The education of Conservation Scientists: the EPISCON project – European PhD in Science for Conservation

Rocco Mazzeo
University of Bologna, Microchemistry and Microscopy Art Diagnostic Laboratory (M2ADL), Via Guaccimanni, 42 48100 Ravenna (Italy), rocco.mazzeo@unibo.it

MARIE CURIE ACTIONS

EPISCON

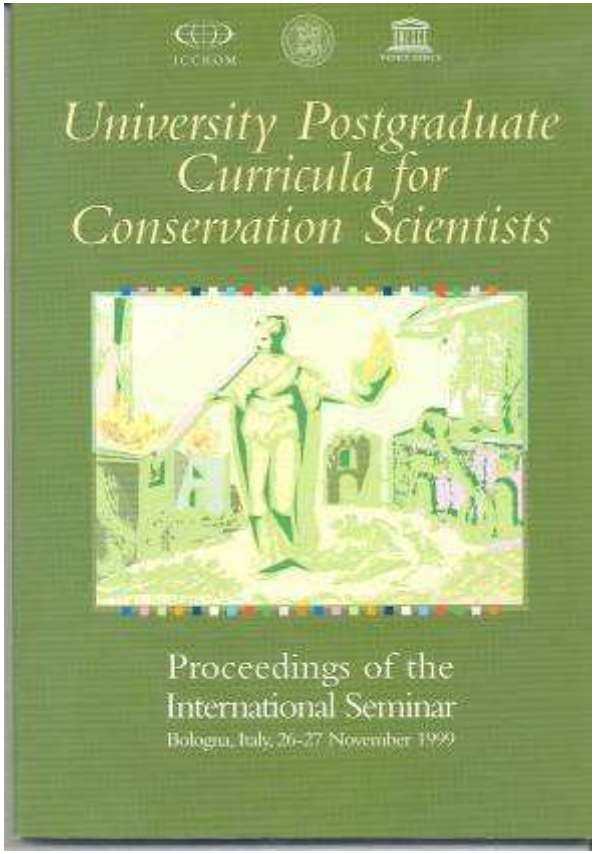
European Ph.D. in Science for Conservation

The long way to EPISCON
1999 - 2005

International Seminar University Postgraduate Curricula for Conservation Scientists,

Bologna, November 1999

("*Bologna document*")



A scientist with a degree in one of the natural, physical and/or applied scientific disciplines and with further knowledge in conservation (ethics, history, cultural values, historical technologies, past and present conservation technologies and practice, specific scientific aspects, etc.) which enables him/her to contribute to the study and conservation of cultural heritage within an interdisciplinary team

The long way to EPISCON
1999 - 2005

2001 – 2003

The CURRIC project (EU-Leonardo funded)

Development of a curriculum for conservation scientists at a European level

2003 – 2005

The UNiCons project (EU-ALFA funded)

Development of a curriculum for conservation scientists at a LA level

The long way to EPISCON
1999 - 2005

From curriculum development to curriculum implementation

- **Seeking for funds for the implementation of a PhD in Science for Conservation**

2005 - 2009

The EU-Marie Curie funded EPISCON project

Implemented by a partnership of:

UNIVERSITY SCIENCE DEPARTMENTS

- **UNIVERSITY OF BOLOGNA (I)**
- **UNIVERSITY OF PERUGIA (I)**
- **UNIVERSITY OF OVIEDO (ES)**
- **UNIVERSITY OF THESSALONIKI (GR)**
- **UNIVERSITY OF IASI (RO)**
- **ELTE UNIVERSITY OF BUDAPEST (HU)**

