

INSTRUCTIONAL INFORMATION

The following module template has been developed as part of Work Package 7 of the EU-funded GoGreen project. The module is designed in a skeletal format to allow for broad adaptation to a wide range of existing curricula and professional development schemes. To enhance flexibility, the module is divided into theme blocks with suggested content, assessments, and activities. The template has been constructed to serve as foundational material for curriculum development or course integration.

INTENDED AUDIENCE

This module may be adapted for the instruction of conservation, conservation science, and the broader cultural heritage sector at the undergraduate, postgraduate, and professional level. The activities and assessments of this module have been developed for both groups and individuals.

MODULE DELIVERY

Content in this module supports in-person, hybrid, or through virtual learning. The following online resources may be used for hybrid or virtual module instruction.

1. <https://padlet.com/>
2. <https://whiteboard.microsoft.com>
3. <https://www.mural.co/>

PRE-REQUISITE KNOWLEDGE

This module has no suggested learning pre-requisites to enable broader application of module contents to diverse audiences. Module-takers should have a general familiarity with sustainability and cultural heritage, and an openness to learning about how conservation and heritage care can support sustainable development.

MISSION STATEMENT

To promote leadership in green conservation by empowering students and professionals to become advocates for green conservation practices, equipped with the knowledge, tools and skills needed to inspire adaptable, community-driven strategies for the long-term stewardship of cultural heritage.

DESCRIPTION

Leadership in Green Conservation equips learners to champion sustainability in conservation by developing leadership skills to promote green(er) practices. The module integrates theoretical perspectives with practical approaches for green(er) solutions, exploring their relevance in both institutional and professional contexts. It serves not only the conservation sector but also the wider cultural heritage field, engaging relevant stakeholders and affiliated professionals. Additionally, the topics proposed in the module promote interdisciplinary engagement and collaboration, positioning these as essential components of sustainable practice.

A central focus of the module is to encourage learners to develop a personal voice in advocating for green(er) conservation and heritage care practices. Through activities, learners design and implement a personalized green action project, applying key concepts to real-world projects. The assessment suggestions provided allow them to keep track of their progress and check their level of understanding. These projects evolve throughout the module, shaped by new insights and resources, fostering a dynamic and interactive learning experience. Learners are also encouraged to reflect on the challenges of their projects and consider their future potential.

LEARNING GOALS AND OUTCOMES

Main Goal Equip students and professionals with the comprehensive knowledge of the latest sustainable development policies, legislations, tools, skills and methodologies within the cultural heritage sector, to enable them to become a leading voice in addressing the risks and challenges of the climate emergency on heritage care.

Subsidiary Goals

- Develop an understanding of how sustainability is debated and defined within the theory and practice of cultural heritage care.
- Cultivate awareness of the importance of reflecting on one's practice and developing reflection skills for lifelong learning of green conservation practices in cultural heritage care.
- Develop leadership and communication competences to advocate for green conservation practices for the care of cultural heritage
- Encourage interdisciplinary collaboration to deepen understanding of and foster responses to sustainability challenges within one's sphere of influence.

By the end of this module,

Learning Outcomes

- 1) **(Analysis)** Analyse the reciprocal relationship between cultural heritage and sustainability.
- 2) **(Application)** Evaluate and synthesize a wide range of data sources and materials in various formats to develop and implement green conservation strategies.
- 3) **(Assessment)** Gain an overview of existing policies, standards, guidelines, and methodologies adopted in the cultural heritage sector that address sustainability to identify existing gaps and emerging challenges.
- 4) **(Reflection)** Reflect on personal practice by assessing one's own professional or academic work through the lens of the green conservation definition and parameters.
- 5) **(Advocacy)** Promote and advocate green(er) conservation strategies within one's sphere of influence using communication tools.

RECOMMEND READINGS

Visit the GoGreen Zenodo for the full module bibliography

Fife, G., Turrina, A., Wagner, J., Del Curto, D., Southwick, C., Keune, K. (TBD). 'Defining Green in the Conservation of Cultural Heritage' to be submitted (for Studies in Conservation)

ICOMOS Climate Change and Cultural Heritage Working Group. (2019). *The Future of Our Pasts: Engaging Cultural Heritage in Climate Action*. ICOMOS. <https://ciivih.icomos.org/wp-content/uploads/Future-of-Our-Pasts-Report-min.pdf>

ICOMOS Sustainable Development Goals Working Group, Labadi, S., Giliberto, F., Rosetti, I., Shetabi, L., & Yildirim, E. (2021). *Heritage and the sustainable development goals: Policy guidance for heritage and development actors*. ICOMOS.

Tate-Harte, A., & Thickett, D. (2024). Calculating the Carbon Footprint of Interventive and Preventive Conservation at English Heritage, UK. *Studies in Conservation*, 69(sup1), 323–332. <https://doi.org/10.1080/00393630.2024.2336814>

Taylor, J., & Boersma, F. (2018). Managing Environments for Collections: The Impact of International Loans on Sustainable Climate Strategies. *Studies in Conservation*, 63(sup1), 257–261. <https://doi.org/10.1080/00393630.2018.1504514>

United Nations. (2023). *Globally Harmonized System of Classification and Labelling of Chemicals (GHS Rev. 10, 2023)* (10th edn). United Nations Economic Commission for Europe. <https://unece.org/transport/dangerous-goods/ghs-rev10-2023>

European Commission. Joint Research Centre. (2024). Safe and sustainable by design chemicals and materials: Methodological guidance. Publications Office. <https://data.europa.eu/doi/10.2760/28450>

GoGreen Work Package 8 (2024). *GoGreen Webinar—Defining Green Conservation* [Video recording]. <https://www.youtube.com/watch?si=YnV86t7f45-PCOHC&v=xR0eA8nGsMw&feature=youtu.be>

LEADERSHIP IN GREEN CONSERVATION

THEME	TOPICS	DESCRIPTION	LEARNING OUTCOMES	SUGGESTED ACTIVITIES AND ASSESSMENTS
The Role of Cultural Heritage for Sustainable Development	<i>Sustainability and Cultural Heritage</i>	Introduces general policies, frameworks, and guidelines for sustainable development and how they may be relevant to cultural heritage.	Analyse the reciprocal relationship between cultural heritage and sustainability.	<p>Activity: Link the United Nations Sustainable Development Goals (SDGs) to cultural heritage practice highlighting ways in which practice aligns with the goals and possible future adaptations.</p> <p>Assessment Action Project: Individually or in a group, design and develop an action project throughout the module that identifies ways to promote sustainable development within your personal sphere of influence. Projects should connect module concepts to real-world contexts and highlight opportunities for green(er) practice and impact within conservation and cultural heritage care</p>
	<i>Cultural Heritage Care, Resources, and the Environment</i>	Through suggested case studies, topic explores the reciprocal relationship between cultural heritage, resources, and the environment.		
	<i>Human Health and Well-Being, and Societal Impact Areas</i>	Explores the positive and negative impacts of cultural heritage on the remaining two impact areas (human health and well-being, and societal impact). Aids learners in establishing a personal vision for sustainable development in cultural heritage through drafting a personal action project .		
Frameworks for Sustainable Development in Cultural Heritage Care	<i>Sustainability in Cultural Heritage Care Policies, Standards, and Guidelines</i>	Highlights cultural heritage specific policies, standards, and guidelines that address sustainable development.	Gain an overview of existing policies, standards, guidelines, and methodologies adopted in the cultural heritage sector that address sustainability to identify existing gaps and emerging challenges.	<p>Activity: Investigate a policy, standard, or guideline specific to the sustainable development of conservation and cultural heritage care. Identify impact areas addressed and any limitations.</p>
Green Thinking: What is Green Conservation?	<i>Exploring the Green Definition, Parameters, and Frameworks</i>	Introduces the definition of green conservation and the parameters and frameworks used to make green(er) decisions. Learners will explore how green thinking drives conservation and cultural heritage care decision-making.		<p>Activity: Engage in a group roleplay or reflect independently, consider the application of the green definition and frameworks in conservation and cultural heritage care practice.</p> <p>Assessment Action Project Cont'd: Continue building on the action project. Consider the following:</p> <ol style="list-style-type: none"> Why were some green parameters not included, and what trade-offs were considered? How might these excluded parameters affect the overall impact of the project, if at all?
Green Tools and Resources for Cultural Heritage Care	<i>Strategies and Tools for Green Conservation Practices</i>	Explores strategies and tools employed within the cultural heritage sector to address the 4 impact areas on sustainable development.	Evaluate and synthesize a wide range of data sources and materials in various formats to develop and implement green conservation strategies.	<p>Assessment: Select a conservation material, method, or practice and assess its sustainability across the four impact areas: natural environment and climate, resources and materials, human health and well-being, and cultural heritage. Then apply a green conservation tool or framework (e.g., STiCH, GHS, GCC, etc.) to evaluate the practice, considering how the tool or framework assesses it and what greener strategies may be adopted.</p> <p>Activity: Practice applying the Decision-Making Model on a personal case study.</p>
	<i>Interdisciplinary Considerations for Green Conservation Practices</i>	Examines methods and perspectives from multiple disciplines to inform green decision-making in conservation and cultural heritage care.		<p>Assessment: Investigate strategies and practices from other disciplines and geographical locations that could be adapted to promote sustainable development in your conservation or cultural heritage care context. Consider potential challenges and the future impact of these adaptations on conservation and cultural heritage care practice.</p>

LEADERSHIP IN GREEN CONSERVATION				
THEME	TOPICS	DESCRIPTION	LEARNING OUTCOMES	ACTIVITIES + ASSESSMENTS
Green Advocacy: Skill-Training, Future Proofing, Accessibility, and Social Cohesion	<i>Role of Advocacy in Cultural Heritage Care</i>	Encourages learners to consider integrating green(er) practices in their personal contexts by introducing them to communication strategies, and the role of outreach in advocating for green conservation practice. Module-takers will learn how to best use their sphere of influence for change.	Promote and advocate green(er) conservation strategies within one’s sphere of influence using communication tools.	<p>Group Activity: Engage in a one-on-one peer roleplay exercise advocating for green(er) approaches to conservation. Take turns playing the devil’s advocate!</p> <p>Activity: Map your sphere of influence to consider approaches when advocating for green(er) strategies</p> <p>Activity: Reflect on policies in professional practice and highlight areas which can incorporate green(er) strategies for cultural heritage care.</p>
	<i>Green Leadership in Action: Personal Projects</i>	Provides learners with the opportunity to present and reflect on their personal green leadership action projects. Projects should consider long-term impact towards green(er) approaches in conservation and cultural heritage care.	Reflect on personal practice by assessing one’s own professional or academic work through the lens of the green conservation definition and parameters.	<p>Action Project: Report and present on the action project developed during the module. How can you incorporate the things you have learned to improve the impact of your project?</p>

DISCLAIMER

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 Horizon Europe. Neither the European Union nor the granting authority can be held responsible for them.

AUTHORS AND CONTRIBUTORS

These modules were developed as a part of Work Package 7 of the GoGreen project funded by the European Commission for Horizon Europe (grant no 101060768). We would like to thank all participating researchers in the GoGreen consortium, researchers from the Green Cluster projects MOXY and GREENART, members of the GoGreen Advisory Board, *and Green Education in Conservation Paris Symposium attendees.*

Additionally, we would like to thank the broader conservation community for collaborating in the development of the module templates through inputs and feedback via workshops, surveys, and focus groups. For more details on the list of contributors see the project deliverable 7.1 report.

1: Sustainability and Cultural Heritage

Author: Caitlin Southwick

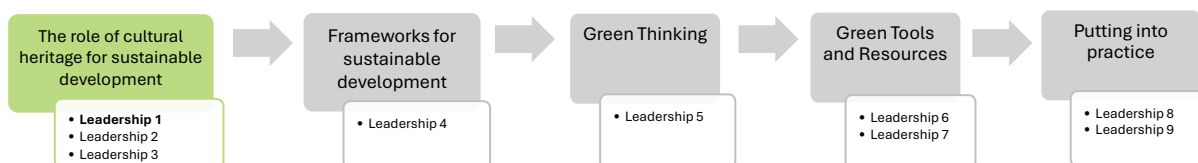
This session introduces general policies, frameworks, and guidelines for sustainable development and how they are relevant to cultural heritage.

