

**C R A F T**

**INTERNATIONAL ONLINE TRAINING**

**2ND FEBRUARY 2024**

**DEVELOPING A NOVEL CLIMATE CHANGE RISK ASSESSMENT  
FRAMEWORK FOR CULTURAL HERITAGE IN TÜRKİYE**

**CLIMATE CHANGE RISKS OF  
CULTURAL HERITAGE**

## A REPORT ON THE INTERNATIONAL ONLINE TRAINING ON CLIMATE CHANGE RISKS OF CULTURA HERITAGE.

### Session I

#### **Welcome Address & Introduction and Findings of CRAFT Project**

Prof. Dr. Ashraf Osman & Assoc. Prof. Dr. Nejan Huvaj - (Project Coordinators).

#### **Flood Disaster Risk Management**

Assoc. Prof. Dr. Meltem Senol-Balaban (METU)

#### **International Efforts Against Climate Change Impacts on Cultural Heritage**

Prof. Dr. Zeynep Gul Unal (YTU)

### Session II

#### **Cultural Heritage and Climate Change: A Discussion on Impacts and Vulnerabilities**

Asst. Prof. Dr. Sibel Esen (METU)

#### **Heritage Building Information Modelling**

Prof. Dr. David Toll (Durham University)

#### **How to Utilize Open-Source Data for Preliminary Assessment of Floods and Landslides**

Olgu Orakci (KU Leuven)

### Session III

#### **In the midst of Climate Risks and Flash Floods, what Happens to Cultural Heritage in Nigeria?**

Tolulope Ajobiewe (METU)

#### **Triggered Floods due to Climate Change and Determining the Indicators of Flood Risk of Cultural Heritage**

Dr. Banu Gokmen Erdogan (Trakya University)

#### **Mitigation and Adaptation Strategies for Climate Change in Urban Heritage of Izmir**

Bilge Bektas (The Historical Port City of Izmir site Management Office)

## CRAFT ONLINE TRAINING

### DEVELOPING A NOVEL CLIMATE CHANGE RISK ASSESSMENT FRAMEWORK FOR CULTURAL HERITAGE IN TURKEY

Prof. Dr. Ashraf Osman & Assoc. Prof. Dr. Nejan Huvaj - (Project Coordinators).

“The online training was aimed at young and early career researchers, undergraduate and graduate students on cultural heritage risk assessment. It will form a basis for their independent professional work in the future and will enable them to train the next generation of researchers and practitioners.”

### SUMMARY

Within the scope of the training, the objectives were to;

- I. Raise awareness of climate change and climate change triggered disasters.
- II. Create an understanding, the connection between Climate Change and Cultural Heritage
- III. The prospects and challenges for disaster risk assessment and management of cultural heritage
- IV. A preliminary assessment of cultural heritage under flood and landslide risk due to climate change. (Collecting open access data, GIS tools, etc.)

To commence the training, findings from the ongoing **CRAFT Follow Up project** were presented.

In the first session, participants were exposed to an overview on flood risk management alongside relevant international efforts against climate change impacts on cultural heritage. The second session featured three insightful discussions; first, the impacts and vulnerabilities of cultural heritage and climate change. Second, heritage building information modelling. Third, the use of open-source data for preliminary assessment of floods and landslides. In the third and final session of the training, a succinct account of climate risks, flash floods and cultural heritage in Nigeria was presented. Following that, the trainees were treated to a presentation on triggered floods as a result of climate change and the determining indicators of flood risk of cultural heritage. To conclude the training, mitigation and adaptation strategies for climate change in urban heritage of Izmir was considered.

### Mapping of the risks -Methodologies

- The task of identifying and potentially providing effective measures to mitigate the hazards posed by landslides and flash flooding is complicated and requires a multidisciplinary approach.
- Site investigation, quantification of soil-water retention behaviour, identification of soil properties, and topographical analysis in the Istanbul historical area were carried out.
- Existing literature and field reports provided by Istanbul Metropolitan Municipality were used.
- A series of climate scenarios representing current and future rainfall and precipitation patterns were explored.
- Susceptibility maps for climate-change-driven hazards to cultural heritage were produced.