CONSERVATION INSTITUTIONS

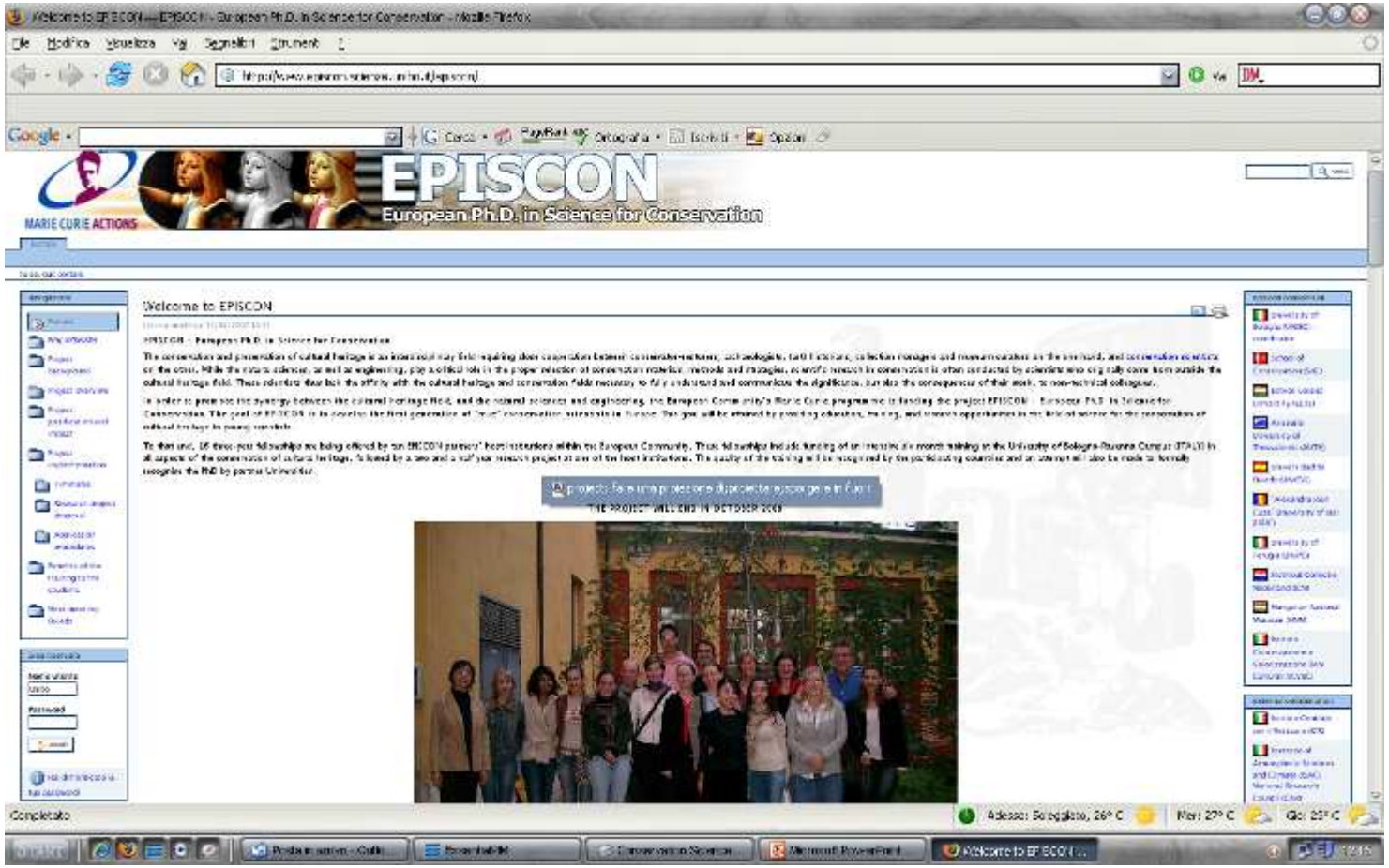
- **INSTITUUT COLLECTIE NEDERLAND (NL)**
- **SCHOOL OF CONSERVATION (DK)**
- **HUNGARIAN NATIONAL MUSEUM (HU)**
- **ISTITUTO CONSERVAZIONE E VALORIZZAZIONE BENI CULTURALI (I)**

