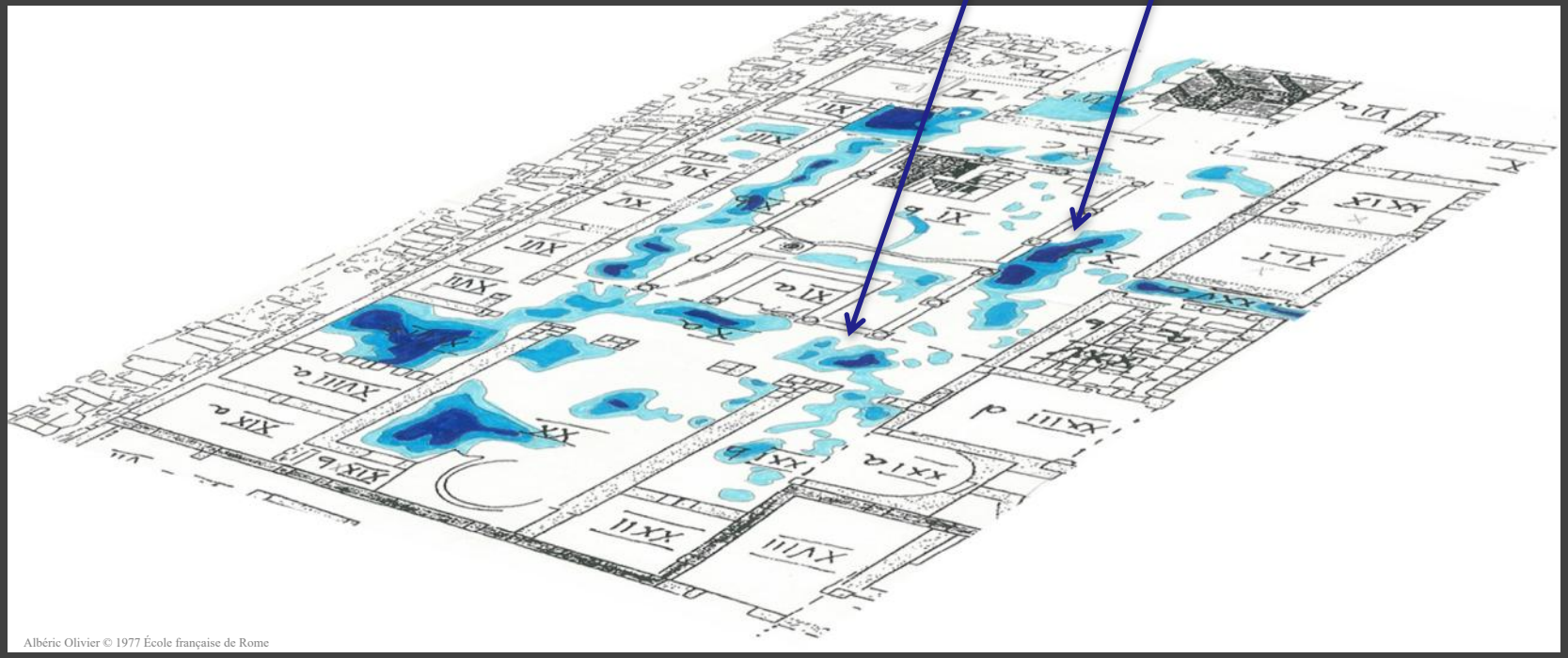


Maison de la Chasse, Bulla Regia, Tunisia

Water pooling map