Key Concept 1	Natural Environment and Climate Change
Key Concept 2	Resources
Key Concept 3	Human Health and Well Being
Key Concept 4	Cultural Heritage

OBJECTIVES

Objective 1	Understand sustainability
Objective 2	Understand how sustainability impacts cultural heritage
Objective 3	Understand how cultural heritage impacts sustainability
Objective 4	Connect practical cultural heritage work to policy and sustainability frameworks

Module placement in Leadership in Green Conservation learning trajectory



CONTENT OUTLINE

Introduction to Sustainability

- What is sustainability?
 - The three pillars – environmental, social and economic
 - Definitions
- Concept and history of Sustainable Development (UN SDGs)
- Sustainability v. Green/Climate
- Terminology and Concepts (focused on green only):
 - Climate Change, Carbon/GHG, Energy-consumption, Circular economy, net-zero, carbon-neutral climate justice

- Green Frameworks:
 - EHS
 - Classification of Hazards: Globally Harmonized System (GHS)
 - Circular Economy
 - 5'Rs for Zero Waste
 - LCA

Policy Frameworks and Guidelines

Each policy framework will be introduced and examined in its relevance to cultural heritage

- History of Climate Discussions and current international accord: Rio/Kyoto through to the Paris Agreement
- European Green Deal
- Agenda 2030 and the United Nations Sustainable Development Goals
- CHGs - the SDGs for Culture
- IPCC
- UNFCCC
- UNESCO
- ICOM / ICOM Sustain

Cultural Heritage for Sustainable Development

- How does sustainability apply to cultural heritage?
- Impacts and direct links from our work to climate and vice versa

SESSION OUTLINE (total 2 hours)

The session starts with a PowerPoint presentation introducing concepts of sustainability, policy and frameworks and connecting these to cultural heritage and practical work. The presentation slides and a script are provided.

After the presentation, students (independently, in pairs, or in groups) work on the activity. The worksheet is provided.

The results of the activity are discussed all together.

Students are then given the assessment (worksheet provided) which is to be completed independently.

Summary / Wrap-Up

Students are encouraged to check out the resources for more information and deeper learning and follow the sustainability groups for cultural heritage.

METHODOLOGY

Delivery format

- Lecture ([PowerPoint Presentation App 1.1](#) – 1 hour)
- Practical exercise (activity) and discussion (1 hour)
- Assessment (after the session)

Activities / Exercises / Assessments

Activity: See activity worksheet **App 1.2** (1 hour)

Option 1: In-class delivery (individual or group work)

1. Distribute the worksheet to all students.
2. Ask students to read each example scenario carefully.
3. Instruct them to identify and list all the ways each scenario relates to sustainability, using the frameworks and impact areas introduced in the module (e.g. environmental, resources, human health and well-being, cultural heritage).
4. Students may work:
 - Individually, or
 - In small groups (2–4 people) to encourage discussion and multiple perspectives.
5. Allow approximately 30–40 minutes for completion.

Follow-up discussion (20-30 minutes)

After completing the worksheet, reconvene as a group and facilitate a discussion:

- Invite students to share key observations or surprising connections
- Compare how different groups interpreted the same scenario
- Highlight any common themes, gaps, or tensions that emerged
- What was easy and what was challenging?

Option 2: Independent / Homework assignment

1. Assign the worksheet for completion outside of class time.
2. Provide the same instructions: students should read each scenario and map its relationship to sustainability using the frameworks introduced.
3. Ask students to come prepared with:
 - their completed worksheet
 - 1–2 key insights or questions

Follow-up discussion (next class)

In the next class, spend 15 minutes discussing the activity:

- Review selected examples
- Facilitate group discussion
 - Invite students to share key observations or surprising connections
 - Compare how different groups interpreted the same scenario
 - Highlight any common themes, gaps, or tensions that emerged
 - What was easy and what was challenging?
- Clarify misunderstandings
- Connect insights back to key concepts in the module

Teaching notes

- Emphasise that this is an exploratory exercise—there are no single “correct” answers.
- Encourage students to think broadly and consider both direct and indirect impacts.
- This activity is intended to build confidence and familiarity with sustainability concepts before moving into more structured analysis in later assessments.

Assessment: See assessment worksheet: **App 1.3**

This assessment builds on the initial activity by requiring learners to independently analyse a cultural heritage activity through a structured sustainability lens.

Learners apply key concepts from the module – including:

- the four impact areas
- policy and sustainability frameworks
- critical reflection on trade-offs

The goal is to move from recognition → analysis → action, demonstrating the ability to connect theory to real-world practice.

This assessment contributes to the learning outcomes:

- Analyse the relationship between cultural heritage and sustainability
- Evaluate sustainability in professional or academic practice
- Reflect on decision-making in conservation contexts

Facilitator notes

Please feel free to make this script your own – and also it's ok not to know everything! You certainly don't need to be an expert on the SDGs or Green Policy in order to present on this. If you get questions you don't know the answer to – use that as an opportunity to look things up together as a group and discuss. This session is not about being perfect or a sustainability expert, but just about exploring the various support materials and mechanisms for sustainability and understanding how connected it is to culture.

The module is designed to be flexible and can be given in person or online – as well as the activity and assessment which can also be done either during the class time or as assignments depending on the format.

ADDITIONAL RESOURCES

Podcast, website, blog, webinar, programs, etc.

- [The Climate Dictionary | United Nations Development Programme](#)

Recommended readings:

- The Globally Harmonized System Summary - [wcms_841722.pdf](#)
- Revised GHS Book - [Globally Harmonized System of Classification and Labelling of Chemicals \(GHS Rev. 10, 2023\) | UNECE](#)

Supplementary readings:

- [fastfacts-what-is-climate-change.pdf](#)
- IPCC Glossary - [Glossary — Global Warming of 1.5 °C](#)
- Nine Principles of Green Heritage Science: Life Cycle Assessment as tool enabling green transformation (Elnaggar, 2024)
- *Heritage in a Circular Economy | Heritage Counts | (Historic England, 2024)*
- [Life Cycle Assessment Explained - STiCH](#)
- UNESCO [World Heritage Centre - World Heritage and Sustainable Development](#)
- World Commission on Environment and Development (WCED): Our Common Future (so-called Brundtland Report), Oxford, New York: Oxford University Press, 1987, London. <https://www.brundtland.co.za/other-publication/brundtland-report-1987-our-common-future/>

- Rio Declaration 1992 Earth Summit in Rio de Janeiro. The 27 principles guide countries in future sustainable development. A second document called
- Agenda 21: action plan of the United Nations adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) that has been updated in the following summits. <https://www.un.org/en/conferences/environment/rio1992>
- Agenda 2030. United Nations 17 Sustainable Development Goals. United Nations Sustainable Development Summit 2015, 25 - 27 September 2015, New York. <https://sdgs.un.org/goals>
- European Green Deal. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee of the Regions, The European Green Deal, COM (2019) 640. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
- Stephen Dovers, Karen Hussey – Environment and Sustainability: A policy handbook, Annadale N.S.W.: The federation Press, Second edition
- European Environment Agency’s homepage – Policy Corner: EU Policies We Support
- UNESCO – Culture is Key in Achieving a More Sustainable World <https://www.unesco.org/en/sustainable-development/culture>
- Directive of the European Parliament and of the Council – Po <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?url=CELEX:52022PC0143&from=EN>
- Circular Economy <https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>
- Critical Entities Resilience Directive <https://www.critical-entities-resilience-directive.com/>
- Green Cluster Roundtable 3- Strategic Policy Recommendations <https://gogreenconservation.eu/wp-content/uploads/2026/04/Green-Cluster-White-Paper.pdf>



Leadership in Green Conservation

Sustainability and Cultural Heritage



Session Overview

Introduction to sustainability

Policy Frameworks

Cultural Heritage Connections

Activity & Discussion



Learning Objectives

- Understand sustainability
- Understand impacts on cultural heritage
- Understand cultural heritage connections to sustainability
- Connect practice to policy



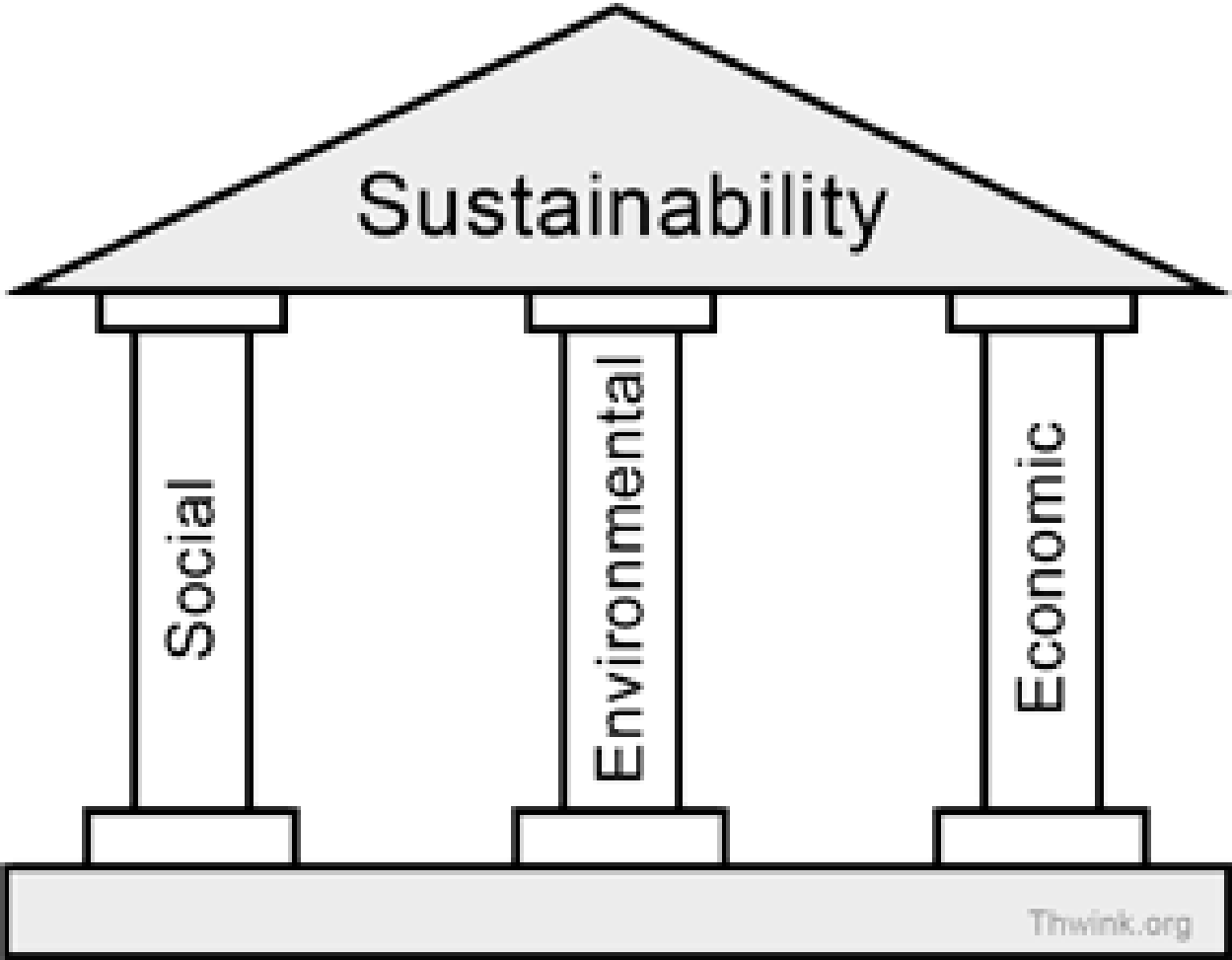
What is sustainability?

