

Title of the proposed activity: **Climate Change and Cultural Heritage**



Participant universities:

National and Kapodistrian University of Athens
Sapienza Università di Roma

Participant academics (indicating university, department, e-mail)

Prof. Constantinos Cartalis, Director of the Laboratory of Environmental Physics, member of the Subsidiary Body of UNFCCC for the implementation of the Climate Convention and the Paris agreement, ckartali@phys.uoa.gr

Prof. Gabriele Favero, PhD, Chairman of Didactic Board in Science Applied to Cultural Heritage, gabriele.favero@uniroma1.it

Kind of activity:

X Short course (1-2 ECTS)

Capacity (total # of participants): twenty (20)

Brief description of the activity (aims and scopes, content, etc):

Short course in the theme “Climate Change and Cultural Heritage”

Period: November - December, 2020*

Deadline to apply for participation: 30 September, 2020

Potential participants: graduate students mainly in the fields of humanities, climate, environment, science applied to cultural heritage

Type of course: On line; six lectures (two hours per lecture, afternoon hours)

Working language: English

Preconditions: Internet connection, use of virtual educational platform

Materials to be provided: Lecture notes in ppt, reference documents (e.g. UNFCCC, UNESCO, European Union, etc.)

Cultural heritage is facing threats due to climate change. In light of this, it is important to explore the relationship between our tangible heritage and the changing climate. The course aims to provide interdisciplinary training for capacity building towards the understanding of:

- (a) human forcing to climate from a historic perspective
- (b) climate change and its controlling processes and driving factors
- (c) the impacts of climate change to cultural heritage
- (d) new dimensions in climate risk
- (e) climate change and conservation needs and priorities, and
- (f) elements of an adaptation plan to climate change impacts

The course will also expose the participants to the international framework related to climate change and to relevant international initiatives associated to cultural heritage. In particular the course will consist of six (6) Lectures equally divided between the partners and in line to their thematic expertise.

Lecture 1. Introduction to the theme “Climate change and Cultural Heritage”

1a. Welcome message and short description of the course and its objectives by Prof. C. Cartalis/Prof. Gabriele Favero

1b. The international framework on climate change. International initiatives related to the theme “Climate Change and Cultural Heritage”. Climate Diplomacy.

(in collaboration with the Center of Excellence “Climate Change – Adaptation and Mitigation” of the National and Kapodistrian University of Athens)

Lecture 2. Disentangling climate and human forcing in the last millennia

Past and present climate change as investigated under the lens of terrestrial records

Prof. Laura Sadori, Palynologist and Archaeobotanist

Lecture 3. Assessing Climate Risk

Main processes and driving factors of climate change. Climate modelling, scenarios and projections. Acquaintance with exposure, sensitivity, adaptive capacity and vulnerability.

Dr. Konstantinos Philippopoulos, Environmental Physicist

Lecture 4. Climate change and heritage conservation risks

Historic climate inside museums is characterized and described in relation to its impact on the conservation of heritage materials

Prof. Anna Maria Siani/Dr. Francesca Frasca, Physicist of the atmosphere

Lecture 5. Climate change and bio-deterioration in Cultural Heritage

The effects of climate changes on distribution and abundance of deterioration agents are addressed with a particular focus on invasive species and insect pests.

Prof. Daniele Porretta, Evolutionary Biologist

Lecture 6. Drafting climate change adaptation plans for open air archaeological areas

Climate change indicators in support of early warning. Climate change adaptation guidelines. Case studies for selected open air archeological areas

Prof. Constantinos Cartalis. Environmental Physicist

Scheduled time: Flexible (provisional period November-December 2020*, one lecture per week)

Other remarkable features of the proposal (interdisciplinary/multidisciplinary character; contribution to CIVIS goals; etc):

The proposed educational activity has the following characteristics:

- (a) contributes to the goals of CIVIS and in particular the ones of Hub 1,*
- (b) establishes a cooperation between two member Universities in view of the definition and development of a more extended educational framework and collaboration,*
- (c) reflects a state of the art scientific issue associated with climate change and its impacts,*
- (d) has a strong transdisciplinary/multidisciplinary character,*
- (e) takes note of recent developments in climate change (from the scientific and policy perspectives),*
- (f) facilitates the participation of graduate students from a multitude of disciplines.*

Finally, the activity reflects considerable flexibility, taken that it will be offered on line and according to a schedule which will not conflict to the main educational obligations of the participants.

**to be re-assessed in conjunction with the covid-19 situation; subject to be moved to January-February 2021*