



# GreenHeritage

The impact of Climate Change on the Intangible Cultural Heritage

## Deliverable D4.3 (MS5) GreenHeritage Modules

Version: V 1.0

Project details:	
<b>No:</b>	<b>101087596</b>
<b>Name:</b>	<b>GreenHeritage</b>
<b>Title:</b>	The impact of Climate Change on the Intangible Cultural Heritage
<b>Start date:</b>	December 1st, 2022
<b>Duration:</b>	36 months



**Co-funded by  
the European Union**

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



Dissemination Level		
PU	Public	●
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Document details:	
Project	GreenHeritage
Title	Deliverable D4.3: Green Heritage Modules
Version	1.0
Work package	WP 4
Author(s)	Alexandra Bounia, Konstantinos Kotis, Despina Catapoti, Christos Matsoukas
Keywords	ICH, CC, Teaching Material, Workshop
Document ID	GreenHeritage-D4.3v-1.0
Synopsis	Report for work package 4, Task 4.3
Release Date	28/06/2024



Revision history			
Version	Date	Changes	Changes by
0.1	30/05/2024	Draft version	Alexandra Bounia, Konstantinos Kotis, Despina Catapoti, Christos Matsoukas
0.2	21/06/2024	Revised version, after internal and external review	Alexandra Bounia, Konstantinos Kotis, Despina Catapoti, Christos Matsoukas
0.3	27/06/2024	Comments and revision request	Giuseppina Padeletti
0.4	28/06/2024	Revised version	Alexandra Bounia, Konstantinos Kotis, Despina Catapoti, Christos Matsoukas
1.0	29/6/2024	Final Version	Giuseppina Padeletti, Patrizia Grifoni



## Table of contents

<b>Table of contents</b> .....	<b>4</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>6</b>
1.1. DOCUMENT ORGANIZATION .....	6
1.2. REFERENCE DOCUMENTS .....	6
1.3. ACRONYMS AND ABBREVIATIONS.....	7
<b>Section 2: Introduction</b> .....	<b>8</b>
<b>Section 3: Description of resources for Module 1</b> .....	<b>8</b>
3.1 INTRODUCTION.....	8
3.2 LEARNING OUTCOMES AND GENERAL COMPETENCIES .....	8
3.3 STRUCTURE OF RESOURCES: ONLINE COMPONENT (I) .....	10
3.4 STRUCTURE OF RESOURCES: WORKSHOP COMPONENT (II).....	13
<b>Section 4: Description of Resources for Module 2</b> .....	<b>14</b>
4.1 INTRODUCTION.....	14
4.2 LEARNING OUTCOMES AND GENERAL COMPETENCIES .....	14
4.3 STRUCTURE OF RESOURCES: ONLINE COMPONENT (I) .....	15
4.4 STRUCTURE OF RESOURCES: WORKSHOP COMPONENT (II).....	17
<b>Section 5: Description of Resources for Module 3</b> .....	<b>19</b>
5.1 INTRODUCTION .....	19
5.2 LEARNING OUTCOMES AND GENERAL COMPETENCIES.....	19
5.3 STRUCTURE OF RESOURCES: ONLINE COMPONENT (I).....	20
5.4 STRUCTURE OF RESOURCES: WORKSHOP COMPONENT (II).....	23
<b>Section 6: Description for Resources for Module 4</b> .....	<b>25</b>
6.1 INTRODUCTION.....	25
6.2 LEARNING OUTCOMES AND GENERAL COMPETENCIES.....	25
6.3 STRUCTURE OF RESOURCES: ONLINE COMPONENT (I).....	25
6.4 STRUCTURE OF RESOURCES: WORKSHOP COMPONENT (II).....	28
<b>Section 7: Conclusions</b> .....	<b>31</b>



## EXECUTIVE SUMMARY

This is the report accompanying the delivery of teaching material and resources for the Blended Learning and the micro-credentials training programme developed for the GreenHeritage project.

This report describes the delivered material per module, following the curricula developed in the GreenHeritage Deliverables D4.1 and D4.2.

Each Module presents two Components, Component I dedicated to online and micro-credential programs and Component II dedicated to the delivery of the Workshops.

According to GreenHeritage Grant Agreement, after the completion of each online module, the participants will attend a physical workshop hosted in a project country.

Four (4) transnational workshops will be conducted in total. The physical element will add to the learning and networking experience.

The two components together form the content for the delivery of the Blended Learning Program (BLP), combining online and physical presence.