Project Coordinators talking about the CRAFT Follow Up Project

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DISASTER MANAGEMENT

RISK PREVENTION

DISASTER RESPONSE

Living with Uncertainty

Where we need to go

Source: <https://gr.uned.org> 2019

**DISASTER RESPONSE TO RISK PREVENTION...**

Global paradigm change focus on not only reactive actions but mainly on proactive actions! So we need to estimate possible risks with alternative scenarios as much as we can in order to take proactive risk reduction measure before it happens!

00:30:19 / 03:50:00

Assoc. Prof. Dr. Meltem Senol Balaban's presentation on Flood Risk Management

INTERNATIONAL SCIENTIFIC COMMITTEE ON RISK PREPAREDNESS

**ICORP**

SILENT TIMES  
SCHEDULED PROJECTS ON THE SAFEGUARDING OF CULTURAL HERITAGE

EMERGENCY  
EMERGENCY/CRISIS RESPONSE TO AFFECTED CULTURAL HERITAGE SITE

ICORP - Crisis Monitoring and Response for Heritage Working Group\*

OBJECTIVES

- The purpose of the ICORP Crisis Monitoring and Response Working Group, assist in carrying out studies on Disaster Risk Management for cultural heritage in times of crisis situation particularly in the following stages;
- Monitoring , Crisis Response, Capacity Building During Emergency , Post

TASK FORCE

TASK FORCE

TASK FORCE

TASK FORCE

00:59:42 / 03:50:00

Prof. Dr. Zeynep Gul Unal on International Efforts and Framework on Climate Change and Cultural Heritage

RISK MANAGEMENT

From Building Scale to Regional Scale

Regional Scale

Settlement Scale

Neighborhood Scale

Building Scale

01:23:31 / 03:50:00

Asst. Prof. Dr. Sibel Esen presenting – discussing the impacts and vulnerabilities of Cultural Heritage and Climate Change

Heritage BIM

01:46:41 / 03:50:00

Prof. Dr. David Toll on Heritage Building Information Modelling

Joint Affected Cultural Heritage with UNESCO World Heritage Sites

Kepeci Piri

Haliç

Cerrahpaşa

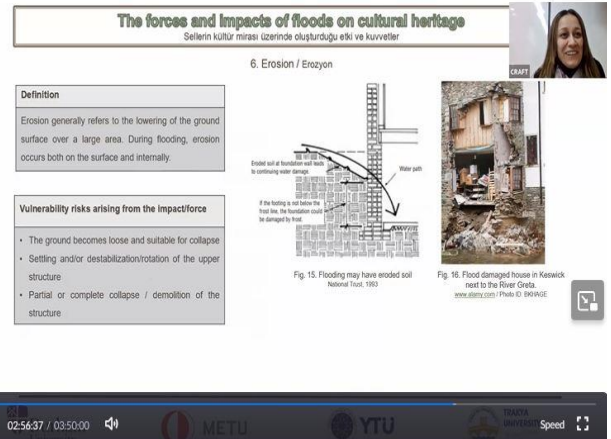
Koca Mustafa

02:08:01 / 03:50:00

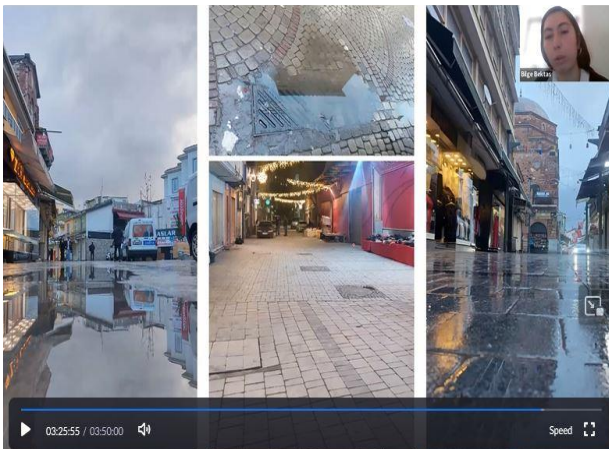
Olgu Orakci speaking on how to Utilize Open-Source Data for Preliminary Assessment of Floods and Landslides