“meets the needs of the present without compromising the ability of future generations to meet their own needs”

[The Brundtland Report 1987](#)



Three Pillars: Social, Environmental, Economic



Agenda 2030 and the Paris Agreement

Agenda 2030:

Transforming Our World
People - Planet - Prosperity -
Peace - Partnership

Paris Agreement:

Limit global
temperature increase to 1.5°C





United Nations SDGs





Key Concepts

- Climate Change
- Carbon & Greenhouse Gas Emissions
- Circular Economy
- Energy Consumption
- Net Zero & Carbon-Neutral
- Climate justice



Sustainability v. Green

Sustainability = three pillars:
environmental, social, and economic

Green = one pillar: environmental

Both are relevant for cultural heritage

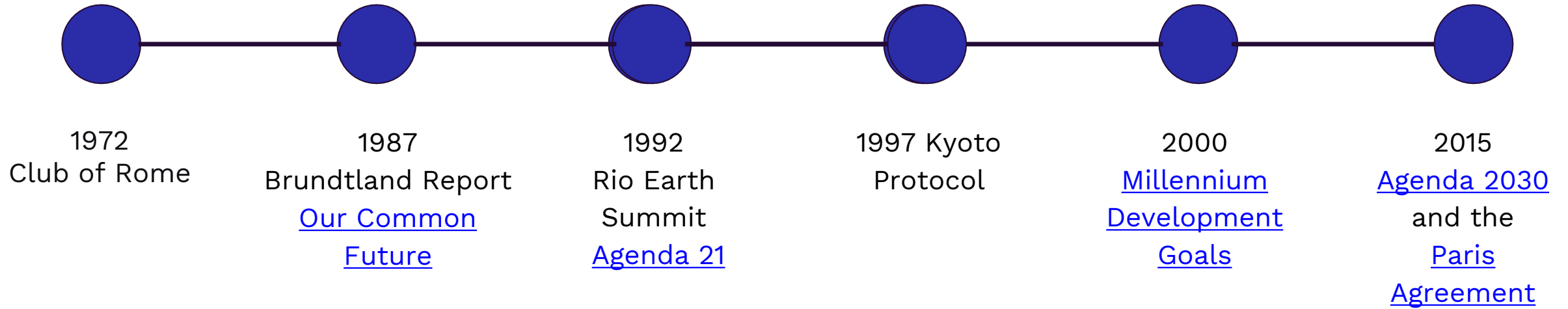


Green Frameworks

- [Environmental, Health, and Safety \(EHS\)](#)
- [Classification of Hazards: Globally Harmonized System \(GHS\)](#)
- [Circular Economy](#)
- 5'R_s for Zero Waste: Refuse, Reduce, Reuse, Repurpose, Recycle
- LCA: Life Cycle Assessment (STiCH)
- [Environmental, Social, and Governance \(ESG\)](#)



History of Policy Frameworks





Policy Frameworks

- UN SDGs
- European Green Deal
- IPCC
- UNFCCC
- UNESCO
- ICOMOS
- ICOM / ICOM Sustain

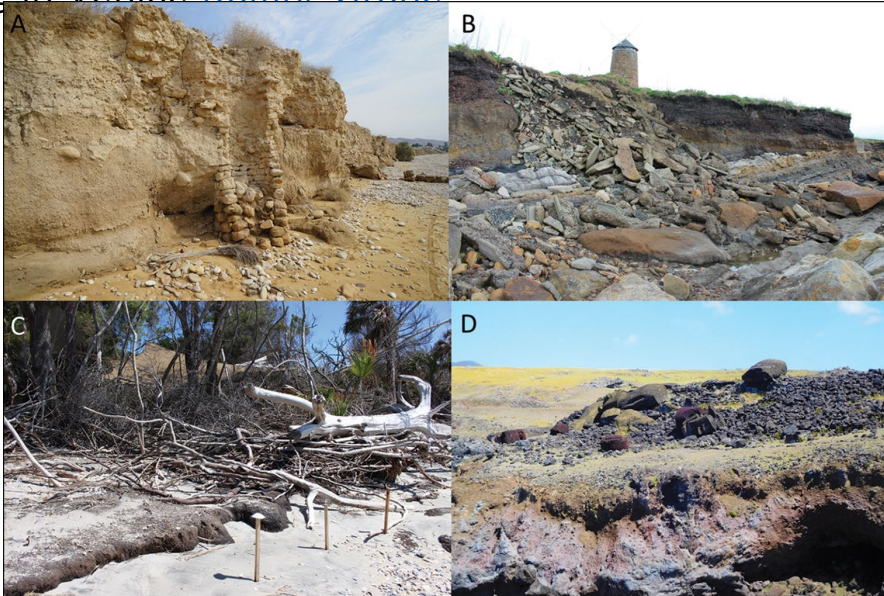
How does climate change impact culture?



Flooding in Venice [Rolling Stone](#)



The UN-protected site of al-Bajrawiya has relics 2,300 years old [BBC](#)



Examples of archaeological sites impacted by coastal erosion: A) the base of Siraf's old city walls on the Persian Gulf of Iran (photograph by M. Pourkerman); B) St Monans, Scotland (photograph by T. Dawson); C) a beach in South Carolina, USA. (photograph by T. Dawson); and D) Ahu Akahanga, Rapa Nui (photograph by J. Downes). CREDIT: M. POURKERMAN, T. DAWSON, AND J. DOWNES. [Popsci](#)

How does climate change impact culture?



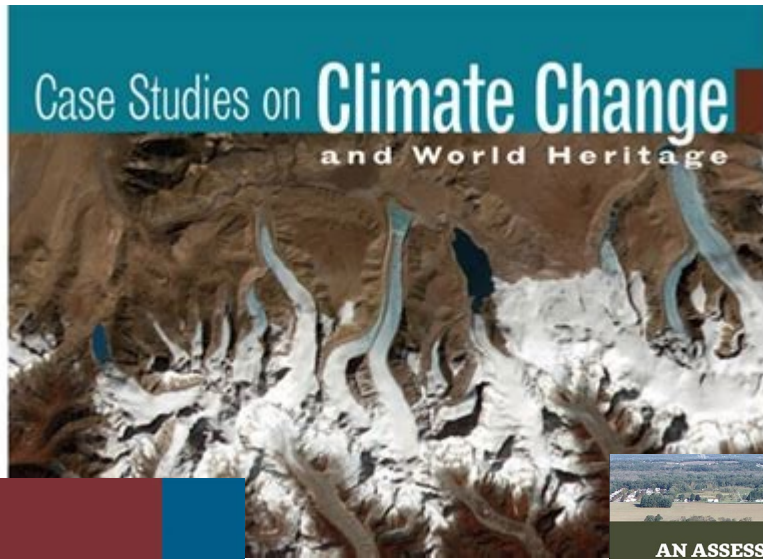
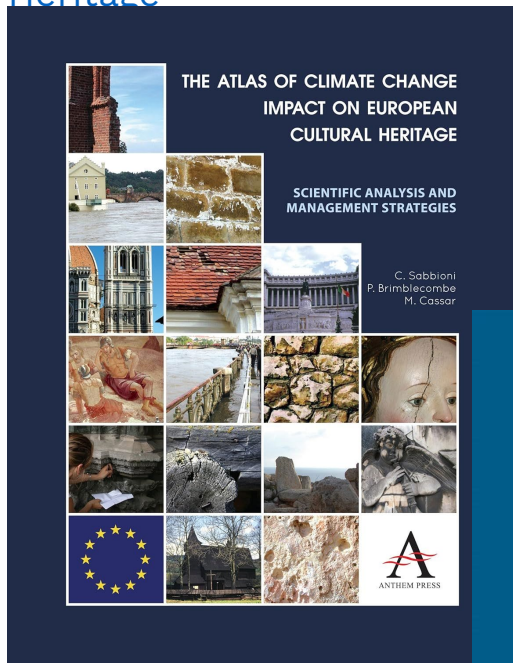
Getty Fires [Deadline.com](https://www.deadline.com)



Evacuation of Louvre Art

How does climate change impact culture?

The Atlas of Climate Change Impact on European Cultural Heritage

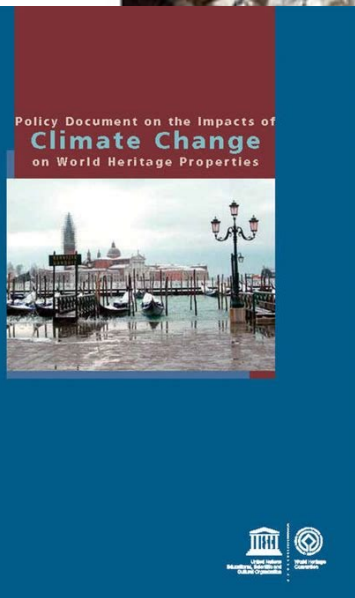


INTERNATIONAL ONLINE TRAINING ON CLIMATE CHANGE RISKS OF CULTURAL HERITAGE
2ND FEBRUARY 2024

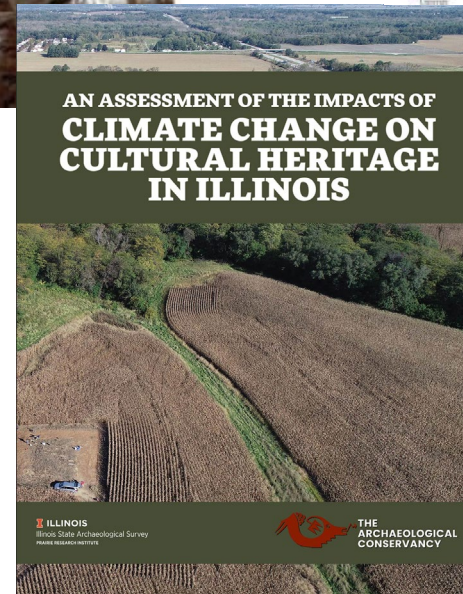
Online Training on Climate Change Risks of Cultural Heritage Program (18 hours)	
Workshop	Prof. Dr. Abdul Özener / Assoc. Prof. Dr. Nevan Şenel (Project Coordinators)
Introduction and Goals of CRAFT Project	Assoc. Prof. Dr. Nevan Şenel (METU)
Flood Insecter risk management	Assoc. Prof. Dr. Nevan Şenel (METU)
International Efforts against Climate Change Impacts on Cultural Heritage	Prof. Dr. İsmail Şenel (YU)
BREAK 15:30-16:00	
Cultural Heritage and Climate Change A Discussion on Impacts and Cultural Heritage	Assoc. Prof. Dr. Şahin İnan (METU)
Heritage Including Information Modelling	Prof. Dr. Turali Kılıç (Dokuz Eylül University)
How to utilize open source data for preliminary assessment of floods and subsidence	Orhan Özgür (Marmara)
Discussion and Questions	
BREAK 16:30-17:00	
In the Wake of Climate Crisis and Youth Climate Movements: What Matters to Cultural Heritage in Nigeria?	Eniola Adedun (METU)
Triggered Floods due to Climate Change and Determining the Indicators of Flood Risk of Cultural Heritage	Dr. Baki Güllüoğlu (Yıldırım Beyazıt University)
Adaptation and Mitigation Strategies for Climate Change on Urban Heritage of İzmir	Ediçe Şiktaş (The Historical Park City of Izmir Site Management Office)
Discussion and Questions	

Application Link
<https://forms.gle/4WY4H4QD9EPE29>

Organizing Committee
Prof. Dr. Abdul Özener - Durham University - Durham/United Kingdom
Prof. Dr. Şenel Nevan - Yıldırım Beyazıt University - Samsat/Çankırı
Assoc. Prof. Dr. Nevan Şenel - Marmara University - Söğütözü/Çankırı
Assoc. Prof. Nevan Şenel - Yıldırım Beyazıt University - Ankara/Turkiye
Assoc. Prof. Nevan Şenel - Yıldırım Beyazıt University - Ankara/Turkiye
Dr. İsmail Şenel - Marmara University - Söğütözü/Çankırı
Dr. Baki Güllüoğlu - Yıldırım Beyazıt University - Ankara/Turkiye
Dr. Ediçe Şiktaş - The Historical Park City of Izmir Site Management Office
Dr. Eniola Adedun - Durham University - Durham/United Kingdom
Turali Kılıç - Marmara University - Söğütözü/Çankırı



UNESCO



Illinois State Archaeological

Durham University

How does climate change impact archaeology?



Author: Benjamin D. Jones

nzarchaeology.org





How does culture impact sustainability?



Goals for All - and for Culture

Culture & Heritage Goals





Four Impact Areas

- Natural Environment & Climate Change
- Resources
- Human Health & Well-Being
- Cultural Heritage



Natural Environment & Climate Change

- Climate change (e.g. emissions)
- Ecosystems and biodiversity
- Pollution and environmental degradation

- Energy consumption
 - Biggest contributor is climate control!
 - Lights - LED and security
- Carbon emissions from travel
 - Business travel / courier
 - Art shipping / loans / traveling exhibitions / art fairs
 - Crates



Resources

- Materials used
 - life cycle assessment - where does it come from, where does it go?
- Water
 - Consumption
 - Contamination
- Energy
 - As a resource - limited! (Connected to first impact area)



Human Health & Well-Being

- Chemical use and toxicity exposure
- Biological hazard exposure
- Mental health
- Burnout and overworking
- Accessibility and inclusion for communities and audiences



Cultural Heritage

- Preservation
- Social impact
- Value
- Access
- Ethics



Activity

Evaluate:

- Social impact
- Value
- Access
- Ethics

This activity introduces learners to the relationship between sustainability and cultural heritage through practical real life examples. Learners explore and identify how everyday conservation and heritage activities connect to broader sustainability challenges.