## Introduction

### **1.1. Document organization**

The present document is organized in the following sections:

Section 2: Introduction

Section 3: Description of Resources for Module 1

Section 4: Description of Resources for Module 2

Section 5: Description of Resources for Module 3

Section 6: Description of Resources for Module 4

Section 7: Conclusions and Recommendations

### **1.2. Reference Documents**

Document name	Reference number
GreenHeritage – Annex 1: Description of Work	Grant Agreement nr. 101087596
GreenHeritage – Project Management Plan	Deliverable D1.2
GreenHeritage - Privacy and Open data policy and procedures	Deliverable D1.7
GreenHeritage - Quality Assurance Plan	Deliverable D1.4
GreenHeritage - Research Protocol	Deliverable D2.1
GreenHeritage-Primary and secondary data research findings	Deliverable D2.2
GreenHeritage - Development of methodology	Deliverable D2.3
GreenHeritage - Virtual Learning Environment (VLE)	Deliverable D3.2
GreenHeritage- Blended learning curriculum	Deliverable D4.1
GreenHeritage-micro-credential programme developed material systems	Deliverable D4.2



### **1.3. Acronyms and Abbreviations**

Acronym	Description
2D/3D/4D	2Dimensional/3Dimensional/4Dimensional
AI	Artificial Intelligence
AR/VR	Augmented Reality/Virtual Reality
BLP	Blended Learning Programme
CC	Climate Change
CIDOD-CRM	Centro Intercultural de Documentación-Conceptual Reference Model
CMS	Content Management System
CRC	Climate resilient Cities
ET	Emerging Technologies
ICH	Intangible Cultural Heritage
ICT	Information and Communication Technology
ICT4ICH	Information and Communication Technology for Intangible Cultural Heritage
IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
MC	Micro-credentials Programme
NFTs	Non-Fungible Token
PDF	Portable Document Format
SSP	Shared Socio-economic Pathway
T	Task
UNESCO	United Nations Educational, Scientific and Cultural Organization,
URL	Uniform Resource Locator
VLE	Virtual Learning Environment
WP	WorkPackage
XR	eXtended Reality



## Section 2: Introduction

GreenHeritage T4.3 concerns the development of blended-learning and micro-credential modules. The Blended Learning Programme (BLP) and Micro-credential (MC) Curriculum development involves the following:

- developing lesson plans per module,
- creating content per lesson and learning resources,
- designing workshop activities,
- forming assessment and grading rubrics, planning the course calendar,
- preparing a syllabus for each module and a study guide.

In preparing the proposal, the consortium identified the following four MODULES:

**Module 1:** Intangible Cultural Heritage: Introduction and Overview

**Module 2:** Intangible Cultural Heritage and Climate Change I: Threats and Protection

**Module 3:** Intangible Cultural Heritage and Climate Change II: Challenges and Opportunities

**Module 4:** ICT tools for safeguarding ICH

The content of the four (4) modules is uploaded the following link:  
<https://cnrsc.sharepoint.com/:f:/r/sites/GreenHeritage/Documenti%20condivisi/General/GreenHeritage%20materials%20for%20PO?csf=1&web=1&e=4Ec2an>

## Section 3: Description of resources for Module 1

### 3.1 Introduction

The resources prepared for **Module 1** entitled “Intangible Cultural Heritage: Introduction and Overview” are prepared for the delivery of the micro-credentials program and the Blended Learning program (BLP). There are two components: Component I includes the resources available for the online program/microcredentials program and Component II the resources available for the delivery of the workshops. The two components together form the content for the delivery of the BLP.

### 3.2 Learning outcomes and General Competencies

The resources have been developed to support the learning outcomes and general competences presented below. Upon completion of the course, participants will be able to:





- Articulate a clear definition of ICH.
- Understand the significance and scope of ICH in cultural preservation.
- Appreciate the diversity of ICH manifestations globally.
- Recognize and provide examples of various forms of ICH.
- Gain an understanding of the UNESCO framework for safeguarding ICH.
- Analyze the legislative measures at the European and national levels for protecting ICH.
- Understand the responsibilities and challenges faced by experts in preserving ICH.
- Explore the role of communities in the safeguarding and transmission of ICH.
- Engage in discussions about the ethical considerations surrounding the documentation, preservation, and dissemination of ICH.
- Critically evaluate case studies illustrating successful and unsuccessful efforts in safeguarding ICH.
- Develop cultural sensitivity and awareness, understanding the importance of respecting diverse cultural practices and traditions.
- Reflect on the opportunities and challenges presented by the digital turn in the context of ICH.

The General Competences are the following:

- Adapting to new situations
- Decision-making
- Teamwork
- Working in international environment
- Working in interdisciplinary environment
- Respect for difference and multi-culturalism.
- Respect for the natural environment.
- Showing social, professional, and ethical responsibility and sensitivity to gender issues



### **3.3 Structure of Resources: Online component (I)**

Component I, i.e. online part of the module, consists of 9 sessions. These follow the teaching methodologies of lectures (8 hours) and group activities (4.5 hours). For the development of the content, a series of pedagogical principles were taken into consideration, as these are presented in the GreenHeritage Deliverables D4.1 and D4.2.

Each session consists of the following:

**Session 1:** Lecture: Unveiling Intangible Cultural Heritage (ICH). An Introduction (1.5 hours)

This lesson aims to enhance students' appreciation about the richness of ICH, encouraging them to recognize and respect the diverse cultural expressions that contribute to our global heritage.