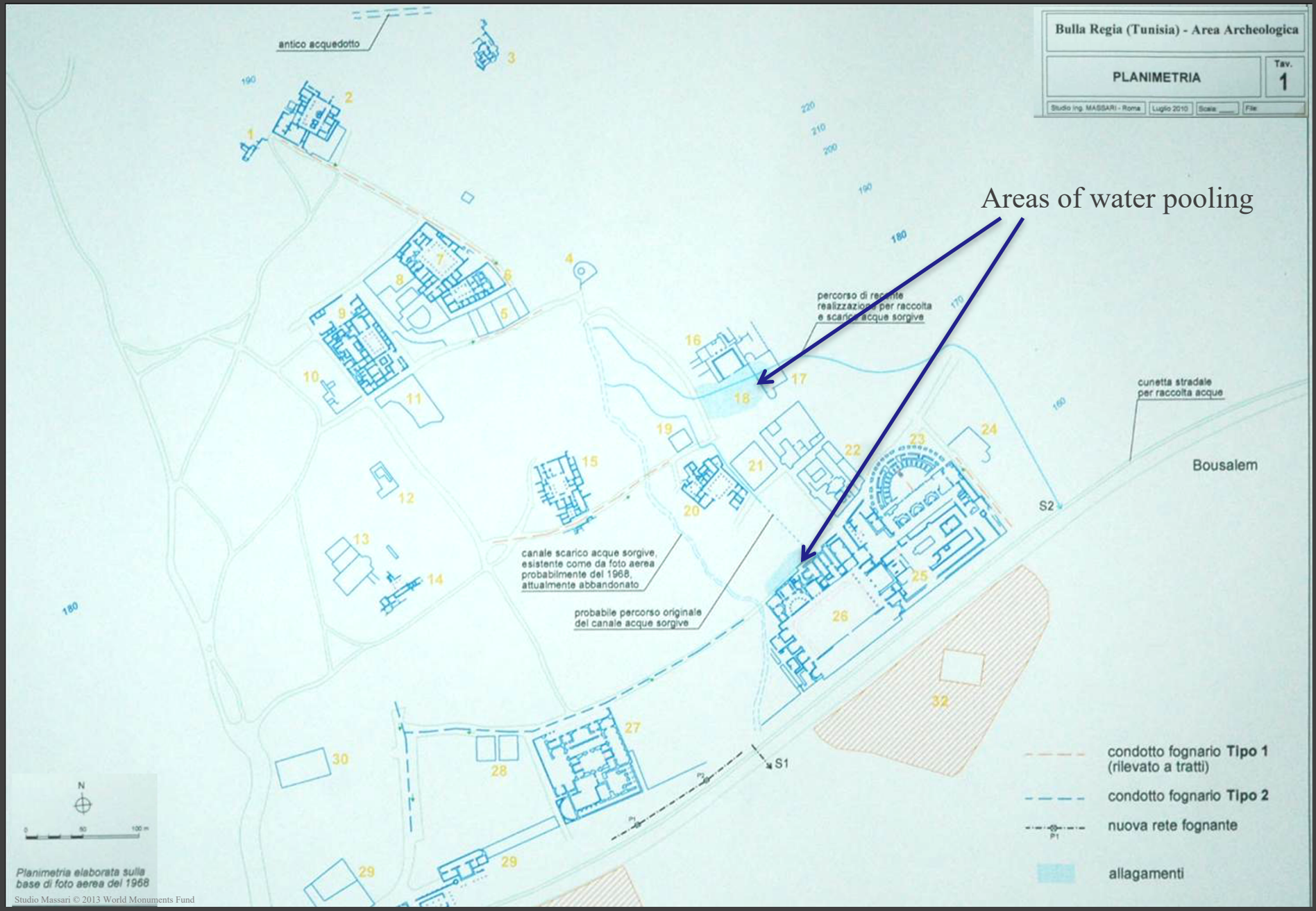
Ermanno Carbonara 2011 © J. Paul Getty Trust