APPENDIX 1.2

Activity: Sustainability and Cultural Heritage

Worksheet: Sustainability Mapping (Guided Exploration)

Time: 1 hour total

30-40 minutes to fill out the worksheet

20-30 minutes for group discussion

Format: Individual, pairs or group

This activity introduces learners to the relationship between sustainability and cultural heritage through practical real life examples. Learners explore and identify how everyday conservation and heritage activities connect to broader sustainability challenges.

The aim is not to reach “correct” answers, but to:

- build confidence in recognising sustainability dimensions
- introduce the four impact areas of green conservation
- encourage broad, systems-based thinking

Instructions

In a group, in pairs, or individually, examine the examples of cultural heritage activities below and discuss/brainstorm how this relates to sustainability. You may use the UN SDGs, the four impact areas, circular economy, or any other sustainability framework presented. There are no wrong answers - only ways that we can connect our work to the world! Remember - the same activity may have positive impacts and negative ones - write them all down! Write down your observations and then share with the rest of the group.

Case Study 1: A museum updates its climate control conditions to Bizot

List all the ways this activity connects to the four impact areas.

Environmental / Climate impacts

-
-
-
-

Resources (materials, energy, waste)

-
-
-
-

Human health & well-being

-
-
-
-

Cultural heritage (preservation, access, value)

-
-
-
-

Case Study 2: Transporting objects for an international loan

List all the ways this activity connects to the four impact areas.

Environmental / Climate impacts

-
-
-
-

Resources (materials, energy, waste)

-
-
-
-

Human health & well-being

-
-
-
-

Cultural heritage (preservation, access, value)

-
-
-
-

Case Study 3: Digitizing a collection

List all the ways this activity connects to the four impact areas.

Environmental / Climate impacts

-
-
-
-

Resources (materials, energy, waste)

-
-
-
-

Human health & well-being

-
-
-
-

Cultural heritage (preservation, access, value)

-
-
-
-

Case Study 4: Conservation treatment using solvents

List all the ways this activity connects to the four impact areas.

Environmental / Climate impacts

-
-
-
-

Resources (materials, energy, waste)

-
-
-
-

Human health & well-being

-
-
-
-

Cultural heritage (preservation, access, value)

-
-
-
-

Case Study 5: Creating an exhibit on social justice

List all the ways this activity connects to the four impact areas.

Environmental / Climate impacts

-
-
-
-

Resources (materials, energy, waste)

-
-
-
-

Human health & well-being

-
-
-
-

Cultural heritage (preservation, access, value)

-
-
-
-

2: Cultural Heritage Care, Resources, and the Environment

Author: Caitlin Southwick

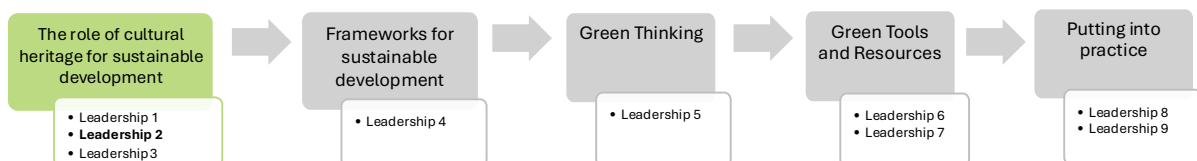
This session explores the interconnected relationship between cultural heritage care, resource use, and environmental impact. Through real-world case studies, participants examine how the climate crisis is affecting cultural heritage and how conservation practices influence environmental outcomes. The session emphasises how more sustainable approaches to conservation can support both environmental goals and improved preservation outcomes.

Key Concept 1	Climate impacts on cultural heritage (risk, vulnerability, exposure)
Key Concept 2	Resource use in conservation (materials, energy, water)
Key Concept 3	Environmental impact of conservation practice (carbon, waste, toxicity)
Key Concept 4	Sustainable conservation as improved practice (efficiency, resilience, co-benefits)

OBJECTIVES

Objective 1	Understand how climate change is directly impacting cultural heritage across different environmental conditions.
Objective 2	Identify how conservation practices contribute to environmental impact through energy, materials, and resource use.
Objective 3	Analyse the relationship between conservation decision-making and sustainability outcomes.
Objective 4	Recognise opportunities to improve both sustainability and preservation through more informed decision making.

Module placement in Leadership in Green Conservation learning trajectory



SESSION OUTLINE (total 2 hours)**Part 1: Climate Impacts on Cultural Heritage** (30 minutes)

- Overview of environmental hazards:
 - extreme temperatures
 - flooding / precipitation changes
 - wildfires
 - coastal erosion
 - pollutants and bio-infestation
- Case studies:
 - Getty fire
 - Serbia floods
 - Cameroon museum
 - Australia fires
 - Floods in Europe
 - Fires in Canada
 - Coastal erosion in Scotland
- Emphasise:
climate change as an *active, present condition*

Part 2: Environmental Impact of Conservation Practice (30 minutes)

- Energy use:
 - climate control systems
 - lighting
- Carbon footprint:
 - loans, transport, exhibitions, couriers
- Materials:
 - plastics, foams, PPE
- Water + toxicity:
 - chemical use
- Digital footprint:
 - storage, digitisation

Key framing: conservation decisions shape environmental outcomes

Part 3: Resources and Decision-Making (20 minutes)

- Life Cycle Thinking:
 - materials origin → use → disposal
- STiCH examples
- Bizot (updated climate control)

- Resource constraints:
 - cost
 - availability
 - environmental burden

Reinforce: better choices = better outcomes (not compromise)

Part 4: Case-study presentations

- Case Studies from Denmark, North America and France from Getting Climate Control Under Control: <https://kifutures.com/getting-climate-control-under-control/>
- Virtual Courier case study from Artichек <https://www.articheck.com/case-studies/design-museum/> , <https://www.articheck.com/case-studies/>
- Climate Impact Reports from Artists Commit <https://www.artistscommit.com/reports>
- STiCH <https://stich.culturalheritage.org/case-studies/>

Part 5: Activity + Reflection (20–30 minutes)

Case studies

Environmental hazard	Resource
Extreme temperatures	Australia Heatwaves in Europe Permafrost thaw
Change of precipitation patterns - flood	Floods and Their Impact on Cultural Heritage- A Case Study of Southern and Eastern Serbia (OPEN ACCESS)
Change in relative humidity	1) Caring for Collections in a Changing World: Case Study of the National Museum of Cameroon (OPEN ACCESS) 2) Impact of climate change on indoor environmental of historic libraries in mediterranean climate zone (OPEN ACCESS)
Wildfires	Climate Change, Fire and Cultural Heritage in Australia (OPEN ACCESS) Canada Getty Fire
Coastal erosion	Scotland, English Heritage
Rise in pollutants	Corrosion studies of Metals
Rise bio-infestation (microorganisms)	1) Influence of Environment on Microbial Colonization of Historic Stone Buildings with Emphasis on Cyanobacteria (OPEN ACCESS)

	2) Effects of Climatic Change on Microorganisms Colonizing Cultural Heritage Stone Materials (ONLINE PDF)
Rise in bio-infestation (pests)	Future pest status of an insect pest in museums, <i>Attagenus Smirnovi</i> : Distribution and Food Consumption in relation to Climate Change

Case studies of museums updating climate control: <https://kifutures.com/getting-climate-control-under-control/>, Bizot Green Protocol <https://www.nationalmuseums.org.uk/what-we-do/climate-crisis/bizot-green-protocol/>

Summary / wrap-up

Questions which may be posed at the end:

- What environmental impact surprised you most?
- Where do you see opportunities to improve practice?
- What would you change in your own context?

Students are encouraged to check out additional materials and resources to learn more about museums combatting climate change.

METHODOLOGY

Delivery format

- Lecture + case study analysis
- Group discussion
- Applied activity
- Assessment

1. Activity (worksheet App 2.1)

Students use a climate control tool (HERIe, CCI Climate Spec Tool, or IPI Dew Point Calculator) to explore how environmental conditions affect both preservation outcomes and energy use. By testing different scenarios, students evaluate how climate control strategies can be adjusted to improve sustainability while maintaining appropriate preservation conditions.

If time or technical familiarity is limited, the instructor may demonstrate the tool instead of requiring full student use.

Purpose

- Develop practical understanding of climate control decision-making
- Connect environmental conditions to both preservation and energy use
- Reinforce the concept that sustainable approaches can support improved practice
- Introduce students to professional tools used in the field

Instructions (summary for facilitator)

- Provide a baseline scenario (e.g. 21°C / 50% RH for a collection type)
- Students input conditions into the tool
- Students test alternative environmental ranges
- Students compare preservation outcomes and likely energy implications
- Students propose a preferred strategy

Estimated duration

- Introduction: 5–10 minutes
- Activity work (group): 25–30 minutes
- Brief discussion: 10–15 minutes

Total: 40–50 minutes

Format

- Small groups (2–3 students)

Materials required

- Access to one climate tool:
 - HERIe
 - CCI Climate Spec Tool
 - OR IPI Dew Point Calculator
- Worksheet or guiding questions (optional but recommended)
- Calculator / laptop access
- Pre-defined case scenario (provided by instructor)

Facilitator notes

- Focus students on **comparison and reasoning**, not technical perfection
- Reinforce: *range-based thinking vs fixed “ideal” conditions*
- Encourage discussion of both preservation and sustainability

2. Assessment: Climate Control Position Essay (worksheet App 2.2)

Description

Students write a short essay evaluating whether cultural heritage institutions should update climate control parameters away from fixed “ideal” standards toward more flexible, needs-based approaches. The essay should present a clear argument supported by course materials, case studies, and examples.

Purpose

- Develop critical thinking and professional judgement
- Engage with current debates in conservation practice
- Encourage students to form and justify a position
- Connect theory, tools, and real-world application

Task summary

Students respond to the prompt:

Should cultural heritage institutions update climate control parameters away from fixed “ideal” standards toward more flexible, needs-based approaches? Why or why not?

They must:

- define the issue
- engage with key debates
- present a clear argument
- support with evidence
- reflect on practical implications

Estimated duration

In-class introduction: 10–15 minutes (explanation + Q&A)

Independent work: 1–2 hours outside of class

Format

- Individual submission

Submission requirements

- 500–800 words
- Short essay format
- Clear argument and supporting evidence

Materials required

- Course slides and notes
- Case studies discussed in class
- Access to climate tools (optional but encouraged)
- Recommended readings (e.g. ECP, ASHRAE, Bizot discussions, STiCH)

Assessment criteria

- Understanding of climate control concepts
- Strength and clarity of argument
- Critical engagement with sustainability and preservation
- Use of evidence and examples
- Relevance to professional practice

Facilitator notes

- Emphasise that there is **no single correct answer**
- Evaluate quality of reasoning, not position taken
- Encourage students to engage with complexity rather than simplify

While this session encourages students to critically engage with the role cultural heritage plays in the climate crisis, it is equally important to affirm the central role of preservation within the field.

Climate action in cultural heritage should not be understood as a compromise or as something that comes at the expense of collections, sites, or cultural value. On the contrary, many of the approaches being developed and implemented today demonstrate that sustainability and preservation are not in opposition—they are aligned.

More sustainable practices in areas such as climate control, materials use, and resource management are increasingly shown to support improved preservation outcomes, long-term stability, and institutional resilience.

The goal, therefore, is not to lower standards, but to move away from rigid notions of “ideal” conditions toward more informed, evidence-based, and context-sensitive approaches. These approaches recognise that good conservation practice is dynamic, responsive, and grounded in both scientific understanding and environmental responsibility.

This session emphasises that preserving cultural heritage and protecting the environment are interconnected objectives. When approached thoughtfully, they reinforce one another. In short: sustainability in cultural heritage is not about sacrifice – it is about doing things better.