The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation

**Session 2:** Lecture: An Insight into the Legislative Landscape of ICH (2 hours)

This lesson provides an in-depth exploration of the legislative frameworks governing ICH and analyses how international and national entities collaborate to ensure ICH preservation and safeguarding.

The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation

**Session 3:** Lecture: Decoding ICH Elements: Definitions and perspectives (Duration 1 hour)

This lesson delves into the diverse elements that comprise ICH, providing students with clear definitions and varied perspectives to understand the dynamic and multifaceted nature of cultural expressions worldwide.



The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation
- o Additional Material, which consists of two academic journal articles and one book chapter (total 3).

**Session 4:** Group Activity related to Session 3 (1.5 hours)

The aim is to conduct collaborative exercises aiming at deepening students' understanding of ICH, by sharing insights and perspectives within the group. Starting from an audiovisual presentation and guided viewing as a methodology, this session encourages students to familiarize themselves with ICH definitions.

The resources for this session include:

- o Teaching notes including references to written or other external resources.
- o Additional Material, which consists of three academic journal articles.

**Session 5:** Lecture: The Experts' Lens: Unveiling the role of connoisseurs (1 hour).

This lesson aims to illuminate the challenges and responsibilities faced by connoisseurs in the field of ICH, fostering a deeper understanding of their impact on its preservation and safeguarding.

The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation
- o Additional Material, which consists of two academic articles.

**Session 6:** Group Activity related to Session 5 (1.5 hours)

Starting from an audiovisual presentation and guided viewing as a methodology, students will conduct a reflective discussion to examine the challenges and ethical considerations faced by ICH custodians. The activity will encourage critical thinking about the balance between safeguarding traditions and adapting to contemporary context.

The resources for this session include:



- o Teaching notes including references to written or other external resources.
- o Additional Material, which consists of one academic article.

**Session 7:** Lecture: “Community” dynamics: Embracing diverse approaches (1 hour).

This session explores the intricate relationship between community dynamics, identity, and the safeguarding of ICH, highlighting the diverse approaches communities employ to protect and preserve their cultural expressions.

The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation
- o Additional Material, which consists of one academic book.

**Session 8:** Group Activity related to 6 (1.5 hours)

Starting from an audiovisual presentation and guided viewing as a methodology, participants will engage in a discussion delving into the diverse definitions and responsibilities of communities and bearers, fostering a deeper understanding of their roles in safeguarding ICH.

The resources for this session include:

- o Teaching notes including references to written or other external resources.
- o Additional Material which consists of one book and one academic journal article.

**Session 9:** Lecture: ICH and the digital turn (1.5 hours)

This lesson begins with an in-depth analysis of a seminal article that outlines the current advancements and prospects in digitizing ICH, providing students with a comprehensive overview of the digital transformation in ICH preservation and safeguarding.

The resources for this session include:

- o Teaching notes including references to written and audiovisual external resources.
- o A PowerPoint Presentation



### **3.4 Structure of Resources: Workshop Component (II)**

The workshop component of this module consists of student-led debate (1.5 hours), an educational visit (3 hours) and a workshop/group activity (2 hours). It will be delivered in person, after the participants have completed their online programme.

The workshops are aimed to be interactive and support participants in putting all ideas together and engage in creative thinking around the concept of ICH and the definitions of transmission and safeguarding. For each of the sections, a lesson plan has been developed including the following:

#### **Session 1: Student-led debate (1.5 hours)**

A critical discussion of concepts and definitions of transmission and safeguarding

The resources for this section include:

- o Teaching notes with key questions to be discussed in class

#### **Session 2: Educated visit (3 hours)**

Visit a site in Greece/Latvia/Spain/Italy and discuss with practitioners/bearers of a specific ICH. Key questions and themes will be discussed in situ.

#### **Session 3: Workshop/Group Activity: ICH case studies (2 hours)**

Students will be grouped in teams; they will be asked to review ICH case studies from their countries or regions of origin. Issues that will be investigated is (a) the role of the ICH under investigation (b) relation of the selected ICH to the respective communities (c) examination of its safeguarding measures (d) the role of the selected ICH elements in terms of promoting gender equality, sustainability, and peace building. Each of the teams will present it to the other teams. The workshop will conclude with discussion and conclusions.

The resources for this section include:

- o Teaching notes with key questions to be discussed in class



## Section 4: Description of Resources for Module 2

### 4.1 Introduction

The resources prepared for **Module 2** entitled “*Intangible Cultural Heritage and Climate Change I: Threats and Protection. An Environmental Perspective*” are prepared for the delivery of the micro-credentials programme and the Blended Learning programme (BLP). There are two components: Component I includes the resources available for the online programme/microcredentials programme and Component II includes the resources available for the delivery of the workshops. Both components together they form the content for the delivery of the BLP.