Albéric Olivier © 1977 École française de Rome

Site map with areas of water pooling

Bulla Regia, Tunisia



Types of interventions

Prevention/Protection

Temporary or long-term shelter
Open or closed shelter

Water drainage systems

Drainage pit
Water channel
Re-use of ancient drainage system

Maintenance

Manual removal of water

Prevention/Protection

Long-term open shelter

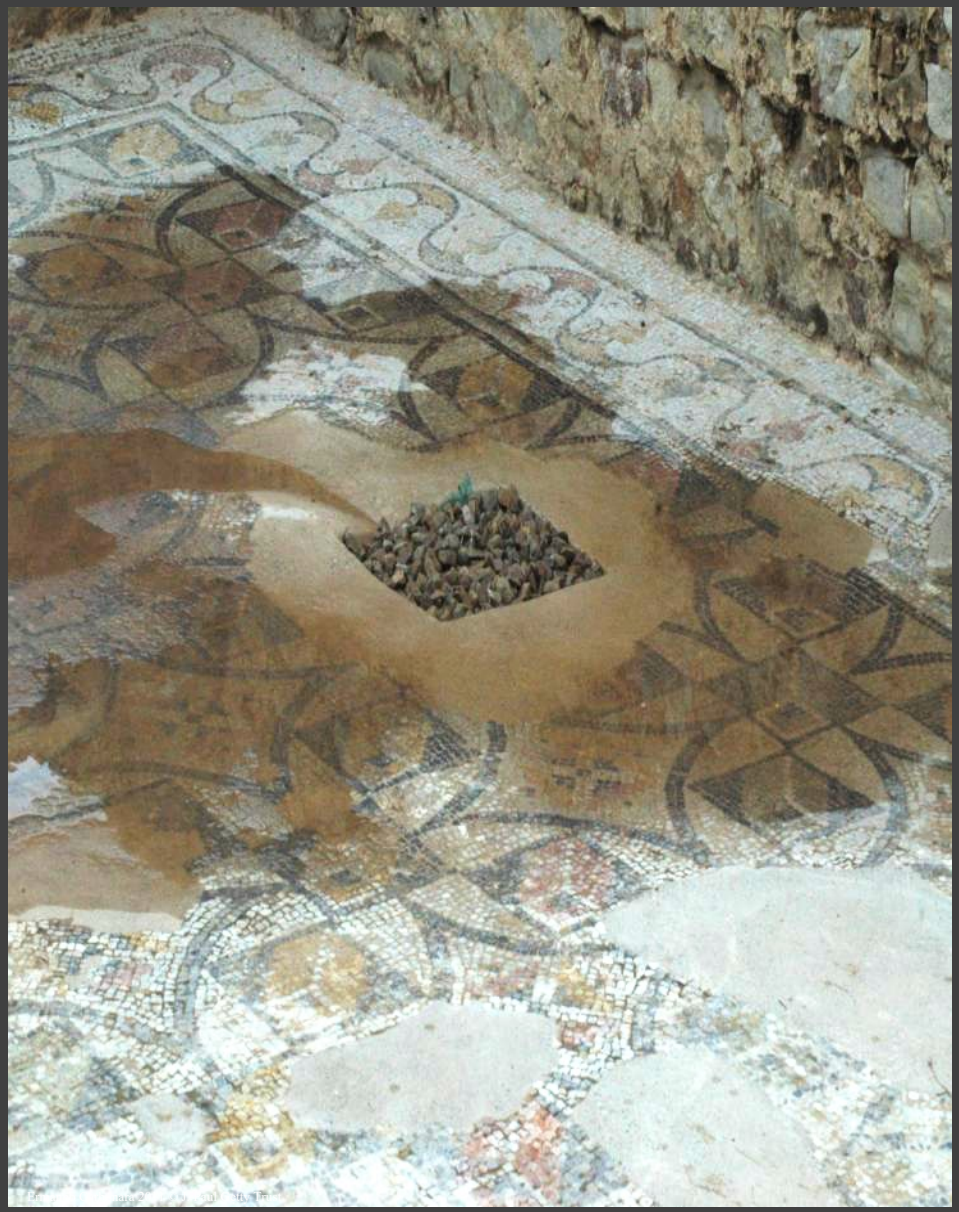
Rain water chain

Prevention/Protection

Temporary shelter

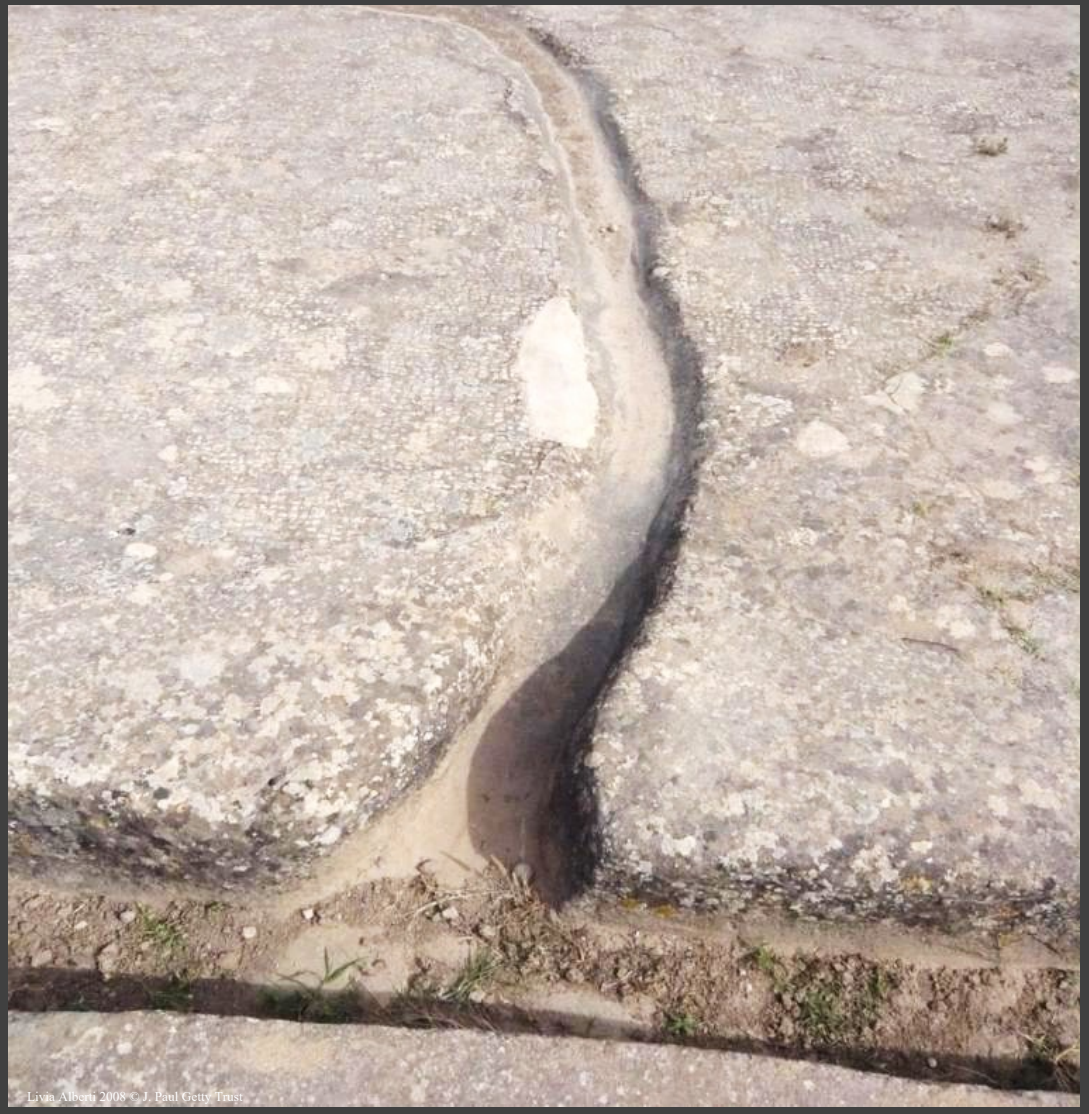