ADDITIONAL RESOURCES

- ECP white paper Culture Over Carbon <https://www.ecprs.org/case-studies/culture-over-carbon>
- Carbon Impact Reports <https://www.artistscommit.com/reports>
- Ki Futures International Climate Control Conference (2022 [Day 1](#) [Day 2](#))
- [Ki Futures International Climate Control Conference \(2024\)](#)
- [Case studies from the Getting Climate Control Under Control Program](#)
- The impact of climate change on cultural heritage - [The impact of climate change on cultural heritage](#)
- Impacts, Vulnerability, and Understanding Risks from Climate Change to Culture and Heritage - [openarchive.icomos.org/id/eprint/2718/1/ICSM CHC White Paper II- Impacts, vulnerability, and understanding risks of climate change for culture and heritage.pdf](https://openarchive.icomos.org/id/eprint/2718/1/ICSM_CHC_White_Paper_II-Impacts_vulnerability_and_understanding_risks_of_climate_change_for_culture_and_heritage.pdf)
- The Future of Our Pasts: Engaging Cultural Heritage in Climate Action (Climate Change and Cultural Heritage Working Group ICOMOS, 2019)
- Calculating the Carbon Footprint of Interventive and Preventive Conservation at English Heritage (Tate-Harte & Thickett, 2024)
- Managing Environments for Collections: The Impact of International Loans on Sustainable Climate Strategies (Taylor, 2018)
- Crowley, Kate, Rowan Jackson, Siona O’Connell, Dulma Karunarthna, Esti Anantasari, Arry Retnowati, and Dominique Niemand. 2022. “Cultural Heritage and Risk Assessments: Gaps, Challenges, and Future Research Directions for the Inclusion of Heritage Within Climate Change Adaptation and Disaster Management.” *Climate Resilience and Sustainability* 1 (3): e45. <https://doi.org/10.1002/cli2.45>.
- Kramer et al (2016) Impact of ASHRAE’s museum climate classes on energy consumption and indoor climate fluctuations

APPENDIX 2.1

Activity: Cultural Heritage Care, Resources, and the Environment

Worksheet: Climate Control Impact Lab: Evaluating Climate Control: Preservation + Sustainability Outcomes

Students use a climate control tool (HERIE, CCI Climate Spec Tool, or IPI Dew Point Calculator) to explore how different environmental conditions affect both preservation outcomes and energy use.

They test scenarios and evaluate how adjusting environmental parameters can improve sustainability while maintaining or improving preservation conditions.

Understand how climate control decisions:

- Influence energy use and carbon impact
- Affect preservation conditions
- Can be optimised for both

Time: 30-40 minutes

Format: Small groups (2–3 people)

Instructions

Instructors provide:

- One object type or collection scenario:
 - Art collection
 - Paper archive
 - Paintings
 - Mixed collection
 - Photographic materials
 - Historic interiors

- Baseline climate condition:
 - 19°C/70°F +/-2
 - 50% RH +/-5%

- Select one tool to test (choose depending on audience):
 - HERIE (advanced) <https://herie.pl/>

- CCI Climate Spec Tool (mid-level)
<https://www.canada.ca/en/conservation-institute/services/preventive-conservation/climate-guidelines/climaspec.html>

- IPI Dew Point Calculator (simpler) <http://dpcalc.org/>
https://www.getty.edu/conservation/publications_resources/pdf_publications/pdfs/tool_s_for_analysis.pdf

Instructions (students)

Step 1: Input baseline

- Enter given environmental conditions into tool
- Observe:
 - Preservation risk indicators
 - Stability conditions

Step 2: Test alternative conditions

Adjust:

- Temperature range
- RH range
- Seasonal variation
- Bizot

Try at least 2–3 alternative scenarios

Step 3: Compare outcomes

For each scenario, evaluate:

Preservation:

- stability
- risk (mould, mechanical damage, chemical decay)

Sustainability:

- likely energy demand
- level of control required
- system intensity

Step 4: Conclusion and discussion

Which environmental strategy provides the best balance of preservation and sustainability?

Provide:

- reasoning
- trade-offs (if any)
- proposed recommendation

3. Human Health and Well-Being, and Societal Impact Areas

Author: Caitlin Southwick

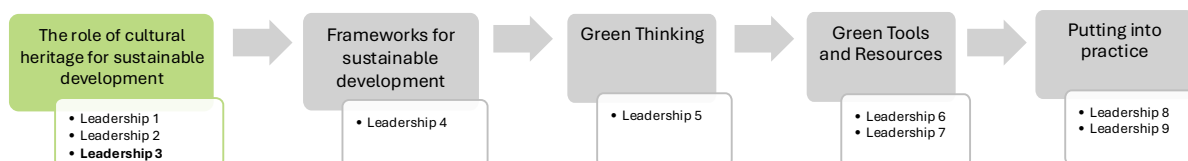
This session explores the human and societal dimensions of sustainability in cultural heritage. It examines both the positive and negative impacts of conservation and heritage practice on human health, well-being, and broader social systems. Through case studies and discussion, learners consider issues such as workplace health, equity, access, and ethical responsibility, and how these shape more sustainable and inclusive cultural heritage practice.

- Key Concept 1 **Human health impacts (chemical exposure, physical strain, mental health)**
- Key Concept 2 **Workplace sustainability (labour conditions, job precarity, diversity and inclusion)**
- Key Concept 3 **Societal impact (access, representation, community engagement)**
- Key Concept 4 **Ethics and responsibility (who benefits, who is excluded, long-term impact)**

OBJECTIVES

- Objective 1 Understand how conservation practices and materials impact human health and well-being.
- Objective 2 Identify social and ethical dimensions of cultural heritage, including access, inclusion/belonging, and equity/equality.
- Objective 3 Analyse how cultural heritage contributes to societal well-being and community.
- Objective 4 Evaluate how sustainability in cultural heritage must account for both people and practice.

Module placement in Leadership in Green Conservation learning trajectory



PREPARATORY MATERIALS

Review literature from case studies below. Please note that students are not required to read everything in full, but just to familiarize themselves with the ideas.

SESSION OUTLINE (total 2 hours)

This session is part presentation and part discussion and can be presented as a PPT with supporting case studies, examples and scenarios for discussion.

Each topic is outlined below with examples and discussion questions. Additional case studies and examples are outlined in the next section. Feel free to select one or more of the discussion questions. You can tie the topic to a specific case study or keep it more general. Total time for presenting and discussing is 2 hours. After, the students are given a writing assignment to do on their own.

Topic 1: Human Health & Well-being in Conservation

- Chemical and toxic exposure:
 - Solvents, adhesives, toxic materials, dust
- Physical strain:
 - Repetitive work, ergonomics
- Mental health:
 - Burnout, stress, pressure (perfectionism, additional volunteer work)
- Structural issues:
 - Precarity
 - Low pay
 - Lack of diversity
 - Lack of support, long term security, opportunity

Sustainability includes the people doing the work - not just the objects.

Case studies / Examples: 1, 2, 3, 4, 5, 6

Discussion question 1: Conservators who have been repeatedly exposed to toxic chemicals such as xylene are diagnosed with cancer. This occupational hazard is not only unnecessary, but can be deadly. What is the price of conservation?

Discussion question 2: It is incredibly difficult right now to get a job in the cultural sector – you need experience and at least a Masters Degree – what kind of barriers does this set up for accessibility, inclusion, diversity, and also the mental health of cultural professionals?

Topic 2: Societal Impact of Cultural Heritage

- Access:
 - Physical, financial, intellectual, communities, collections, loans
- Representation:
 - Whose stories are told
 - Decolonization
- Community:
 - Identity, belonging
- Well-being:
 - Role of culture in mental and social health

Include audience-centred approaches and social impact measurement

Case studies / Examples: 7, 8, 9

Discussion question 1: Loan agreement requirements make loans an exclusive activity – with only a limited number of museums able to meet strict requirements. What kind of barriers are there in current loan practices and how might they be addressed? What ways can we improve access to art?

Discussion question 2: More than 95% of museum collections are in storage – and might never be seen. What impacts does this have on the planet? On our communities? On us, as cultural professionals? On the artists? How can we make our collections more accessible?

Discussion question 3: Exhibitions are currently curated, but this means that only one point of view is told. How can we decolonize our collections and our exhibitions to be more representative?

Topic 3: Ethics & Critical Questions

- “Who are we preserving for?”
 - Why do we do what we do?
- Long-term vs present needs
- Inclusion vs exclusion
- Cultural value vs institutional practice
- Indigenous and Origin Communities
 - Issues with ownership and permission
 - Repatriation and decolonization
 - Community engagement and object use
- Digital – digital access, digital sovereignty

Use social sustainability literature.

Case studies / Examples: 10, 11, 12

Discussion question 1: Why do you want to work in cultural heritage? In what ways do you think cultural heritage work supports your goals and in what ways do you think there might be tensions?

Discussion question 2: Museums have historically been exclusive – seen as elitist, only for certain people, and still restrict access to collections. How can museums be more inclusive? What does this look like in practice?

Discussion question 3: When considering various implications of cultural access and sustainability, there are often difficult discussions – for example, making people feel welcome, but also abiding by “museum etiquette” – i.e.. not touching the art. How do we navigate these tensions – making sure we are balancing access and preservation? What other examples might be relevant for this discussion?

Discussion question 4: Many Indigenous communities’ objects are in museums – and many of these objects are meant to be used (for example, in a ceremony). What are the various considerations that need to be discussed when a museum has a request from an Indigenous community for the use of one of their objects? Who’s decision is it?

[Assessment App 3.1](#) (take home)

Case studies / examples

1. Chemical Exposure in Conservation Labs

Source: Chemical exposure measurements in art restoration

<https://www.sciencedirect.com/science/article/abs/pii/S1871553207000382>

Context: Conservators exposed to solvents (toluene, xylene, acetone), work often done in poorly ventilated environments or without proper personal protective equipment

Impacts:

- Respiratory issues
- Skin irritation
- Long-term occupational disease risk, including cancer

2. Occupational Health Risks in Conservators

Source: Occupational Diseases in Art Conservators and Restorers

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11989223/>

Context: Systematic review of conservator health

Impacts:

- Musculoskeletal disorders
- Chronic exposure risks
- Repetitive strain

3. Mould Exposure in Collections Environments

Source: Mould Prevention and Collection Recovery: Guidelines for Heritage Collections – Technical Bulletin 26 <https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/technical-bulletins/mould-prevention-collection-recovery.html>

Context:

- Flooded or poorly controlled environments
- Archive and storage settings

Impacts:

- Respiratory illness
- Long-term health risks

4. Burnout and Precarity in the Museum Sector

Source: Workforce Reports from the Museum Association:

<https://www.museumsassociation.org/campaigns/workforce/>

Context: Short-term contracts. low pay, high expectations / pressure

Impacts:

- Burnout
- Stress
- Exit from profession

5. Diversity and Barriers to Entry in Conservation

Source: Aiding the Evolution of Art Museums to Reflect the Diversity of Our Country
<https://www.mellon.org/report/aiding-the-evolution-of-art-museums-to-reflect-the-diversity-of-our-country>

Museum Association The Case for Inclusive Museums:
<https://www.museumsassociation.org/campaigns/workforce/inclusion/valuing-diversity/>

Context:

- High cost of education
- Limited paid pathways
- Lack of representation

Impacts:

- Exclusion of underrepresented groups
- Narrow professional perspectives

6. Physical Strain in Conservation Practice

AIC Wiki on Health and safety: https://www.conservation-wiki.com/wiki/Category:Health_%26_Safety

Context: Large object handling, repetitive fine work

Impacts:

- Back injuries
- strain injuries

7. Audience-Centred Museum Approaches

Source: An Audience-Centric Approach for Museums Sustainability Di Pietro, L., Mugion, R. G., Renzi, M. F., & Toni, M. (2014). *Sustainability*, 6(9), 5745–5762.
<https://doi.org/10.3390/su6095745>

Context: Museums shifting from object-focused → audience-focused

Impacts:

- Increased engagement
- Improved accessibility
- broader public value

8. Measuring Social Impact in Museums

Source: Two Approaches to Measuring Social Impact in Utah Museums

<https://onlinelibrary.wiley.com/doi/epdf/10.1111/cura.12457>

Context: Museums measuring impact beyond attendance

Impacts:

- Evidence of community benefit
- Improved funding justification

9. Community-Led Heritage Projects

Source: ICCROM <https://local-approach.com/a-tool-for-measuring-peace-by-iccrom-community-based-heritage-indicators-for-peace/>

Context: Local communities involved in heritage decisions

Impacts:

- stronger cultural identity
- increased relevance
- shared ownership

Ethics & Critical Case Studies

10. “Who Do We Preserve For?”