Tolulope Ajobiwe providing an account of how climate risks and flash floods affect cultural heritage in Nigeria.



Dr. Banu Gokmen Erdogan discussing Triggered Floods due to Climate Change and Determining the Indicators of Flood Risk of Cultural



Bilge Bektas on Mitigation and Adaptation Strategies for Climate Change in Urban Heritage of Izmir.

The training featured insightful presentations and was widely attended by sixty-six individuals across the world. In Fig 1, it can be gathered that these sixty-six trainees participated from 31 different countries. Figures 2 – 5 shows the distribution of attendees across different regions and continents. For context, people joined the training from 8 different African countries; 10 European countries; 9 countries across all sub-regions in Asia; 2 countries from the Americas.

Seeing that Turkiye is the host country for the project, 23 (52%) participants were from Turkiye as in figure 6. Also, in countries such as Egypt, Greece, Ethiopia, Ghana, Tunisia, Rwanda, Pakistan, and India there were 2 or more participants who joined the training (see figure 6). The training which was aimed at young and early career researchers on cultural heritage risk assessment, was attended by a diverse group of professionals within and outside the academia. Figure 7 profiles these participants and shows that of these early career researchers, 25 were PhD students, 8 were masters students and about 5 had recently graduated from a bachelors or master's degree program. Seven (7) of the participants were lecturers and college professors.

