EUROPEAN AND MEDITERRANEAN MAJOR HAZARDS AGREEMENT (EUR-OPA)

European Master-Doctorate Course on

VULNERABILITY OF CULTURAL HERITAGE TO CLIMATE CHANGE

European Youth Centre, Council of Europe, Strasbourg
7-11 September 2009

Draft Programme
Our urban landscape and built heritage are designed in line with the local climate specificities. As our cultural heritage as a whole is exposed to the atmosphere over long periods of time and therefore exposed to attack from pollutants and natural weathering processes, climate change is thus expected to have either catastrophic or subtle effects on Cultural Heritage materials and Cultural Landscapes.

The main objective of the 2009 Strasbourg Course is to ensure that young European students are informed on these important issues and will be able to undertake future rigorous scientific monitoring of changes in relation with cultural heritage.

The Programme of the Course will cover the following topics:

- Past Climate Changes and their impact on Cultural Heritage
- Heritage Climatology
- Principles of Adaptation and Resilience of Cultural Heritage to Climate Change
- Impact of Climate Change on building structures
- Dose-Response and Damage Functions for materials in a Changing Climate
- Modelling sea salts transport and deposition
- Modelling wetting and drying of historic buildings
- Impact of Climate Change on building materials: stone, mortar, modern glass, stained glass windows
- Impact of Climate Change on organic materials
- Cultural landscapes and Climate Change
- Biological impact of Climate Change on Cultural Heritage
- Sea level rise models and possible application to Cultural Heritage
- Impact of Climate Change in Indoor Environment
- The policies and action plans of International Organisations (Council of Europe, UNESCO, ICCROM)

The Course is addressed to young people with scientific background from Europe or from member-countries of the EUR-OPA Agreement (a high level of scientific background is required in order to facilitate the comprehension of the topics): physicists, chemists, geologists, biologists, engineers. Teaching will be delivered in English without any simultaneous interpretation. The lecturers belong to European Universities, National Research Centres and International Organisations.

There is no registration fee. The Council of Europe will cover the travel and subsistence expenses for a limited number of participants after careful examination and selection of the applications.

On request, students may benefit of 3 ECTS (European Credit Transfer System) after agreement with their own university.

The course will be held on the premises of the European Youth Centre in Strasbourg, France, from 7 to 11 September 2009. The registration form is attached to this Programme.

The course is addressed to European countries or member-countries of the EUR-OPA Agreement.

Deadline for application: 15 June 2009.

Information and application forms:

- European University Centre for Cultural Heritage, Villa Rufolo, I-84010-Ravello, Italy, [http://www.univeur.org](http://www.univeur.org)  univeur@univeur.org
- or Council of Europe, EUR-OPA, DG IV, F-67075-Strasbourg Cedex, [http://www.coe.int/europarisks](http://www.coe.int/europarisks) europa.risk@coe.int
DRAFT PROGRAMME

Sunday
6 September 2009

Arrival of the participants and registration.

Monday
7 September 2009

9:00-9:45  
**Introduction to the course**
- Eladio Fernandez-Galiano, Council of Europe
- Roger-Alexandre LEFEVRE, University Paris XII
- Eugenia Apicella, CUEBC, Ravello

9.45-10:00  
Coffee break

10:00-12:00  
**The Noah’s Ark Project: “Global Climate Change Impact on Built Heritage and Cultural Landscapes”**
- Cristina Sabbioni, CNR-ISAC, Bologna

12:00-14:00  
Lunch

14:00-15.30  
**Heritage Climatology**
- Peter Brimblecombe, School of Environmental Sciences, Norwich

15.30-15.45  
Coffee Break

15.45-17.00  
**Dose-Response and Damage Functions for Materials in a Changing Climate**
- J. Tidblad, Swedish Corrosion Institute

17.00-18.00  
**Dose-Response Function for the soiling of modern glass in a changing climate**
- Anda Ionescu, University Paris XII

Tuesday
8 September 2009

9:00-10:30  
**Impact of Climate Change on building materials: stone, mortars**
- Cristina Sabbioni, CNR-ISAC, Bologna

10:30-10:45  
Coffee break

10:45-12:15  
**Impact of Climate Change on clay and organic materials**
- Roman Kozłowski, Institute of Catalysis and Surface Chemistry ICSC, Polish Academy of Sciences

12:15-14:00  
Lunch

14:00-15.30  
**Impact of Climate Change on mediaeval stained glass**
- Manfred Schreiner, ISTA, Vienna

15.30-15.45  
Coffee Break

15.45-17.15  
**Impact of Climate Change on indoor environment**
- Dario Camuffo, CNR-ISAC Padova
**Wednesday**  
9 September 2009  
9:00-10:30 **Modelling sea salts transport and deposition**  
- Terje Grontoft, Norwegian Institute for Air Research (NILU), Oslo  
10:30-10:45 Coffee break  
10:45-12:15 **Impact of Climate Change on building structures**  
- Milos Drdacky, Institute of Theoretical and Applied Mechanics (ITAM)  
12:15-14:00 Lunch  
14:00-17:00 Workshop Session / Discussion  

**Thursday**  
10 September 2009  
9:00-10:30 **Modelling wetting and drying of historic buildings**  
- May Cassar, Centre for Sustainable Heritage, London  
10:30-10:45 Coffee break  
10:45-12:15 **Principles of adaptation and resilience of Cultural Heritage to Climate Change**  
- May Cassar, Centre for Sustainable Heritage, London  
12:15-14:00 Lunch  
14:00-15.30 **Sea level rise models and possible application to Cultural Heritage**  
- Fabio Trincardi, ISMAR-CNR (Institute for Maritime Science)  
15.30-15.45 Coffee Break  
15.45-17.15 **Past climate changes and their impact on cultural heritage**  
- Max Schvoerer, Centre de Recherche en Physique Appliquée à l’ Archéologie, Université de Bordeaux III, France  

**Friday**  
11 September 2009  
9:00-10:30 **Biological impact of Climate Change on Cultural Heritage**  
- Cesareo Saiz Jimenez, Instituto de Recursos Naturales y Agrobiología de Sevilla  
10:30-10:45 Coffee break  
10:45-12:15 **Policies and Action Plans of UNESCO**  
- Giovanni Boccardi, World Heritage Centre, UNESCO, Paris  
12:15-14:00 Lunch  
14:00-15.30 **Policies and Action Plans of ICCROM**  
- Mounir Bouchenaki, ICCROM, Rome  
15.30-15.45 Coffee Break  
15.45-17.15 **Council of Europe strategies in the field of Climate Change and Cultural Heritage**  
- Eladio Fernandez-Galiano, Council of Europe