Source: Beyond Lifetimes: Who Do We Exclude When We Keep Things for the Future?

<https://orca.cardiff.ac.uk/id/eprint/143565/1/Beyond%20lifetimes%20who%20do%20we%20exclude%20when%20we%20keep%20things%20for%20the%20future.pdf>

Context: Preservation prioritising future generations

Key question: Who is excluded in the present?

11. Restricted Access Collections

Source options:

- First Nations Information Governance Centre (OCAP principles)
<https://fnigc.ca/>
- Native American Graves Protection and Repatriation Act
<https://www.nps.gov/subjects/nagpra/index.htm>

- Australian Institute of Aboriginal and Torres Strait Islander Studies (cultural protocols) <https://aiatsis.gov.au/>

Context: Museums hold Indigenous cultural materials (objects, images, recordings) that they may not have permission to have or that may be sacred, may have gender or community restrictions, may not be intended for public display (intended for use, or has a spirit)

Issue: Traditional museum practice prioritises preservation. Complication is around access, and respect for Indigenous frameworks which prioritise cultural authority and consent. The tension is around control and ownership.

Positive impacts:

- Increased respect for communities
- Ethical stewardship
- Improved relationships

Challenges:

- Limited public access
- Reframing museum authority
- Institutional change required

12. Digital Access vs Digital Divide

Context: Museums digitising collections, COVID reaction

Source: The Digital Environment: online culture, offline implications. UNESCO <https://www.unesco.org/en/reshaping-creativity-reports/digital-environment>

Impacts:

- Increased access globally
- Excludes those without digital access
- Carbon footprint of digital – digital footprint

Summary / Wrap-Up

Create an environment where students feel safe and supported in sharing their perspectives and engaging in open discussion. These topics can be personal and, at times, sensitive, so it is important to foster a space grounded in respect, active listening, and thoughtful dialogue.

If delivering this session online, it is recommended that the session is not recorded, to encourage honest participation and reduce hesitation in contributing. At the beginning of the session, it may be helpful to set clear expectations around respectful engagement, patience, and openness to different viewpoints.

Example disclaimer (to read at the start of the session)

I'd like to start by acknowledging that some of the topics we'll be discussing today – such as workplace conditions, decolonization, and accessibility – can be sensitive and may connect to personal experiences.

Our goal is to create a space where everyone feels comfortable contributing, asking questions, and exploring ideas. We ask that everyone engages with respect, listens actively, and remains open to perspectives that may differ from their own.

You are welcome to participate in a way that feels appropriate for you, and it's okay to take a step back from discussion if needed. This is a space for learning, reflection, and constructive dialogue - not for judgment.

METHODOLOGY

Delivery format

The session should be delivered as a hybrid presentation and interactive discussion. The lecturer can guide participants through the topics, presenting examples and case studies and then posing the discussion questions to the students.

Activities / Exercises / Assessments

The activity is built into the presentation in this module (2 hours total)
The assessment (essay) can be done independently at home (varied times)

Facilitator notes

This session introduces key issues related to social justice and social sustainability, encouraging students to think critically about their role in advocating for more equitable and sustainable conditions within the field. It is not about having all the answers—many of these challenges are complex and still evolving—but about developing awareness, asking thoughtful questions, and engaging with both the positive contributions and ongoing challenges facing cultural heritage practice today.

ADDITIONAL RESOURCES

- Ferreira, M. R., Brito, A. V., & Fernandes, R. J. (2025). Occupational Diseases in Art Conservators and Restorers: A Systematic Review. *Healthcare*, 13(7), 819.
<https://doi.org/10.3390/healthcare13070819>

- Gherardi, M., Gordiani, A., & Proietto, A. (2007). Chemical exposure measurements in art restoration. *Journal of Chemical Health & Safety*, 14(6), 4–7. <https://doi.org/10.1016/j.jchas.2007.04.001>
- Di Pietro, Laura, Roberta Guglielmetti Mugion, Maria Francesca Renzi, and Martina Toni. 2014. “An Audience-Centric Approach for Museums Sustainability.” *Sustainability* 6 (9): 5745–5762. <https://doi.org/10.3390/su6095745>.
- Henderson, Jane. 2020. “Beyond Lifetimes: Who Do We Exclude When We Keep Things for the Future?” *Journal of the Institute of Conservation* 43 (3): 195–212. <https://doi.org/10.1080/19455224.2020.1810729>.
- Ross Nelson, Kari, Jennifer Ortiz, Stephen Ashton, and Emily Johnson. 2022. “Two Approaches to Measuring Social Impact in Utah Museums.” *Curator: The Museum Journal* 65 (1): 79–94. <https://doi.org/10.1111/cura.12457>.
- Barack, S., & Walthew, J. (2024). Social Dimensions of Sustainable Collections Care. *Journal of the American Institute for Conservation*, 64(1), 62–75. <https://doi.org/10.1080/01971360.2024.2369823>
- Museums Moving Forward <https://museumsmovingforward.com/>
- The Repatriation Handbook <https://www.primary-colours.ca/projects/34-indigenous-repatriation-handbook>
- *United Nations Declaration on the Rights of Indigenous Peoples (UN 2007, UNDRIP)* https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf
- People-Centred Approaches to the Conservation of Cultural Heritage: Living Heritage https://www.iccrom.org/sites/default/files/PCA_Annexe-2.pdf

APPENDIX 3.1

Assessment: Human Health, Well-being, and Societal Impact Essay

Rethinking Sustainability: Human and Societal Impacts in Cultural Heritage

Assessment description

This assignment asks you to critically evaluate how cultural heritage practice impacts human health, well-being, and society.

While sustainability is often discussed in environmental terms, this assessment focuses on the human and social dimensions of sustainability -examining both the benefits and the challenges within current cultural heritage practice.

Essay prompt

Write a 500–800 word essay responding to the following:

To what extent does current cultural heritage practice support human health, well-being, and societal sustainability? What needs to change to create a more sustainable and inclusive sector?

Guidance for students

Your essay should include the following:

1. Define the Scope

Briefly explain:

- what is meant by human health and well-being in cultural heritage
- what is meant by societal impact

2. Analyse Current Practice

Discuss how cultural heritage practice currently impacts:

- human health (e.g. chemical exposure, physical strain)
- well-being (e.g. burnout, job precarity)
- society (e.g. access, representation, inclusion)

Include both positive and negative impacts

3. Engage with key issues

You may wish to consider:

- working conditions in the sector
- barriers to entry and diversity
- access to cultural heritage
- ethical questions (e.g. who benefits? who is excluded?)

4. Develop Your Argument

Take a clear position:

- Is current practice sustainable in these areas?
- Where are the biggest gaps?
- What are the most urgent issues?

5. Propose Changes

Suggest realistic improvements, such as:

- changes in practice
- institutional approaches
- policy or professional shifts

6. Support with Evidence

Use case studies, suggested readings and/or examples from your own experience

Submission requirements

- 500–800 words
- Essay format (clear structure, paragraphs)
- Referenced where appropriate

Assessment Criteria

<i>Criteria</i>	<i>What is Expected</i>
Understanding	Clear understanding of human and societal sustainability

Analysis	Ability to evaluate both positive and negative impacts
Argument	Clear, coherent, and well-supported position
Critical thinking	Engagement with complexity and ethical issues
Application	Connection to real-world practice

4. Sustainability in Cultural Heritage Care Policies, Standards, and Guidelines

Author: Caitlin Southwick

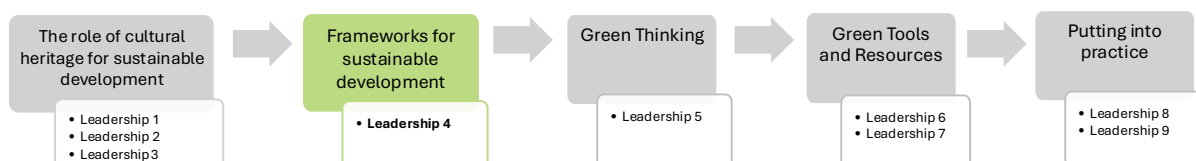
This session introduces key cultural heritage-specific policies, standards, professional codes, and guidance that shape sustainable practice in conservation, museums, and heritage care. Learners examine how organisations such as UNESCO, ICCROM, ICOMOS, ICOM, IIC, AIC, ICON, English Heritage, Historic England and others frame sustainability, ethics, preservation, access, climate action, and social justice. The session supports learners in identifying where sustainability is already embedded in best practice and where gaps, tensions, or opportunities remain.

<i>Key Concept 1</i>	Sustainability in professional standards and codes of ethics
<i>Key Concept 2</i>	Heritage-specific policy frameworks and institutional guidance
<i>Key Concept 3</i>	Best practice, current practice, and evolving practice
<i>Key Concept 4</i>	Gaps and opportunities in cultural heritage sustainability frameworks

OBJECTIVES

Objective 1	Identify key international, national, and professional frameworks that guide sustainable practice in cultural heritage care.
Objective 2	Understand how sustainability is reflected in heritage policies, standards, ethical codes, and professional guidance.
Objective 3	Analyse how these frameworks influence decision-making in conservation, museums, collections care, and heritage management.
Objective 4	Evaluate strengths, gaps, and opportunities in existing cultural heritage sustainability guidance.

Module placement in Leadership in Green Conservation learning trajectory



PREPARATORY MATERIALS

- UNESCO, *Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention*
<https://whc.unesco.org/document/139146>
- ICOMOS <https://ciwih.icomos.org/wp-content/uploads/Future-of-Our-Pasts-Report-min.pdf>
- ICOM Resolution on Sustainability
<https://sustain.mini.icom.museum/resources/icom-resolution-1-sustainability/>
- Bizot Green Protocol <https://www.nationalmuseums.org.uk/what-we-do/climate-crisis/bizot-green-protocol/>
- AIC Code of Ethics and Guidelines for Practice
<https://www.culturalheritage.org/conservation-at-work/uphold-professional-standards/code>
- AIC Sustainability Committee: <https://www.culturalheritage.org/who-we-are/about-us/committees/sustainability>
- AAM Sustainability: <https://www.aam-us.org/category/environmental-sustainability/>
- CIMAM Sustainability: <https://www.cimam.org/sustainability-and-ecology-museum-practice/>
- ICON Sustainability <https://www.icon.org.uk/groups-and-networks/sustainability-group.html>
- English Heritage sustainability and climate resilience resources
<https://www.english-heritage.org.uk/learn/conservation/sustainability/>

SESSION OUTLINE (total 2 hours)

This session includes a presentation with discussion questions. Questions are posed throughout the presentation for a total of 2 hours. An assessment follows the practical component.

Part 1: Why heritage-specific frameworks matter (15 minutes)

Introduce the purpose of this session:

- Broad sustainability frameworks are useful, but cultural heritage needs sector-specific interpretation.
- Conservation and heritage care involve specific responsibilities:
 - preservation
 - access

- cultural value
- community responsibility
- professional ethics
- long-term stewardship
- This session asks: where does sustainability already appear in cultural heritage guidance, and where does the field still need clearer tools?

Key framing: Sustainability is not separate from heritage best practice; it is increasingly becoming part of how best practice is defined.

Part 2: International heritage frameworks (30 minutes)

Introduce and discuss:

UNESCO

UNESCO provides global cultural and natural heritage frameworks, especially through the World Heritage Convention. Its 2015 Sustainable Development Policy helps position heritage as part of sustainable development, while still affirming the primary purpose of protecting Outstanding Universal Value. UNESCO's policy aims to help States Parties, practitioners, institutions, communities, and networks use heritage to support sustainable development.

Use UNESCO to discuss:

- World Heritage and sustainable development
- heritage as a contributor to resilience, education, identity, and peace
- the integration of sustainability into heritage management plans
- tensions between global frameworks and local practice

Example discussion question: How does a global framework like UNESCO help, and where might it feel distant from day-to-day conservation work?

ICCROM

ICCROM is an intergovernmental organisation focused on cultural heritage conservation through training, research, information, cooperation, and advocacy. Its work is especially useful for linking conservation practice with capacity building, resilience, risk management, and people-centred approaches. ICCROM's current resources include tools such as the *Enhancing Our Heritage Toolkit 2.0* for World Heritage management effectiveness.

