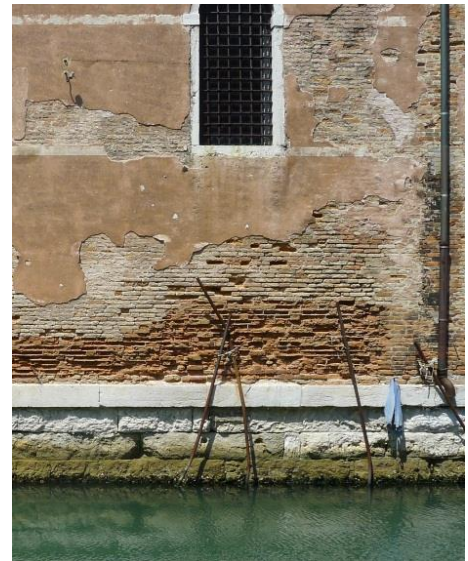


## Content Newsletter 1:

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### Project summary

Rising damp is a recurrent hazard to ancient buildings in Europe and its relevance is expected to increase in the future, due to climate changes. The presence of rising damp in walls does not only create an unpleasant climate in buildings, but it also enhances damage processes as frost action, salt crystallization and biological growth, with possible consequences on the health of the inhabitants. The relevance of this problem is reflected by the large variety of products and methods to tackle rising damp. This wide and differentiated offer, together with the scarce and fragmented scientific information on the effectiveness of the methods, make it difficult (even) for the professionals working in the field to choose a suitable intervention on a sound basis.



The aims of this project are to come to a scientifically based evaluation of the effectiveness of different methods against rising damp and to a define decision support tool for a conscious choice and successful use of these methods in the practice of conservation. These aims will be achieved by sharing the knowledge, available in the participating countries, and by acquiring new knowledge through the application of selected methods in case studies.

## Partners and co-operation

The co-operation between research institutes, conservation authorities and SMEs guarantees: (i) easy access to documentation on case studies, (ii) independent and scientifically based evaluation of interventions, and (iii) successful dissemination of results.



Laura, Michiel, Linda, Alessandra, Simone, Barbara, Elisabetta, Maura, Paola, Mauro, Lorenzo, Yves

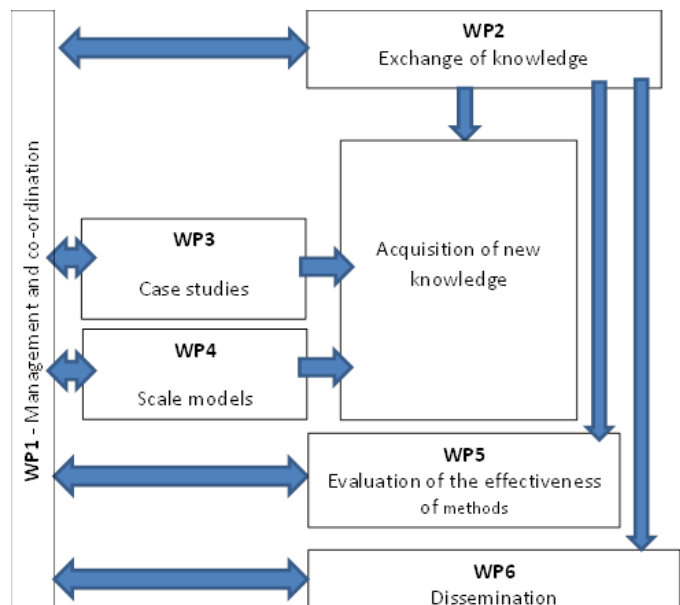
### Partners:

- Belgian Building Research Institute (BBRI- WTCB – CSTC), project coordinator and contact person: Yves Vanhellemont , yves.vanhellemont@bbri.be ;
- Italian National Research Council – Institute of Atmospheric Sciences and Climate (CNR – ISAC), contact person: Alessandra Bonazza, a.bonazza@isac.cnr.it;
- Delft University of Technology, faculty of architecture (TUD), contact person: Barbara Lubelli, b.lubelli@tudelft.nl;
- Dutch Cultural Heritage Agency (RCE), contact person: Michiel van Hunen, m.van.hunen@cultureelerfgoed.nl;
- Ca' Foscari University of Venice (UNIVE), contact person: Elisabetta Zendri, elizen@unive.it;
- Special Restoration Ltd. of Pambianco, contact person: Mauro Pambianco, restaurispeciali@libero.it ;
- Diasen, contact person: Simone Sonaglia, simone.sonaglia@diasen.com .

### Description of the work

The overall strategy of the work plan is to come to a scientifically based evaluation of the effectiveness of different methods against rising damp and to define a decision support tool for a conscious choice and successful use of these methods in the practice of conservation.

The Emerisda project takes 3 years and is divided into six Work Packages.



## First results: Questionnaire, Case Studies and Scale Models.

### Questionnaire

Interviews are carried out with the users, including owners and/or inhabitants of the buildings, architects and contractors, in order to define their satisfaction with the intervention. A questionnaire to collect the results of the interview in a homogenous way has been developed. The questionnaire is available in English, Dutch and Italian. In the next newsletter the first results of the interviews will be given.

### Case Studies

Several case studies (below three of them) are investigated in the participating countries. Different intervention methods to tackle rising damp are tested: chemical interruption, electro-based methods and dehumidification plasters.

The effectiveness of these methods is assessed by measuring the moisture content in the wall before and after the intervention. To this scope both little invasive (gravimetric) and non-destructive techniques are used.

#### Italy, Venice Saint Mark's Basilica



#### Belgium, Antwerp Saint Felix Warehouse



#### The Netherlands Delft, Paardenmarkt





## Scale Models, research set-up

Scale models have been built and placed outdoors. The scale models constitute an intermediate level between the laboratory and the field application. Scale models are, because of their size and complexity, more reliable than small laboratory specimens. The effect of rising damp on the scale models is simulated through partial immersion of the masonry in a salt solution.

The scale models are located in Bologna (Italy). They consist of brick masonry, and have dimension of 77x25x100 cm<sup>3</sup> (lxdxh). The scale models are exposed to an outdoor climate. In order to avoid direct impact of rainfall, they are covered with a plexiglas roof.



On the scale models different types of intervention against rising damp will be carried out. Their effectiveness will be assessed by means of different analysis methods.

## Project information

Project duration: 1 February 2014 – 31 January 2017

More information: [www.Emerisda.eu](http://www.Emerisda.eu)

Newsletter 2: February 2016, End-of-project Newsletter January 2017.

Budget: €596,194.00, funding awarded: €393,129.00, own funds: 203,065.00