### 4.2 Learning outcomes and General Competencies

The resources have been developed to support the learning outcomes and general competences presented below.

Upon completion of the course, participants will be able to:

- Be familiar with the basic greenhouse gases, their sources, and their influence on the climate.
- Grasp the complexity of the climate system, its various time scales, and its natural vs. anthropogenic aspects.
- Acquire science-grounded expectations of the future climate changes and challenges.
- Recognize and examine risks in various sectors of natural, human, and managed systems.
- Suggest adaptation options and detect maladaptation situations.

The General Competences are the following:

- Production of free, creative, and inductive thinking
- Respect for difference and multiculturalism
- Respect for the natural environment
- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working in an interdisciplinary environment
- Working in international environment
- Working independently



### **4.3 Structure of Resources: Online component (I)**

Component I, i.e. online part of the module, consists of 12 sessions. These follow the teaching methodologies of lectures (18 hours); self-study (6 hours); Reflection (1 hour). For the development of the content, a series of pedagogical principles were taken into consideration, as these are presented in the GreenHeritage Deliverables D4.1 and D4.2.

The sessions are structured as follows:

**Session 1:** Lecture: Historical climate change. Agents of change (3 h)

In situ and remote sensing climate observations. Reconstructions of paleoclimate. Planetary energy balance and greenhouse effect.

The resources for this session include:

- Teaching notes including references to written and audiovisual external resources.
- A PowerPoint Presentation
- Additional Material, which consists of three reports (freely downloadable).

**Session 2:** Self-study and reflection on Session 1

The students will study the Session 1 lecture notes and additional material.

**Session 3:** Lecture: Temporal horizon of the greenhouse effect (3 h)

Greenhouse gases and solar flux as forcing agents. Sources and sinks of greenhouse gases. Temporal scales.

The resources for this session include:

- Teaching notes including references to written and audiovisual external resources.
- A PowerPoint Presentation
- Additional Material, which consists of two reports (freely downloadable).

**Session 4:** Self-study and reflection on Session 3

The students will study the Session 3 lecture notes and additional material. They will reflect on the topics of Sessions 1 and 3 by taking a 20-minute quiz.



**Session 5:** Lecture: Models and socio-economic future scenarios (3 h)

Climate models and uncertainties. Can they replicate the past? What about the future? Shared socio-economic pathways (SSPs).

The resources for this session include:

- Teaching notes including references to written and audiovisual external resources.
- A PowerPoint Presentation
- Additional Material, which consists of two reports (freely downloadable).

**Session 6:** Self-study and reflection on Session 5

The students will study the Session 5 lecture notes and additional material.

**Session 7:** Lecture: Impacts, risks, and vulnerabilities (3 h)

Historical climate change impacts. Hazard, vulnerability, exposure, and risk. Extreme weather and slow-onset events. Adaptation limits.

The resources for this session include:

- Teaching notes including references to written external resources.
- A PowerPoint Presentation
- Additional Material, which consists of two reports (freely downloadable).

**Session 8:** Self-study and reflection on Session 7

The students will study the Session 7 lecture notes and additional material. They will reflect on the topics of Sessions 5 and 7 by taking a 20-minute quiz.

**Session 9:** Lecture: Sectoral impacts and vulnerability (3 h)

Sectoral impacts (water resources, agriculture, health, etc.) and vulnerable populations. Compound, cascading and transboundary risks. Reasons for Concern.

The resources for this session include:

- Teaching notes including references to written external resources.
- A PowerPoint Presentation
- Additional Material, which consists of two reports (freely downloadable).





**Session 10:** Self-study and reflection on Session 9

The students will study the Session 9 lecture notes and material provided (see above) and reflect on the content.

**Session 11:** Lecture: Adaptation measures (3 h)

International climate agreements. Adaptation measures. Maladaptation. Climate resilient development.

The resources for this session include:

- Teaching notes including references to written and audiovisual external resources.
- A PowerPoint Presentation
- Additional Material, which consists of three reports (freely downloadable).

**Session 12:** Self-study and reflection on Session 11

The students will study the Session 11 lecture notes and additional material. They will reflect on the topics of Sessions 9 and 11 by taking a 20-minute quiz.

***4.4 Structure of Resources: Workshop component (II)***

**Learning Outcomes**

Upon completion of the course, participants will have acquired hands-on experience on:

- the various emissions scenarios and the hazards they entail on a regional scale.
- handling regional data from climate model projections.
- adaptation planning tools to tackle regional/city challenges.

The workshop part of this module aims to present a scientific overview of climate change scenarios, highlighting societal impacts and vulnerabilities deriving from extreme weather and slow-onset changes, and fostering an understanding of available adaptation measures, planning tools and services, to cope and adapt at different scales.