Water drainage systems

Drainage pit



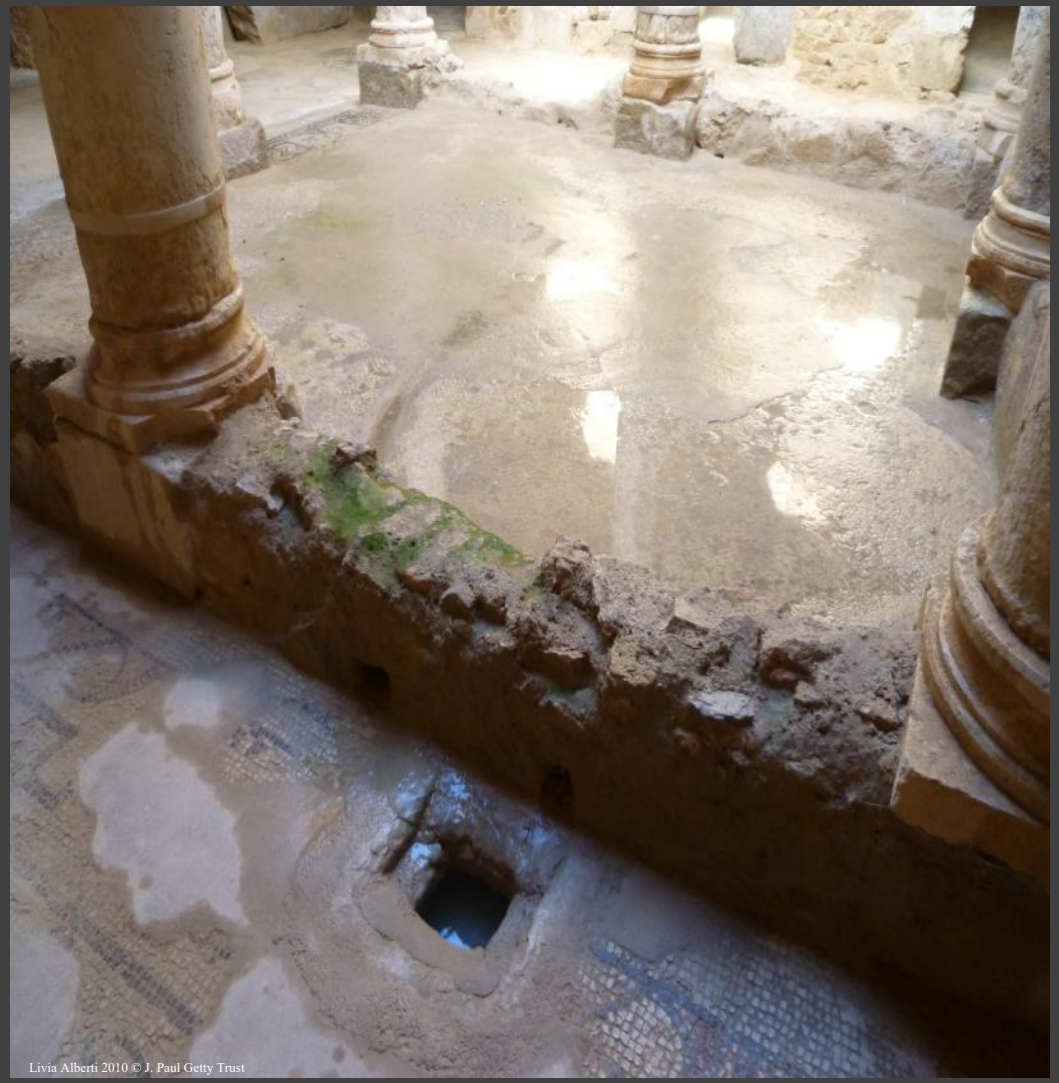
Water drainage systems

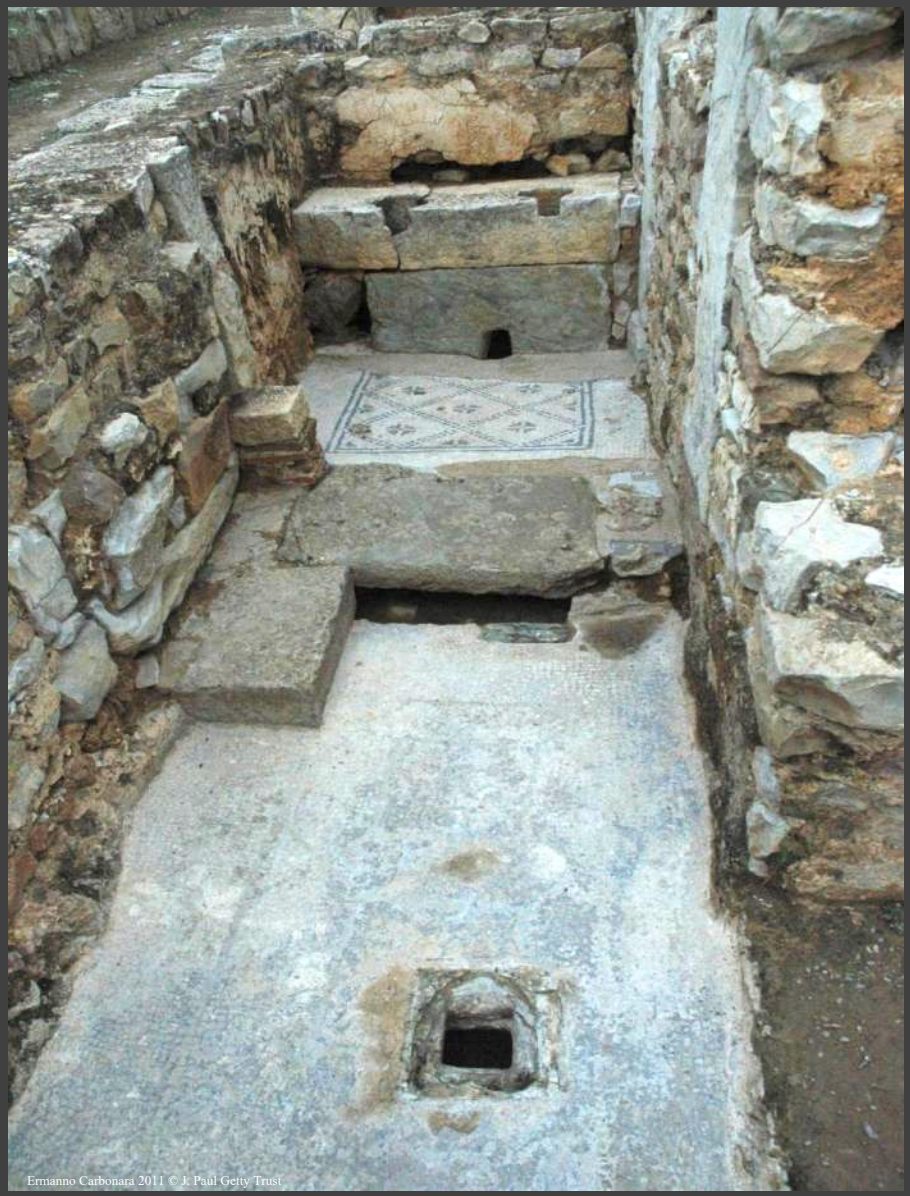
Water channel