Use ICCROM to discuss:

- training and capacity building
- risk preparedness and resilience

- people-centred conservation
- heritage management effectiveness
- climate, culture, and disaster response

Example: ICCROM is useful when thinking about how sustainability becomes professional capacity—not just policy.

ICOMOS

ICOMOS provides international professional guidance for monuments, sites, cultural landscapes, and built heritage. It works closely with UNESCO on World Heritage evaluation and advisory processes and has produced major work on climate change and cultural heritage.

Use ICOMOS to discuss:

- built heritage and cultural landscapes
- climate risk and heritage vulnerability
- heritage in climate action
- sustainable development and conservation principles
- the importance of expert guidance in policy translation

Example: ICOMOS helps translate climate and sustainability concerns into heritage-specific language for sites, landscapes, and monuments.

Part 3: International membership organizations and professional codes of ethics

ICOM

ICOM sets international professional standards for museums. The ICOM Code of Ethics is described as a reference text setting standards for museum professionals. ICOM also states that sustainability in social, economic, and environmental forms should be included in its mission, values, and activities.

Use ICOM to discuss:

- museum ethics
- social responsibility
- public trust
- sustainability as part of museum values
- the 2022 museum definition and inclusion/accessibility

Example: ICOM helps learners see sustainability not only as environmental practice, but also as public responsibility.

IIC

IIC provides professional guidance and leadership for conservation. The IIC and ICOM-CC 2014 Declaration on Environmental Guidelines is a major sector-specific statement because it supports evidence-based environmental practice and recognises the need to move beyond rigid universal conditions.

IIC also has organisational work on environmental sustainability and carbon analysis, including its path to reduce emissions.

Use IIC to discuss:

- environmental guidelines
- professional responsibility
- climate control standards
- carbon reduction in professional organisations
- evidence-based conservation

E.C.C.O. (European Confederation of Conservator-Restorers' Organisations)

E.C.C.O. represents professional conservation organisations across Europe and plays a key role in defining professional standards, education requirements, and ethical practice.

The **E.C.C.O. Professional Guidelines and Code of Ethics** emphasise:

- responsibility toward cultural heritage
- the importance of documentation and reversibility
- professional competence and training
- accountability to society

While sustainability is not always explicitly named, it is embedded through principles such as:

- long-term preservation
- responsible decision-making
- minimising unnecessary intervention

Use ECCO to highlight:

- how European professional standards define “good practice”
- how sustainability is often implicit in ethical conservation principles

ENCoRE (European Network for Conservation-Restoration Education)

ENCoRE is a European network that connects higher education institutions in conservation-restoration. It focuses on education, training standards, and the development of the profession.

ENCoRE plays an important role in:

- shaping future practitioners
- defining competencies and learning outcomes
- aligning conservation education across Europe

Sustainability appears here through:

- curriculum development
- integration of ethics, responsibility, and critical thinking
- training practitioners to respond to evolving challenges (including climate and societal impact)

Use ENCoRE to highlight:

- how sustainability enters the field through education
- the role of training institutions in shaping future best practice

NEMO – Network of European Museums Organization

<https://www.ne-mo.org/advocacy/our-advocacy-themes/museums-and-sustainability/>

Part 4: National guidance (25 minutes)

Historic England

Historic England provides national guidance on the historic environment, including climate change, adaptation, and energy efficiency in historic buildings. Its climate strategy explains how the organisation responds to the climate crisis and supports others in the heritage sector.

Historic England's guidance on adapting historic buildings for energy and carbon efficiency is especially useful because it frames energy adaptation and heritage protection as complementary goals when changes are made thoughtfully and carefully.

Use Historic England to discuss:

- adapting historic buildings
- energy efficiency and carbon reduction

- climate resilience
- guidance for owners, practitioners, and decision-makers
- balancing heritage significance with environmental performance

English Heritage

English Heritage provides guidance and case-based work on conservation, sustainability, and climate resilience across the sites and collections it manages. It explicitly frames climate change as one of the greatest threats to heritage and provides resources to support climate resilience.

Its collections conservation advice and guidance is also freely available and informed by science-based evidence and practical experience.

Use English Heritage to discuss:

- collections conservation guidance
- climate resilience for sites and collections
- practical evidence-based conservation
- institutional sustainability strategies
- translating research into site-level practice

AIC

AIC's Code of Ethics and Guidelines for Practice set standards for conservation professionals. The guidelines explicitly recognise preventive conservation as a critical means of promoting the long-term preservation of cultural property and include recommendations around continuing care and appropriate environmental conditions.

Use AIC to discuss:

- professional responsibility
- preventive conservation
- environmental conditions
- treatment decision-making
- documentation and accountability

ICON

ICON provides professional standards and guidance for conservators in the UK. Use ICON to discuss:

- professional accreditation
- ethical practice

- practitioner responsibility
- conservation standards
- how national professional bodies shape practice

Because ICON resources are likely to change by page and document version, cite the current ICON professional standards or code of conduct page directly when finalising the reading list.

AICCM (Australian Institute for the Conservation of Cultural Material)

AICCM is the national professional body for conservators in Australia. It provides guidance on professional practice, ethical standards, and conservation training within the Australian context.

The **AICCM Code of Ethics and Practice** emphasises:

- responsibility to cultural heritage and communities
- professional competence and ongoing learning
- respect for cultural significance and context
- accountability in decision-making

AICCM is particularly important for:

- integrating **Indigenous perspectives and cultural protocols** into conservation practice
- addressing regional environmental challenges (e.g. climate, materials, geography)
- supporting professional development and accreditation

Use AICCM to highlight:

- how sustainability and ethics are shaped at a national level
- the importance of regional context in conservation practice
- connections between conservation, community, and cultural responsibility

NEMO (Network of European Museum Organisations)

NEMO is a network representing national museum organisations across Europe. It serves as a platform for collaboration, advocacy, and knowledge exchange between museums, policymakers, and cultural institutions at the European level.

<https://www.ne-mo.org>

NEMO focuses on:

- representing museums in European policy discussions
- supporting collaboration across countries
- sharing research, reports, and best practices
- advocating for the role of museums in society

Sustainability Focus

NEMO plays an important role in connecting museums to sustainability agendas at the European level, including:

- climate action and environmental sustainability
- social impact and inclusion
- digital transformation and access
- resilience and crisis response (e.g. COVID-19, energy crisis)

NEMO regularly publishes reports and recommendations that highlight:

- the challenges museums face in implementing sustainability
- the need for funding, policy support, and training
- the role of museums in achieving broader societal goals

- reports on sustainability and climate action
- survey results on museum challenges (e.g. energy crisis, COVID-19 impact)
- policy recommendations

Part 5: Institutional sustainability policies and clauses (30 minutes)

Tate – Tackling the Climate Emergency

<https://www.tate.org.uk/about-us/tate-and-climate-change>

What it is: Tate has one of the most developed museum sustainability strategies and commitments to climate.

Covers:

- carbon reduction targets
- energy use
- exhibitions and loans
- sustainable materials
- governance and reporting

Victoria and Albert Museum – Sustainability & Climate Action

<https://www.vam.ac.uk/info/sustainability>

What it is: Institution-wide sustainability commitments and climate strategy.

Covers:

- net zero goals
- exhibitions and design
- collections care
- public engagement

British Museum – Sustainability & Climate Adaptation

https://www.britishmuseum.org/sites/default/files/2021-11/Sustainability_Ethos_The_British_Museum.pdf

What it is: Sustainability strategy and climate adaptation work.

Covers:

- building management
- energy reduction
- risk and resilience
- climate impacts on collections

Smithsonian Institution – Sustainability Plan

<https://www.si.edu/newsdesk/releases/sustainability-smithsonian-institution-responding-climate-change>

What it is: Large-scale institutional sustainability strategy.

Covers:

- energy and water use
- sustainable design
- collections care
- research and education

The Getty– Environmental Sustainability

<https://www.getty.edu/sustainability/>

What it is: Getty-wide sustainability initiatives.

Covers:

- energy efficiency
- conservation research
- sustainable exhibitions
- environmental monitoring

Rijksmuseum – Sustainability & Building Management

<https://www.rijksmuseum.nl/en/about-us/what-we-do/sustainability>

What it is: Sustainability embedded in operations and facilities.

Covers:

- energy efficiency
- climate systems
- building performance

National Gallery – Environmental Management

<https://www.nationalgallery.org.uk/about-us/sustainability>

What it is: Environmental and sustainability commitments.

Covers:

- climate control
- energy use
- loans and exhibitions

The Australian Museum

<https://australian.museum/learn/sustainability/>

What it is: Sustainability action plan

Covers:

- partnerships and approaches
- carbon reduction strategy
- Indigenous community engagement

National Museum of Australia – Sustainability Approach

<https://www.nma.gov.au/about/corporate/plans/environmental-sustainability-action>

What it is: Institutional sustainability strategy.

Covers:

- environmental impact
- Indigenous engagement
- social responsibility

Science Museum Group

<https://www.sciencemuseumgroup.org.uk/our-work/sustainability-approach>

What it is: Institutional climate commitments

Covers:

- environmental commitments and policy
- sustainability programming
- net zero commitment

Royal Ontario Museum – Sustainability Initiatives

<https://www.rom.on.ca/whats-on/special-programs/climate-change>

What it is: Sustainability integrated into museum operations.

Covers:

- energy
- exhibitions
- public programming

Discussion: pick one of the museums and read through the entire sustainability policy as a group. Then analyse what works and what is missing. Is it primarily focused on climate, or does it address all three components of sustainability? Does it include staff wellbeing or is it primarily focused on external aspects? Does it talk about operational implementation or more theory based? Discuss how this can be turned into action and what would be helpful to make it more tangible.

METHODOLOGY**Delivery format**

This session can be delivered online or in person. The combination of presentation and discussion may require a break half way. The discussion is to be integrated into the presentation, so ensure that you leave adequate time for all topics. After the presentation, students are given their assessment to complete at home.

Activities / Exercises / Assessments

Assessment should be done individually: worksheet **App 4.1**

Facilitator notes

This session is really about putting theory into practice, so it's important to keep in mind the concepts that were addressed in the first module and see what is being done in the field well and where there is room for improvement – and what that improvement might look like.

ADDITIONAL RESOURCES

- Phillips, H. (2014). Adaptation to Climate Change at UK World Heritage Sites: Progress and Challenges. *The Historic Environment: Policy & Practice*, 5(3), 288–299. <https://doi.org/10.1179/1756750514Z.00000000062>
- Labadi S., Giliberto F., Rosetti I., Shetabi L. and Yildirim E, Heritage and the sustainable development goals: policy guidance for heritage and development actors, International Council on Monuments and Sites – ICOMOS, March 2021.
- Brury, Paul, Anna Mcpherson and English Heritage (2008). Conservation Principles, policies, and guidance for the sustainable management of the historic environment. Available to [download](#) from English Heritage.
- Saunders, David. 2022. “A Methodology for Modelling Preservation, Access and Sustainability.” *Studies in Conservation* 67 (suppl. 1): 245–252. [https://www.tandfonline.com/doi/full/10.108000393630.2022.2055933\(open in a new window\)](https://www.tandfonline.com/doi/full/10.108000393630.2022.2055933(open%20in%20a%20new%20window)).
- Fatoric, S., and Egberts, L. (2020) Realising the potential of cultural heritage to achieve climate change actions in the Netherlands
- Saunders (2008) Climate Change and Museum Collections
- McGhie, H. (2020) Evolving climate change policy and museums

APPENDIX 4.1

Activity: Evaluating Sustainability in Cultural Heritage Policies and Practice

Description

Students analyse a real-world policy, standard, guideline, or institutional sustainability strategy from the cultural heritage sector and evaluate how effectively it addresses sustainability.

Prompt

To what extent does a cultural heritage policy, standard, or institutional strategy address sustainability in a holistic way? What is missing, and how could it be improved?