The participants will have examined the scientific background of climate change, its causes, effects, uncertainties, complexity, temporal scale, and future projections, during the online course. This workshop aims to expand on this knowledge bringing



the participants in contact with some of the most up-to-date tools and services in adaptation planning (e.g. the CLIMATE-ADAPT platform, Climate Resilient City Tool) and future scenarios of climate quantities (e.g. the Interactive Atlas of the IPCC).

The participants will work in teams of 2-3 people. The delivery of this module consists of two two-hour workshop sessions:

**Session 1:** Computer-lab workshop: Projections, threats (2 hours)

Hands-on learning of the projected threats, through the IPCC Interactive Atlas. We will explore the global and regional projections and focus on the observed and projected climate hazards for various scenarios.

**Session 2:** Computer-lab Workshop: Socio-economic scenarios and effects by region (2 h)

Introduction of the Urban Adaptation Map Viewer and Climate Resilient Cities (CRC) tools. Participant teams will select regions or cities, investigate relevant climate hazards, and set limits after discussions with the instructor, who will be available for guidance and consultation. Using the support tools, the teams will propose adaptation measures tailored to selected case study.

**Session 3:** Group writing assignment (2h): The participants will be asked to write a short essay discussing the threats for a specific region of their choice and a suggestion for a set of policies/adaptation measures that may alleviate the threat. Each team will be able to select a region, climate hazards, and ICH resources along with their tangible assets. Special emphasis will be given to the regions and case studies developed during the GreenHeritage project.



## Section 5: Description of Resources for Module 3

### 5.1 Introduction

The resources prepared for **Module 3** entitled “*Intangible Cultural Heritage and Climate Change II: Challenges and Opportunities*” are prepared for the delivery of the micro-credentials programme and the Blended Learning programme (BLP). There are two components: Component I includes the resources available for the online programme/microcredentials programme and Component II includes the resources available for the delivery of the workshops. Both components together they form the content for the delivery of the BLP.

### 5.2 Learning outcomes and General Competencies

The resources have been developed to support the learning outcomes and general competences presented below.

Upon completion of the course, participants will be able to:

- Critically discuss issues of sustainability regarding ICH.
- Discuss and evaluate different threats that CC poses on ICH.
- Discuss and debate different solutions that ICH might bring to CC concerns.
- Critically reflect on the relationship between ICH safeguarding and environmental risks.

Evaluate significant debates, problems, controversies, concepts, and theories pertinent to ICH and CC.

The General Competences are the following:

- Adapting to new situations
- Decision-making
- Development of reading, comprehension and writing skills
- Respect for difference and multiculturalism
- Respect for the natural environment
- Showing social, professional, and ethical responsibility and sensitivity to gender issues
- Teamwork
- Working in an interdisciplinary environment
- Working in an international environment



### **5.3 Structure of Resources: Online component (I)**

Component I, i.e. online part of the module, consists of 10 sessions. These follow the teaching methodologies of lectures (8 hours); reading assignments (6 hours); writing assignment (4 hours); interactive workshops (4 hours); and a student-led seminar (2 hours). For the development of the content, a series of pedagogical principles were taken into consideration, as these are presented in the GreenHeritage Deliverables D4.1 and D4.2.

Each session consists of the following:

#### **Session 1:** Lecture: Introduction: ICH and CC (3 hours)

Using specific examples from the research undertaken during the GreenHeritage WP2 research, this session attempts an overarching presentation bringing together the concerns around cultural heritage, tangible and intangible heritage and climate change in Europe and globally.

The resources for this session include:

- Teaching notes including references to written and audiovisual external resources.
- A PowerPoint Presentation
- Additional Material, which consists of two reports (these can be downloaded through the Web, however, it was considered easier for the participants to have them for downloading).

#### **Session 2:** Reading assignment: Students will study academic literature on sustainability and ICH and report back to class (3 hours)

This reading assignment will ask participants to engage in the debates as these are presented in academic and popular literature and present their ideas to peers, building on a peer-to-peer knowledge exchange.

The resources for this session include:

- Detailed teaching notes including references to written and other external resources.
- A PowerPoint Presentation of the main introductory points before the students start working on their readings.
- Three documents as additional resources that participants will need for their reading and therefore the completion of this section.



**Session 3:** Lecture: Threats that CC poses on ICH (Documentary, guided viewing, and discussion). (3 hours)

Starting from an audiovisual presentation and guided viewing as a methodology, this session encourages students to familiarize themselves with specific threats based on specific environments.

The resources for this session include:

- Teaching notes including references to written or other external resources.
- A PowerPoint presentation
- The WP2 Reports of Green Heritage as a main resource for the case studies discussed in this session (D2.1, D2.2, D2.3)

**Session 4:** Reading assignment: Students will study academic literature on threats imposed on ICH by CC and report back to class (3 hours)

This reading assignment asks participants to engage in the debates as these are presented in academic and popular literature and present their ideas to peers, building on a peer-to-peer knowledge exchange.

The resources for this session include:

- Teaching notes including references to written or other external resources. All bibliography is annotated.
- Four additional texts that are to be used for the reading assignment.

