Thematic Actions

Coordinating Universities for the Proposal: UCM and UPM

Title of Action	**Implementation of the Heritage Dating Laboratory (DACIPA)**		
Participating partners	UCM, UPM, CSIC, CIEMAT	**Other participants**	IGME, INIA, IPCE
Personnel involved (indicate institution)	UCM-CSIC (IGEO), UCM (Faculties : Geology, Physics, Chemistry, Geography and History, Fine Arts, CAI: Archaeometry and Archaeological Analysis, Technical Physics, X-Ray Diffraction) UPM (Schools of Architecture, Civil Engineering)		
Start date	2010	**End date**	2013
Cluster	Heritage	**Other clusters**	
Areas of action	Teaching Improvement and EHEA Deployment / Research / Knowledge Transfer		
Location			
Infrastructures involved	Geochronology Applied to Heritage Dating		
Keywords	Architectural, cultural and geological heritage		

Objectives:

To implement an absolute dating laboratory to join the Science and Technology of Heritage Conservation Laboratory Network , CEI Moncloa (RedLabPat).

Description of the action:

The incorporation of absolute dating techniques into the Science and Technology of Heritage Conservation Laboratory Network will considerably improve the services offered. This action is basic for establishing event chronology. Dating techniques such as dendrology (INIA), radiocarbon (CSIC) and palaeomagnetism (UCM) are already available, but the consolidation and improvement of these techniques is essential with the addition of new techniques such as luminescence (TL and OSL) to increase the chronological spectra. These are complementary to the techniques used in the UCM Geochronology CAI . They are currently used to solve geological issues but they could be used effectively for problem solving in palaeontological and geological heritage conservation.

Planned key results:

Increase the competitiveness of all the groups involved and acquire the equipment to ensure national and future international positioning in the heritage field . This infrastructure will offer services to other areas such as environment, climate change, palaeoclimatology, etc.

Just Rationale for the action:

To understand the value of heritage and establish the appropriate guidelines for its conservation it is essential to know the dating and chronology of the elements to be conserved , distinguishing the authentic ones. Relative dating techniques or chronology acquisition with tools such as architectural archaeology with a sequential reading of parameters, although very useful, require the analytical support provided by absolute dating. Without this, mistakes may occur. As there are currently no integrated laboratories with different dating techniques, the proposal to create this heritage dating laboratory will complement the existing techniques, allowing an increased dating interval. This infrastructure will be also be accessible for other scientific fields such as environment or climate change research.

International aspects:

There are very good dating laboratories in the archaeology field at an international level. However, very few use techniques such as dendrology, palaeomagnetism, radiocarbon, OSL, TL. This will allow the proposed laboratory to provide services to international research institutions within a planned timeframe.

Planned impact :

Title of Action	**Implementation of the Heritage Dating Laboratory (DACIPA)**
The dating techniques laboratory will support problem solving in heritage conservation and will help to plan intervention guidelines. It will increase international collaboration and data quality in the work of research groups. It will attract national and foreigner researchers to participate in fellowships in the heritage laboratory network , including the dating laboratory.	