MARIE CURIE ACTIONS

EPISCON

European Ph.D. in Science for Conservation

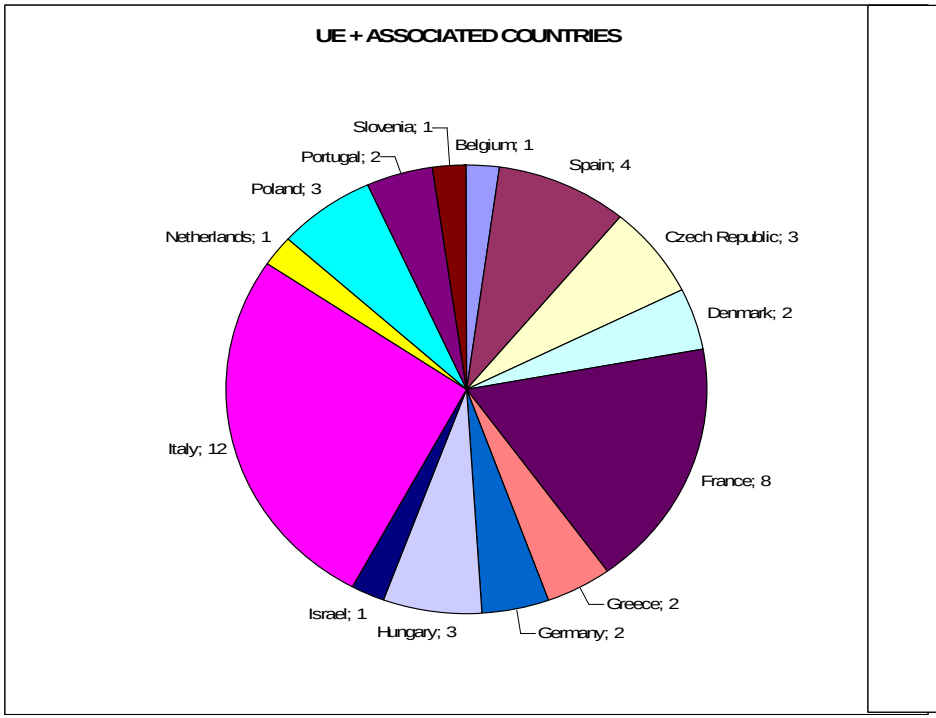
www.episcon.scienze.unibo.it



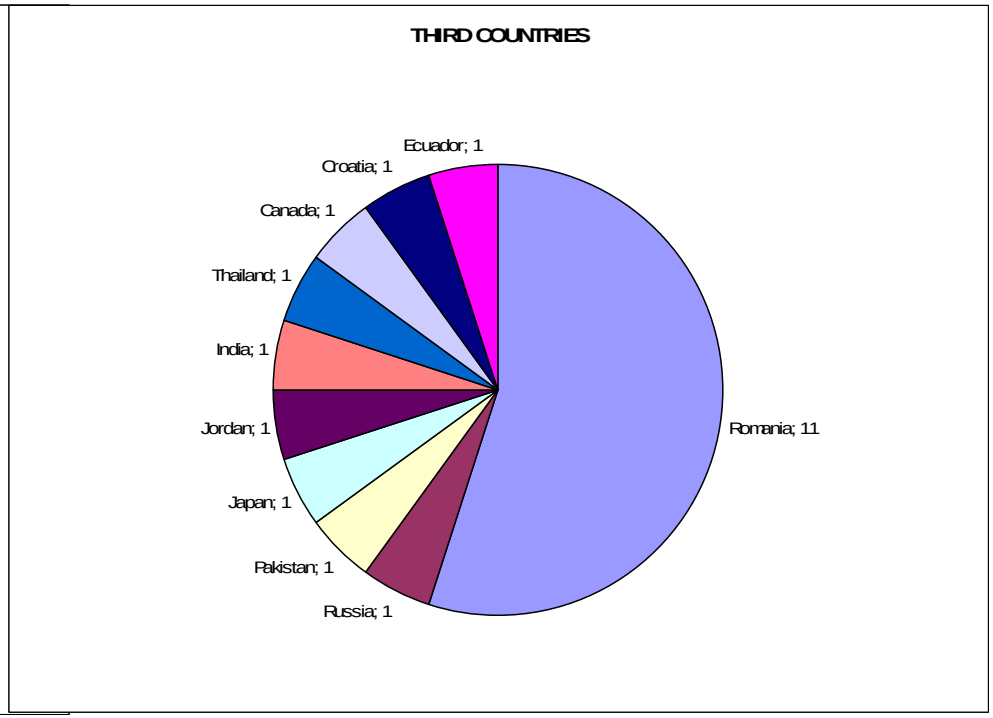
N.OF PARTNERS	**10**
COUNTRIES REPRESENTED	**7**
TYPE OF PARTNERSHIP	**6 Universities + 4 Conservation Institutions**
PROJECT DURATION	**4 YEARS (2005-2009)**
PhD DURATION	**SEPTEMBER 2006 – NOVEMBER 2009**
BUDGET	**2.600.000 €**
N. MARIE CURIE FELLOWSHIPS	**16**