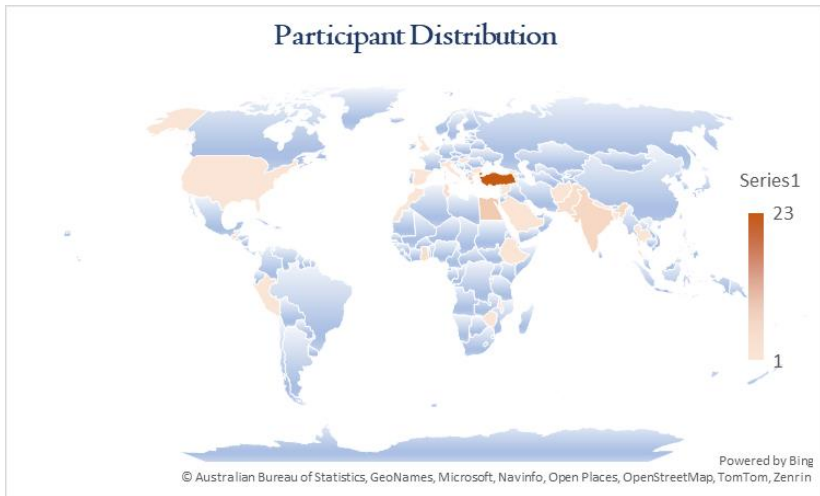


Fig 1: Participants from 31 countries



Fig 2: Participants from Africa



Fig 3: Participants from Turkiye & Asia



Fig 4: Participants from Europe



Fig 5: Participants from North and South America

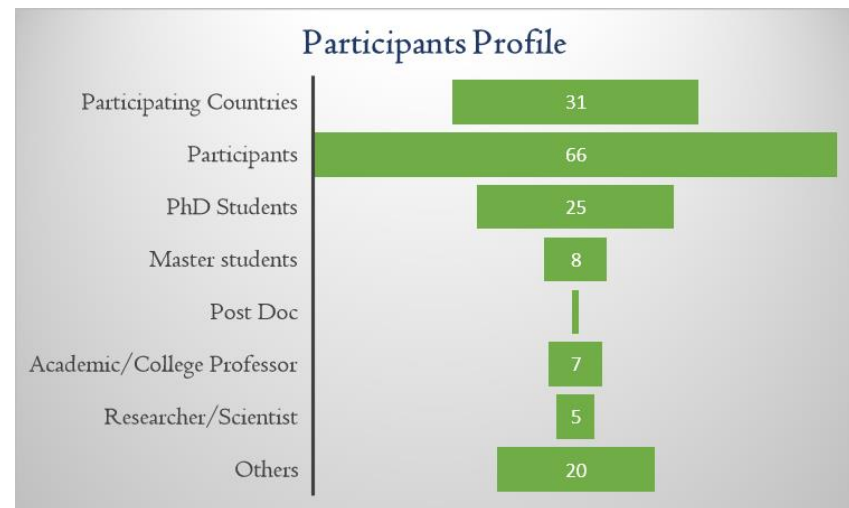


Fig 7: Participants Profile

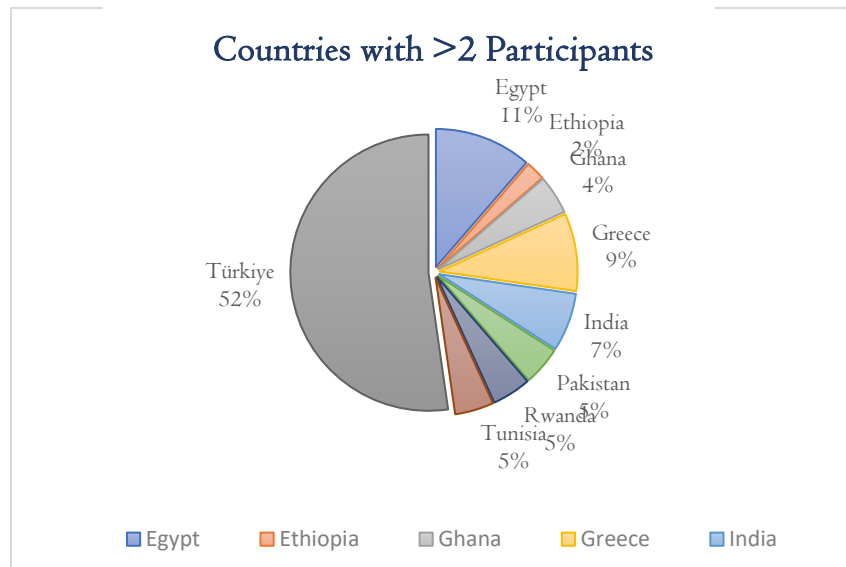


Fig 6: Countries with >2 Participants

### Key Questions & Takeaways

“First and foremost, I would like to appreciate for organizing such crucial trainings. It is really timely! I think that climate change is becoming one of the most causes for the destruction of cultural heritages in many countries. Thus, is there any platform that we as concerned bodies and heritage experts can proceed into proposing such mitigation measures and continuing practical mitigation measures from now onwards? Thank you!” - **Amanuel Abrha**.

“We manage heritage values and protect attributes. So, Climate change if not controlled it becomes a threat to the physical attributes that maintain the values.” - **David NKUSI**



Resources and Useful Links

[https://yildiz-edu-tr.zoom.us/rec/play/uyR\\_GdlBhMktb2mMLjnmKsQWXXuahVU4XV8i5jNTzd6vzf5hbLGeEBAbDdPAQdbmI8FexibFH867Qpse.V03cAst5Bshr9XG9](https://yildiz-edu-tr.zoom.us/rec/play/uyR_GdlBhMktb2mMLjnmKsQWXXuahVU4XV8i5jNTzd6vzf5hbLGeEBAbDdPAQdbmI8FexibFH867Qpse.V03cAst5Bshr9XG9)