**Session 5:** Lecture on evaluation of significant debates, problems, controversies, concepts, and theories pertinent to ICH and CC. (2 hours)

This session aims to explore the intricate connections between ICH and CC, exploring the multifaceted implications, challenges, and opportunities this relationship presents. Through the exploration of diverse perspectives and the analysis of current research, this lecture will foster a deeper appreciation for the relationship between cultural heritage and environmental sustainability. Participants to the module/session will have the opportunity to engage in thought-provoking discussions, contributing to a heightened awareness of the complex issues at the nexus of cultural heritage preservation and the ongoing challenges posed by climate change.

The resources for this session include:

- Teaching notes including references to written or audiovisual external resources.
- A PowerPoint presentation
- Two additional reports selected to support the participants' reading.



**Session 6:** Writing assignment: Students are requested to reflect critically upon the relation between ICH and CC and produce a written essay based on the previous lectures and assignments (2 hours)

The resources for this session include:

- Teaching notes with references to external resources and the criteria of assessment of this assignment – which is part of the evaluation of the participants
- Additional resources: two documents that will support participants in their writing assignment.

**Session 7:** Interactive workshop: CC and ICH – Threats: Work on one of more case studies based on GreenHeritage research (WP2) (2 hours)

This hands-on session is designed to immerse participants in a dynamic exploration of the threats posed to ICH by the impacts of climate change. Through the lens of a case studies, participants have the opportunity to delve deep into specific challenges faced by ICH in the face of environmental changes.

The resources for this session include:

- Teaching notes with references to external interactive elements
- PowerPoint Presentation

**Session 8:** Interactive workshop: CC and ICH – Opportunities: Work on one or more case studies based on GreenHeritage research (WP2) (2 hours)

This hands-on session is designed to immerse participants in a dynamic exploration of the threats posed to ICH by the impacts of climate change. Through the lens of case studies, participants have the unique opportunity to delve deep into the opportunities ICH offers for the mitigation and adaptation to environmental changes.

The resources for this session include:

- Teaching notes with references to external interactive elements
- PowerPoint Presentation

**Session 9:** Student-led seminar: How can we evaluate risks and opportunities? (2 hours)

The emphasis here is on the methodologies used for research regarding ICH and knowledge building towards CC challenges. The goal is not only to understand the



methodologies used, but also to identify gaps where innovative (in terms of methodology, content, geographical areas, etc.) can be developed that will contribute to effective safeguarding.

The resources for this session include:

- Teaching notes with references to external interactive elements

### **Session 10: Writing assignment: Summary and evaluation (2 hours)**

Participants are tasked with synthesizing key information from the extant bibliography, but beyond mere summarization, the assignment extends into the realm of evaluation, challenging participants to engage critically with the content. This involves assessing the strengths and weaknesses of the material, identifying any biases or gaps in information, and offering well-founded opinions on the overall effectiveness and significance of different sources, analytical theories, and methodologies.

The resources for this session include:

- Teaching notes with references to external resources, as well as the evaluation matrix for the evaluation of this assignment (as it is the final one for the total evaluation of the participation to the programme).

## **5.4 Structure of Resources: Workshop Component (II)**

The workshop component of this module consists of lectures (2 hours) and interactive workshops (4 hours). It will be delivered in person, after the participants have completed their online programme.

The workshops are aimed to be interactive and support participants in putting all ideas together and engage in creative thinking around the topic of ICH and CC.

For each of the sections, a lesson plan has been developed including the following per section:

**Session 1:** Lecture: Overview: *“Intangible Cultural Heritage and Climate Change / CC, and Risk Assessment regarding ICH / CC and Opportunities from Indigenous Knowledge”* (2 hours)

The resources for this section include:

- Teaching notes with references to external resources
- A PowerPoint presentation to be used during the lecture.



- Additional material for study consisting on one report available online that has been also downloaded for easy reference.

**Session 2:** Interactive workshop: CC and ICH - Threats: Using case study methodology (2 hours) (the case study methodology will relate to the research undertaken during WP2 of GreenHeritage project and/or other case studies locally available to the workshop organisers).

The resources for this section include:

- Lesson plan with references to external resources
- A folder of images that can be used for the preparation of a presentation (if the local instructors in each of the workshops decides to use the proposed case study of the Mandres of Lemnos, as example; however, other case studies from WP2 or related to the location can be also used).

**Session 3:** Interactive workshop: CC and ICH – Opportunities: Using case study methodology (2 hours) (the case study methodology will relate to the research undertaken during WP2 of GreenHeritage project and/or other case studies locally available to the workshop organisers).

The resources for this section include:

- Lesson plan with references to external resources





## Section 6: Description for Resources for Module 4

### 6.1 Introduction

The resources prepared for **Module 4** entitled “*ICT TOOLS for the SAFEGUARDING of ICH*” (ICT4ICH) are prepared for the delivery of the micro-credentials programme and the Blended Learning programme (BLP). There are two components: Component I include the resources available for the online programme/microcredentials programme and Component II includes the resources available for the delivery of the workshops. Both components together form the content for the delivery of the BLP.