Water drainage systems

Re-use of ancient drainage





Maintenance

Manual removal of rain water

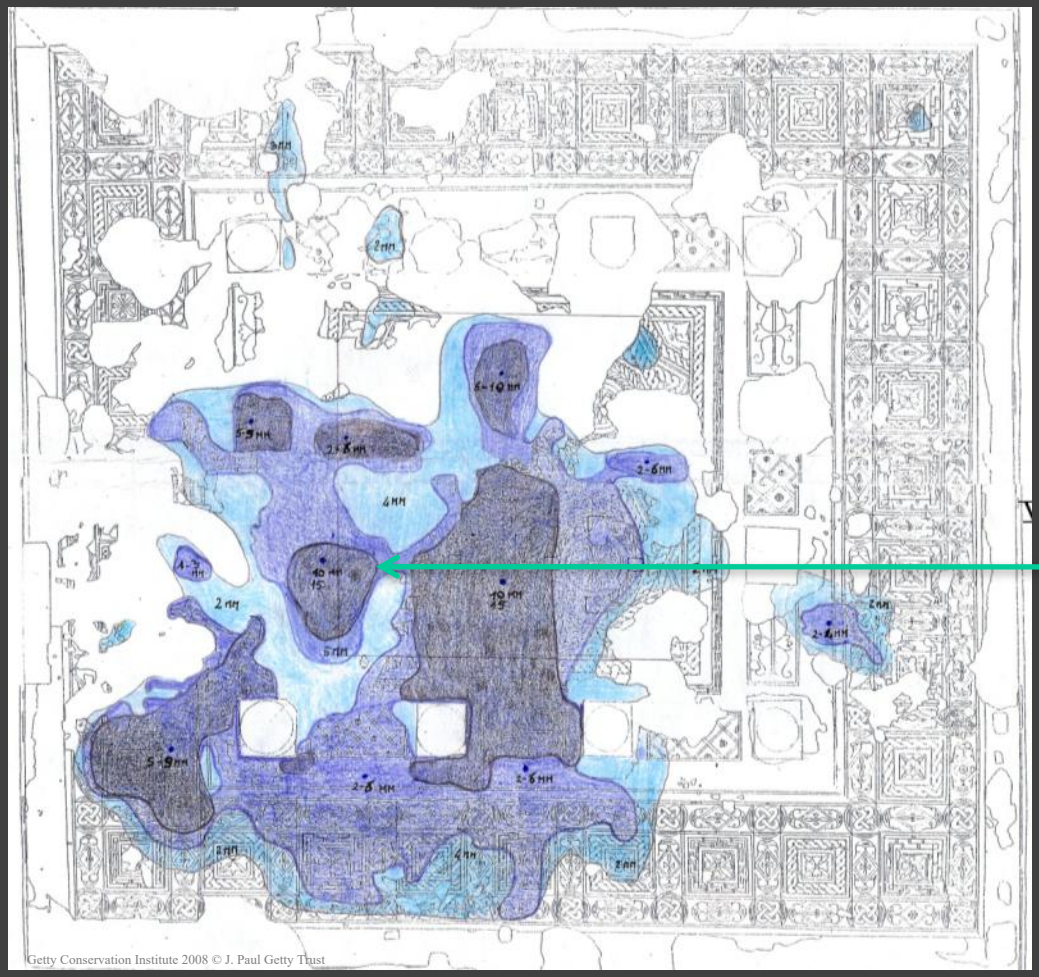
Livia Alberti 2006 © J. Paul Getty Trust