Applications (65) received from EU and associated countries

FROM 14 EUROPEAN COUNTRIES



FROM 10 THIRD COUNTRIES



A TOTAL OF 24 COUNTRIES REPRESENTED

MARIE CURIE ACTIONS

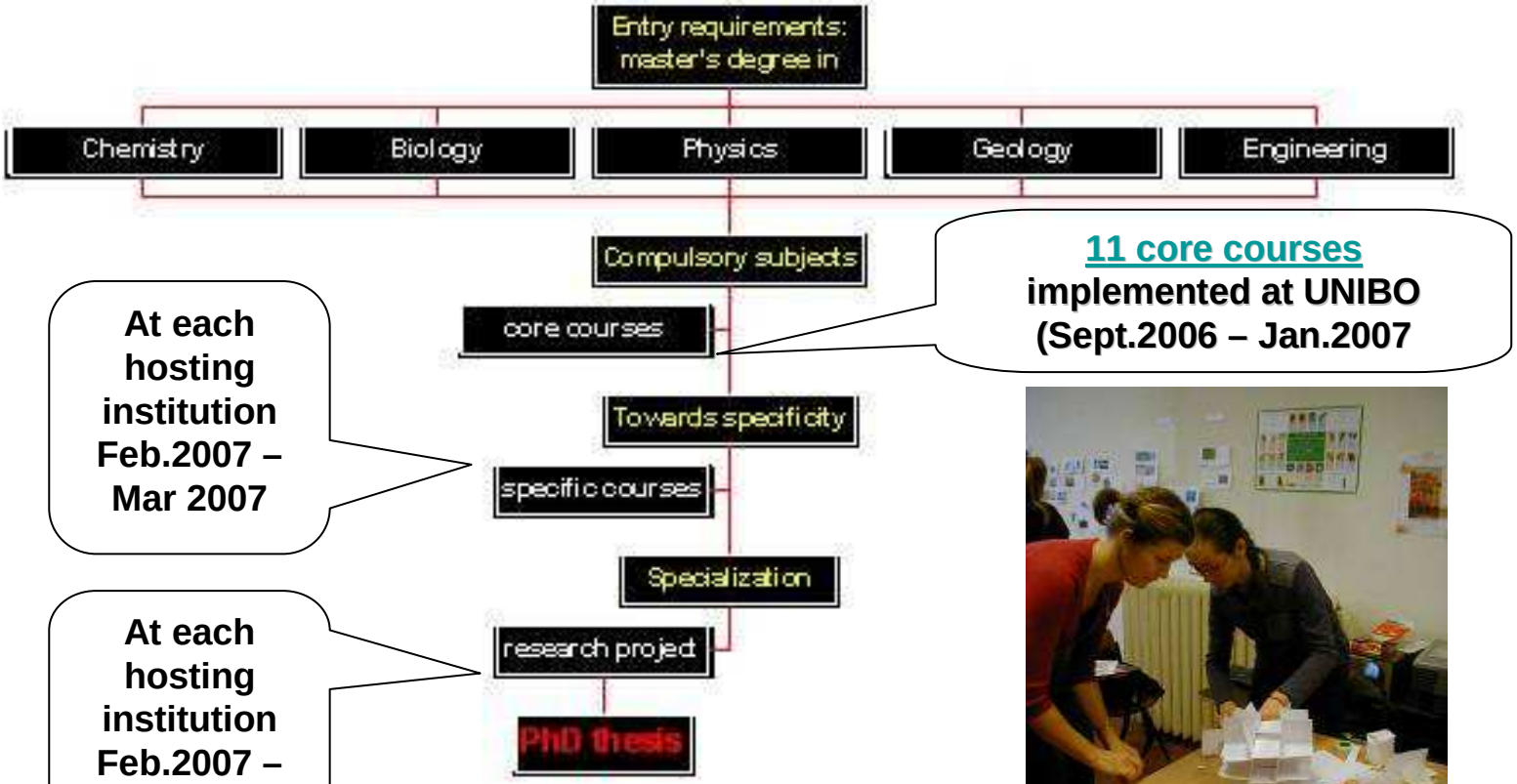
EPISCON

European Ph.D. in Science for Conservation

The 16 SELECTED RESEARCH FELLOWS WITH DIFFERENT EDUCATIONAL BACKGROUND (Masters degree in science)

1. Eva Cechova, graduated in Chemical Technology, Czech Republic
2. Patricio Chiriboga, graduated in Mechanical Engineering, Ecuador
3. Oana-Adriana Cuzman, graduated in Environmental Management, Romania
4. Mikiko Hayashi, graduated in Human Life and Environmental Science, Japan
5. Kenza Kahrim, graduated in Chemistry, Canada
6. Elsebeth Langholz Kendix, graduated in Chemistry, Denmark
7. Timea Kovacs, graduated in Geology, Hungary
8. Clara Morales, graduated in Chemistry, Spain
9. Izabela Ozga, graduated in Physics, Poland
10. Gianluca Pastorelli, graduated in Natural Science, Italy
11. Delphine Pouilley, graduated in Material Science, France
12. Marta Quaranta, graduated in Chemistry, Italy
13. Anna Ruggieri, graduated in Geology, Italy
14. Ana-Bogdana Simionescu, graduated in Biomaterials engineering, Romania
15. Vincenzo Starinieri, graduated in Geology, Italy
16. Magdalini Theodoridou, graduated in Civil Engineering, Greece