### 6.2 Learning outcomes and General Competencies

The resources have been developed to support the learning outcomes and general competences presented below.

Upon completion of the course, participants will be able to:

- Understand and identify the Information and Communication Technologies (ICT) available for intangible cultural heritage (ICH), and especially the technologies available for safeguarding it.
- Understand the use of these technologies for: a) ICH content management; b) ICH information, promotion and raising of awareness of dangers e.g., climate change (CC); c) ICH education and training.
- Understand and identify the Emerging Technologies (ET) of ICT, and how they are used in several aspects of the ICH.

The General Competences are the following:

- Autonomous work and teamwork
- Critical thinking exercise
- Production of free, creative, and inductive thinking
- Search, analysis and synthesis of data and information, using the necessary technologies.
- Transmission and transfer of know-how to other environments
- Work in an interdisciplinary and international environment

### 6.3 Structure of Resources: Online component (I)

Component I, i.e. online part of the module, consists of 12 sessions. These follow the teaching methodologies of lectures (18 hours); self-study (6 hours); Reflection (1 hour). For the development of the content, a series of pedagogical principles were



taken into consideration, as these are presented in the GreenHeritage Deliverables D4.1 and D4.2.

The sessions are structured as follows:

**Session 1: Lecture: Introduction to ICT for CH (part A) (Presentations/PowerPoint slides recordings)**

- ICT for CH (tangible and intangible): safeguarding
- Content digitization (e.g., 2D/3D/4D modelling of cultural/historical maps, story-telling recording, video recording)
- Content organization/structure, documentation, metadata, openness, interoperability, privacy, ownership (e.g., database technology, cultural metadata, repositories/aggregators, Europeana, CIDOC-CRM)

**Session 2: Self-study and reflection on Session 1 (PDF document reading and quiz)**

The students will study the Session 1 lecture notes and additional material. They will reflect on the topics of Session 1 by taking a 10 min quiz.

**Session 3: Lecture: Introduction to ICT for CH (part B) (Presentations/PowerPoint slides recordings)**

- Content dissemination and promotion (e.g., mobile apps, Web apps, AR/VR apps, games)
- CC awareness and information on ICH impact (e.g., mobile app raising awareness on the impact of CC on ICH)

**Session 4: Self-study and reflection on Session 3 (PDF document reading and quiz)**

The students will study the Session 3 lecture notes and additional material. They will reflect on the topics of Session 3 by taking a 10-minute quiz.

**Session 5: Lecture: Introduction to the Web technology for ICH (part A) (Presentations/PowerPoint slides recordings)**

- Web and CH (tangible and intangible): safeguarding
- Web-based content management systems CMS (e.g., [Omeka](#), [D-Space](#)) and digital libraries/aggregators (e.g., [SearchCulture](#), [OpenGlam](#), [Wikimedia Commons](#), [Europeana](#)) for ICH content preservation, aggregation, open content
- Web crowdsourcing for collaborative content creation (e.g., [HistoryPin](#))



- Map-based storytelling (e.g., StoryMapJs)

### **Session 6: Self-study and reflection on Session 5 (PDF document reading and quiz)**

The students will study the Session 5 lecture notes and additional material. They will reflect on the topics of Session 5 by taking a 10-minute quiz.

### **Session 7: Lecture: Introduction to the Web technology for ICH (part B) (Presentations/PowerPoint slides recordings)**

- Social media (e.g., to raise awareness of ICH and engage communities in its preservation)
- Blockchain technology (provides decentralized and secure systems for storing and sharing cultural artefacts and information - [NFTs](#)) and Metaverse e.g., project *Monuverse*.

### **Session 8: Self-study and reflection on Session 7 (PDF document reading and quiz)**

The students will study the Session 7 lecture notes and additional material. They will reflect on the topics of Session 7 by taking a 10-minute quiz.

### **Session 9: Lecture: Introduction to ET for ICH (part A) (Presentations/PowerPoint slides recordings)**

- IoT for CH (tangible and intangible): safeguarding
- XR and virtual tours for CH (e.g., [virtual museums](#) )

### **Session 10: Self-study and reflection on Session 9 (PDF document reading and quiz)**

The students will study the Session 9 lecture notes and additional material. They will reflect on the topics of Session 9 by taking a 10-minute quiz.

### **Session 11: Lecture: Introduction to ET for ICH (part B) (Presentations/PowerPoint slides recordings)**

- AI for CH (a) tools for the analysis and recognition of various aspects of ICH, such as music, dance, and oral traditions e.g., Machine learning algorithms that can be used to automatically transcribe and translate audio recordings of endangered languages, as well as to analyze and preserve other aspects



of ICH) (b) AI chatbots for informing and educating people on CC and its impact in ICH,

- Generative AI for CH (e.g., Bing and DALL-E to create images for ICH such as a dry stone wall and [its traditional profession](#), or use ChatGPT to generate a text description of an imaginary picture of dry stone wall build tradition).