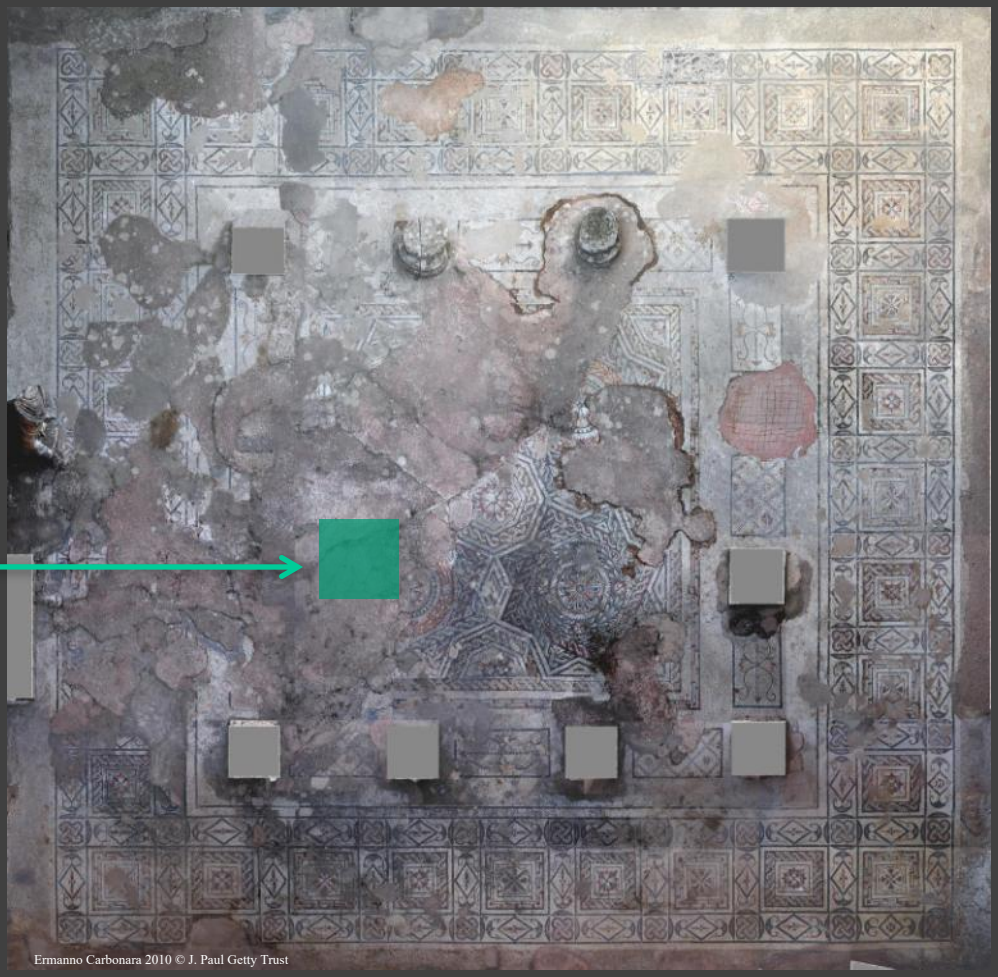

Livia Alberti 2011 © J. Paul Getty Trust

Example of water drainage pit

Baths of Caracalla, Dougga, Tunisia

Water pooling map





Excavation of the pit

Infilling of lacuna with slope toward the drainage pit

Filling the pit with drainage materials

1 – large stones

2 – separation membrane

3 – gravel

Completed drainage pit

Intervention documentation

1 – large stones

2 – separation membrane

3 – gravel

DATA FORM NO. 5 - CURRENT INTERVENTIONS

INTERVENTION PHASE

MOSAIC ID _____ /_____ /_____ /_____

INTERVENTION TYPE ❑ Initial intervention ❑ Maintenance cycle

DATE OF PREVIOUS INTERVENTION

DATE OF PREVIOUS INSPECTION

DATE AND LENGTH OF CURRENT WORK

DATE RECOMMENDED FOR THE NEXT INSPECTION

TREATMENTS CARRIED OUT ON THE MOSAIC

❑ Vegetation removal
❑ Cleaning of the entire surface
❑ Cleaning of part of the surface
❑ Removal of modern repair mortars
❑ Resetting tesserae
❑ Filling interstices between tesserae
❑ Grouting voids between preparatory layers
❑ Infilling lacunae and/or edging repairs
❑ Removal and resetting tesserae with facing
❑ Removal of metal reinforcements in support panels
❑ Treatment of metal reinforcements in support panels
✖ Drainage *Drainage pit layers : 1-large stones; 2-separation membrane; 3-gravel*
❑ Reburial *(Draw a vertical section of the reburial: describe the fill materials and separation membranes used, provide the total thickness and the thickness of each layer)*

INTERVENTIONS CARRIED OUT AROUND THE MOSAIC

❑ Wall stabilization
Notes:

❑ Other: _____
Notes:

NAMES OF THE TECHNICIANS WHO CARRIED OUT THE WORK

PREPARED BY **DATE**

Getty

ICCROM

ICCM
International Committee for the Conservation of Mosaics

Institut national du patrimoine

ⵜⴰⴳⵍⴷⵉⵜ ⵏ ⵍⵎⵖⵔⵉⴱ
ⵜⴰⵎⴰⵡⴰⵙⵜ ⵏ ⵜⵙⴷⵓⵔⵉⵏ
المملكة المغربية
وزارة الثقافة
Royaume du Maroc
Ministère de la Culture

وزارة الثقافة
Ministry of Culture
المديرية العامة للآثار – لبنان
Directorate General of Antiquities

MOSAIKON
Getty Conservation Institute Getty Foundation ICCM ICCROM

MOSAIKON is a partnership of four institutions: the Getty Conservation Institute, the Getty Foundation, ICCROM, and ICCM. The aims of the project are to strengthen the network of professionals concerned with the conservation, restoration, maintenance, and management of mosaic heritage in the southern and eastern Mediterranean region; provide training to a variety of individuals involved in mosaics conservation and, more generally, with the management of archaeological sites and museums with mosaics; work with national and international bodies to provide a more favorable legislative, regulatory, and economic environment for the conservation of mosaics in the Mediterranean; and promote the dissemination and exchange of information.