Curriculum structure and implementation plan



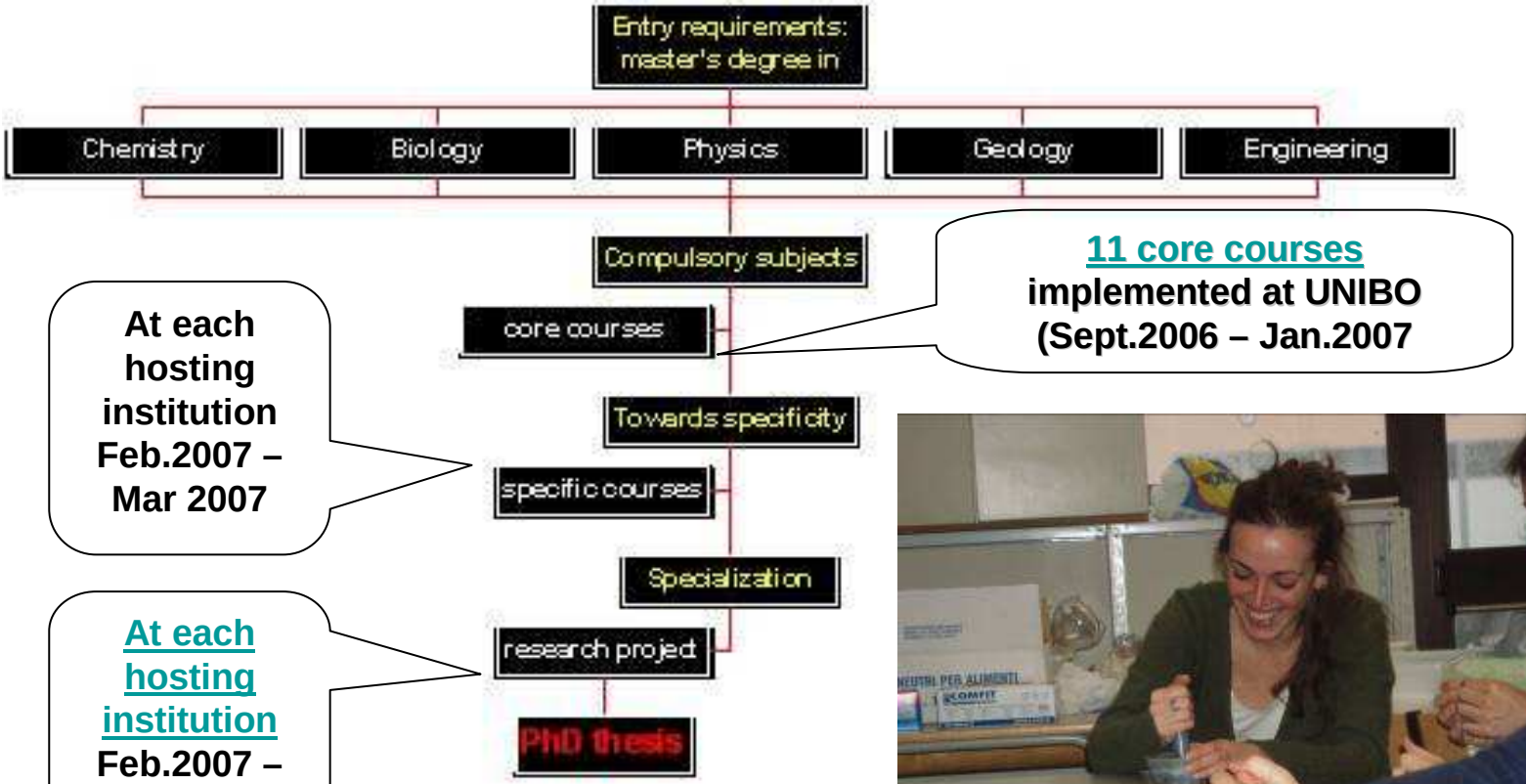
At each hosting institution Feb.2007 – Mar 2007

At each hosting institution Feb.2007 – Sept.2009

11 core courses implemented at UNIBO (Sept.2006 – Jan.2007

Core course	Title
1	Principles of conservation/restoration
2	Introduction to the conservation community
3	Heritage legislation
4	Historic contemporary materials and technologies
5	Overview of history of art
6	Principle of collection and site management
7	Scientific methods of examining cultural property
8	Environmental impact on materials, deterioration and ageing
9	Preventive conservation
10	Documentation of cultural property
11	Processes in conservation

Curriculum structure and implementation plan



11 core courses implemented at UNIBO (Sept.2006 – Jan.2007

At each hosting institution Feb.2007 – Mar 2007

At each hosting institution Feb.2007 – Sept.2009

Hosting Institution	Selected candidate	Country of origin	PhD research project
UNIBO	Kendix Elsebeth Langholz	Denmark	Alternative sample preparation methods using ATR-MIR and FTIR spectroscopy for the study of cultural heritage materials
	Izabela Ozga	Poland	Environment/heritage material interactions: evaluation of the impact of multi-pollutants and microclimate on modern and contemporary built heritage
SoC	Pastorelli Gianluca	Italy	Archaeological Baltic Amber: degradation mechanisms and conservation measures
	Morales Clara	Spain	Understanding plastic surfaces: evaluating methods for cleaning art objects comprised of or containing new or degraded plastics
ELTE	Theodoridou Magdalini	Greece	Mineralogical and chemical changes caused by surface and subsurface weathering of building stone. Problems encountered in preserving monuments in the Székeshehérvár ruin garden
AUTH	Starinieri Vincenzo	Italy	Study of material and technology of mosaics' substrates
	Cechova Eva	Czech Republic	Parameters influencing the quality of lime based mortars used in repairing monuments and historical buildings