### **Session 12: Self-study and reflection on Session 11 (PDF document reading and quiz)**

The students will study the Session 11 lecture notes and additional material. They will reflect on the topics of Session 11 by taking a 10 min quiz.

#### ***6.4 Structure of Resources: Workshop Component (II)***

Upon completion of the workshop part of the module, participants are expected to be able to:

- Identify, select, and apply Information and Communication Technologies (ICT) available for intangible cultural heritage (ICH), and especially the technologies available for safeguarding of it.
- Identify, select, and apply applications/tools for cultural content management, promotion, dissemination, and preservation.
- Identify, select, and apply applications/tools of Emerging Technologies (ET).

This workshop will provide a practical approach to ICT methods and tools that are available today for safeguarding, and promotion of ICH, based on the knowledge gained in the related GreenHeritage online course (ICT4ICH), and includes a demonstration (by the instructor) and practice/hands-on experience (by the participants) on the following topics per session:

#### **Session 1: Computer-lab workshop: demonstration of ICT tool (1,5 hours):**

Web-based cultural content and virtual tour creation/publication (360 tour embeddings from Momento360 or Kuula in Google Sites), Virtual Museum tour created (Google Slides).



## Outline

1. Get any 360 panoramic photo from the Web (e.g., from [unsplash.com](https://unsplash.com)) or create one using a mobile app e.g., Panorama360 ([Google play](#) and [Apple store](#)). Download and place it in a folder (e.g., “example content” folder).
2. Demonstrate Momento360.com web service for 360 photos viewing  
URL: <https://momento360.com/>  
URL: [photo example](#) in Momento360.com  
Tutorial: <https://momento360.com> (Help/Onboarding tutorial option)
3. Demonstrate Google Sites for web page/site creation  
URL: <https://sites.google.com/>  
URL: [site example](#) in Google Sites (need a Google account)  
Tutorial: <https://youtu.be/0woNTtlcxgM?si=kb3keFITdBRy0cE6>
4. Demonstrate the embedding of 360 photo from Momento360 to Google site, as an example of a virtual tour creation  
URL: <https://sites.google.com/view/greenheritage-example-site/home>
5. Demonstrate Google Slides as an alternative to virtual tours in museums  
URL: [template](#) by <https://www.davidleedtech.org/>  
URL: [shared](#) for edit  
URL: [slideshow](#) shared (published)  
Tutorial: <https://www.youtube.com/watch?v=9GaguGpvFAQ>

## Session 2: Computer-lab workshop: demonstration of tool (1,5 hours):

Map-based storytelling via Web-based crowdsourcing tool and collaborative content creation (HistoryPin, StoryMapJS).

## Outline

6. Demonstrate HistoryPin.  
Create profile, login, navigate in collections, create/edit example Collection.  
URL: <https://www.historypin.org/en/>  
URL: [example project](#) (Greek, Master thesis)  
URL: [example project](#) (English, Word War I Panoramas)  
Tutorial: <https://about.historypin.org/how-to-guides/>
7. Demonstrate StoryMapJS.  
Create profile, login, navigate in collections, create/edit example StoryMap.  
URL: <https://storymap.knightlab.com/>  
URL: [example StoryMap](#), an [other example](#)  
Support: <https://storymap.knightlab.com/#help>



**Session 3: Practice/Hands-on Practice/Workshop (3 hours):**

Participants will be asked to: Choose among (a), (b) or (c) options of team projects and implement them in teams of 2-3 participants (teamwork). Upload a link (URL) of a Web-published project on VLE, along with a short (one paragraph) description, including participants' details.

(a) Create and publish a one-page website using Google Sites under the topic "The Impact of CC to ICH", integrating multimedia content (found on the Web or generated by AI). Integrate at least 1 use case for safeguarding of ICH also using a photo or video embedding.

(b) Create and publish a virtual tour on a cultural site (e.g., exhibition related to ICH) using Google Slides. You may reuse multimedia content found on the Web or generated by AI.

(c) Use HistoryPin or StoryMapJS tool to create and publish a project with stories or/and customs (e.g., from people under relocation) that need to be preserved due to the CC.



## **Section 7: Conclusions**

In this deliverable a large volume of educational content for a continuously evolving scientific and research field has been generated. In such a field, the educational content should be occasionally updated, upon proposal and agreement by the whole consortium and the coordination.

The generated content targets experts in the field as well as a broader audience. The GreenHeritage aim is to deliver a starting point for awareness building among different communities and stakeholders, practitioners, policy makers, but also students.

The content will be enriched with live discussions and exchanges during the workshops, and networks will be created that will take the research and educational resources building of GreenHeritage to the next level, ensuring sustainability and enhancement of resources.