UNIOVI	Kovacs Tìmea	Hungary	Durability of crystalline monumental stones in terms of their pore-space structure and hydraulic properties
	Simionescu Ana-Bogdana	Romania	Durability of treated monumental stones with different salt content
UAIC	Quaranta Marta	Italy	On the degradation mechanisms under the influence of pedological factors through the study of archaeological bronze patina
	Hayashi Mikiko	Japan	Modern materials and procedures for old polychrome wood treatment
UNIPG	Kahrim Kenza	Canada	New methodologies for in-situ non invasive studies of artworks materials
ICN	Chiriboga Patricio	Ecuador	The effect of vibrations on the condition of sensitive paintings: mechanical modelling
	Pouilley Delphine	France	Kinetics of aging of face-mounted photographs WITHDRAW
HNM	Ruggeri Anna	Italy	Preservation and conservation of building stones from excavation context. Case study of the Roman villa from Nagyharsány
ICVBC	Cuzman Oana-Adriana	Romania	Biofilms on exposed monumental stones: mechanism of their formation and development of new control methods

HOW TO MAKE THE PROJECT SUSTAINABLE?

- **Funding represents the major issue**

- **<u>Two options</u>:**
  - **Enlarge the partnership and seek for funding at both European and regional level (…*is it feasible???)***
  - **Seek for local funding but maintaining the international character of the didactic model**

An example on how to work at local level: the experience of the Bologna University

- **Establishment of the ALMA HeritageScience IRT (Intergrated Research Team) which reflects a core of competences already existing in chemistry, physics, geology, biology, environment, engineering, architecture, art history, archaeology, economy departments**

- **Establishment of an interdisciplinary Doctoral School in Science for Conservation (joining disciplines, forces, skills, attitudes, competences) capable to launch each Academic Year one or two PhD scholarship in Science for conservation**

MARIE CURIE ACTIONS

EPISCON

European Ph.D. in Science for Conservation

ALMA HERITAGESCIENCE

Un grande gruppo interdisciplinare di ricercatori dell'Università di Bologna che offre **scienza e servizi innovativi per i beni culturali**.

Le competenze del gruppo integrato di ricerca Alma HeritageScience comprendono l'architettura, la chimica dei materiali, la fisica, le arti visive, la geologia, l'economia, la conservazione dei beni culturali, le scienze ambientali, l'ingegneria

Il gruppo è dotato di attrezzature e laboratori scientifici di alto livello per l'attività di ricerca.

Una grande squadra di scienziati per la ricerca sulla conservazione del patrimonio culturale

ALMA HERITAGESCIENCE

Un partner europeo per collaborare sui grandi temi finanziati dall'Unione Europea:

- Ambiente (protezione, conservazione e sviluppo del patrimonio culturale; tutela del patrimonio sottomarino)
- Nanotecnologie (materali e costruzioni)
- ICT (patrimonio e biblioteche digitali, nuove tecnologie e apprendimento)
- Cooperazione culturale

Il team è attivo sulla **Piattaforma Tecnologica Europea** Focus Area on Cultural Heritage (FACH)

Contatti

E-mail: **almaheritage.irt@unibo.it**

Telefono: +39 051 2098837

aggiornato al 5 giugno 2008

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

INTEGRATED RESEARCH TEAM

ALMA HERITAGESCIENCE

Acknowledgements

- EU – Marie Curie Early Stage Training funds
- University of Bologna and the 9 EPISCON partners
- Opificio delle Pietre Dure, Florence
- Istituto Superiore della Conservazione e Restauro, Rome
- ICCROM
- National Museum of Denmark
- Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Bologna
- Prof. Peter Brimblecombe, Dr. Norman Tennent and Dr. Stefan Simon, members of the International Evaluation Board
- The City of Ravenna and the Flaminia Foundation