Pick a framework/organization:

- *UNESCO, Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention*
<https://whc.unesco.org/document/139146>
- *ICOMOS* <https://civvih.icomos.org/wp-content/uploads/Future-of-Our-Pasts-Report-min.pdf>
- *ICOM Resolution on Sustainability*
<https://sustain.mini.icom.museum/resources/icom-resolution-1-sustainability/>
- *Bizot Green Protocol* <https://www.nationalmuseums.org.uk/what-we-do/climate-crisis/bizot-green-protocol/>
- *AIC Code of Ethics and Guidelines for Practice*
<https://www.culturalheritage.org/conservation-at-work/uphold-professional-standards/code>
- *AIC Sustainability Committee:* <https://www.culturalheritage.org/who-we-are/about-us/committees/sustainability>
- *AAM Sustainability:* <https://www.aam-us.org/category/environmental-sustainability/>
- *CIMAM Sustainability:* <https://www.cimam.org/sustainability-and-ecology-museum-practice/>
- *ICON Sustainability* <https://www.icon.org.uk/groups-and-networks/sustainability-group.html>
- *English Heritage sustainability and climate resilience resources*
<https://www.english-heritage.org.uk/learn/conservation/sustainability/>

Task

Write a **600–800 word analysis** that:

1. Introduces the Framework / Approach

- What is the document or group?
- Who produced it?
- What is its purpose? What does it do?

2. Identifies Sustainability Content

- Where does it address sustainability?
- What types of sustainability are addressed?
- Is this:
 - explicit (named)
 - implicit (embedded)

3. Applies the Four Impact Areas

Evaluate how well it addresses:

- Environmental impact (climate, carbon, energy)
- Resource use (materials, waste, efficiency)
- Human health & well-being (staff, working conditions)
- Societal impact (access, inclusion, public value)

4. Critically Evaluates Gaps

- What is missing?
- What is underdeveloped?
- What feels theoretical vs. practical?

5. Proposes Improvements

- What should be added or strengthened?
- How could this better reflect holistic sustainability?

Purpose

Builds ability to read professional documents

Connects theory → real-world practice

Reinforces your broader sustainability definition
Encourages critical but constructive thinking

Assessment criteria

- Understanding of the selected framework
- Ability to identify explicit vs implicit sustainability
- Use of the four impact areas
- Critical analysis (not just description)
- Practical, realistic recommendations

5. Exploring the Green Definition, Parameters, and Frameworks

Author: Caitlin Southwick

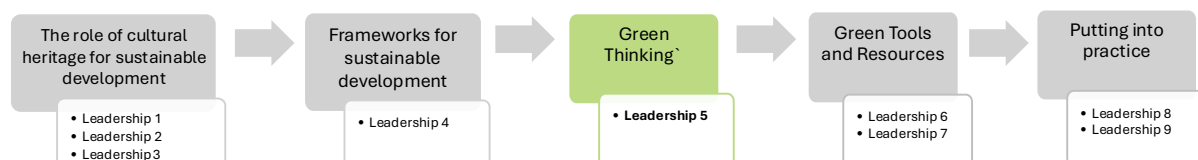
This session introduces the GoGreen definition of Green Conservation and explores the key parameters that underpin sustainable decision-making in cultural heritage practice. Learners examine how green is integrated into conservation decision making processes through the GoGreen Decision-Making Model (DMM), providing a framework for evaluating conservation choices in a holistic and transparent way. This module establishes the foundation for applying greener practices in professional contexts.

Key Concept 1	Green Conservation (GoGreen definition)
Key Concept 2	Green Parameters
Key Concept 3	Decision-making in conservation practice
Key Concept 4	GoGreen Decision-Making Model (DMM)

OBJECTIVES

Objective 1	Understand the GoGreen definition of Green Conservation.
Objective 2	Identify the key parameters and impact areas that inform sustainable decision-making.
Objective 3	Understand the structure and purpose of the GoGreen Decision-Making Model (DMM).
Objective 4	Develop confidence in evaluating conservation decisions using a structured, holistic framework.

Module placement in Leadership in Green Conservation learning trajectory



PREPARATORY MATERIALS

- The GoGreen Definition and Parameters
<https://gogreenconservation.eu/defining-green-conservation/>
- GoGreen Decision Making Model (DMM)

SESSION OUTLINE (total 2 hours)

The session introduces the GoGreen Green Definition and then explores using the GoGreen Decision Making Model.

Introduction:

Why is it important to have a common definition of Green for conservation?

Invite students to answer this question then give some additional ideas:

- Clear understanding leads to aligned goals and objectives for conservation work
- Common reference point for policy and reporting
- Supports material development and research
- Supports informed decision making

GoGreen Definition of Green Conservation

- Read through the definition
 - Normative and aspirational
 - Holistic Definition
 - Parameters
 - Each parameter
- How the definition was developed
 - Methodology and approach
 - Inspiration and influences
 - Frameworks and resources
- How to use the definition
 - Advocacy
 - Policy Alignment
 - EU Policy
 - Individuals and practitioners

Applying Green to Conservation

- Green as a consideration and priority
- Thinking green – what does this look like in practice?
 - Ask students to think about how they would consider green when doing their work

Decision Making Model

- Introduce the GoGreen Decision Making Model
 - Look at the different spirals

- Go through the deep spiral exercise with the group (hint – look at the DMM case studies for inspiration and further instruction)
- Choose a case study or workflow to workshop. Select from the list below or bonus – ask the students to come up with a real life scenario!
 - Design an exhibition
 - Conservation treatment
 - Implementing Bizot climate control practices
 - Packing and crates

Discussion:

- How applicable is the DMM in real life scenarios?
- Where would you feel comfortable using this?
- How could you support greener decision making in your own context using this methodology?

Summary / Wrap-Up

Remind students that sustainability decisions often involve multiple stakeholders. This means that they may be required to work with a group of people across different departments or disciplines to reach a solution. Also remind students that greener practices and sustainability should be considered as early as possible to ensure that anything needed is already considered. For example, designing an exhibition, greener materials choices need to be included in the design phase so that they are already planned for when purchasing comes around.

METHODOLOGY**Delivery format**

This session will be a combination of presentation and group exercise. The lecturer will guide the students through a presentation with some discussion questions (45 minutes) then will introduce the DMM and the exercise. Students will have an hour to run through the DMM (they may get to do this exercise several times) and then the lecturer will facilitate a discussion on using the DMM in real life.

Activities / Exercises / Assessments

Have the students facilitate the DMM speed spiral in a real life context. Have them report on the process and write a 1-2 page summary of the experience and the outcome.

Facilitator notes

Encourage students to think about how they can start integrating green into their daily contexts – from how the definition and parameters apply to their work to how they can encourage sustainable thinking across their organization using the DMM.

ADDITIONAL RESOURCES See DMM and GoGreen Definition [webpage](#)

6. Strategies and Tools for Green Conservation Practices

Author: Caitlin Southwick

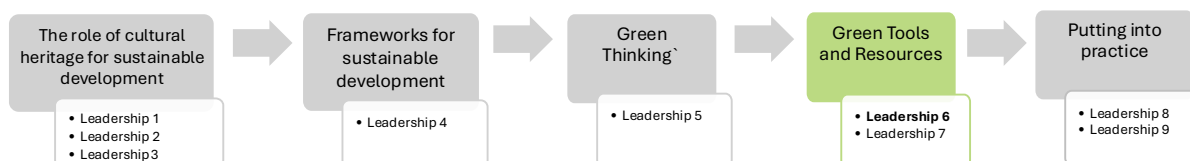
This session builds on the conceptual framework of Green Conservation by introducing practical tools and strategies that support sustainable decision-making in cultural heritage practice. Learners explore a range of sector-specific and cross-disciplinary tools, including the GoGreen DSA app, STiCH, the Gallery Climate Coalition carbon calculator, and material selection and safety frameworks such as the Chem21 solvent selection tool and the Globally Harmonized System (GHS). The session focuses on how these tools can support, inform, and operationalise greener conservation decisions, while reinforcing the importance of critical thinking and context-based applications.

<i>Key Concept 1</i>	Tools as decision-support (not decision-makers)
<i>Key Concept 2</i>	Material impact and selection
<i>Key Concept 3</i>	Carbon and environmental foot printing
<i>Key Concept 4</i>	Health and safety in conservation practice

OBJECTIVES

Objective 1	Identify key tools and strategies used to support Green Conservation practices.
Objective 2	Understand how different tools contribute to evaluating environmental, material, and health impacts.
Objective 3	Apply tools to support structured decision-making in conservation scenarios.
Objective 4	Develop confidence in selecting and using appropriate tools in professional practice.

Module placement in Leadership in Green Conservation learning trajectory



SESSION OUTLINE (total 2 hours)**Introduction**

- Overview and demonstration of various tools
- Introduce each tool below with 1-3 slides, then test it out in class

DSA App (GoGreen)

- Purpose:
 - apply DMM in practice
- Functions:
 - compare options
 - structure decisions
 - document reasoning

STiCH (Sustainable Tools in Cultural Heritage)

<https://stich.culturalheritage.org/>

- Material database
- Life cycle-informed insights

Use for material comparison and understanding environmental impact

Chem21 Solvent Selection Tool

<https://pubs.rsc.org/en/content/articlelanding/2016/gc/c5gc01008j>

- Ranks solvents based on:
 - environmental impact
 - toxicity
 - safety

Use for greener material substitution

GHS (Globally Harmonized System)

<https://unece.org/sites/default/files/2025-09/GHS%20Rev11e.pdf>

- Hazard classification
- labelling and safety

Use for understanding chemical risks and supporting safer choices

Gallery Climate Coalition (GCC) Carbon Calculator

<https://measure.galleryclimatecoalition.org/>

- Estimates carbon footprint of:
 - exhibitions
 - transport
 - operations
- quantifying environmental impact

METHODOLOGY

Delivery format

The session is a combination of presentation and demonstration. The majority of the class will be walking through the tools together so students can see how it works and get familiar with thinking through the process.

Activities / Exercises / Assessments

Activity in class testing out tools. Lecturers can assign additional testing outside of the class. No assessment or evaluation is applicable.

Facilitator notes

The point of this module is to showcase the tools and resources available to students for evaluating cultural work. Students should leave feeling like they have a new set of resources to support decision making and comfortable using the presented tools and frameworks.

ADDITIONAL RESOURCES

- Ki Culture Ki Books <https://www.kiculture.org/ki-books/>
- Julie's Bicycle Creative Climate Tools <https://juliesbicycle.org/take-action/creative-climate-tools/>

7. Interdisciplinary Considerations for Green Conservation Practices

Author: Caitlin Southwick

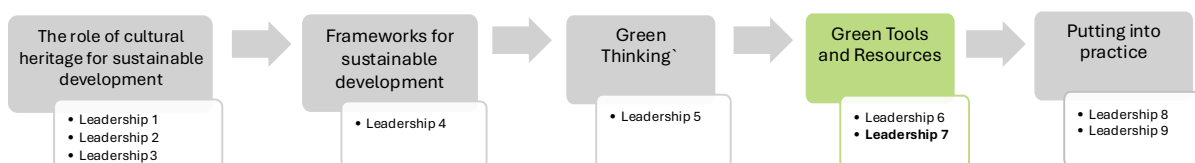
This session explores how sustainability frameworks, strategies, and innovations from other disciplines can inform greener decision-making in conservation and cultural heritage care. Learners are introduced to key cross-sector approaches—such as circular economy, green chemistry, passive design, and sustainable logistics—and examine how these can be adapted to conservation contexts. Through case-based examples and applied discussion, the session builds learners’ ability to critically translate ideas across disciplines, recognise opportunities for innovation, and evaluate the practical challenges of implementation.

- Key Concept 1* **Interdisciplinary learning and knowledge transfer**
- Key Concept 2* **Sustainability frameworks beyond conservation**
- Key Concept 3* **Innovation through cross-sector thinking**

OBJECTIVES

- Objective 1 Understand the value of interdisciplinary approaches in advancing Green Conservation.
- Objective 2 Identify key sustainability frameworks from other disciplines relevant to conservation.
- Objective 4 Build confidence in evaluating opportunities and limitations of interdisciplinary solutions.

Module placement in Leadership in Green Conservation learning trajectory



SESSION OUTLINE (total 2 hours)

Part 1: Why Interdisciplinary Thinking Matters

- Sustainability challenges are shared across sectors
- Many solutions already exist outside conservation

- Conservation can:
 - adopt
 - adapt
 - reinterpret

Key message: Innovation in conservation often comes from learning how to adapt solutions from other fields. Look at Paraloid B-72!

Part 2: Key Frameworks from Other Disciplines

Introduce 4–5 frameworks then discuss applications in conservation.

Circular Economy

Ellen MacArthur Foundation

<https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>

Core idea:

- design out waste
- keep materials in use
- regenerate systems

Discussion: Applications in conservation

- reusable packing materials
- modular exhibition design
- reducing consumables

Green Chemistry Principles

<https://chemistryforsustainability.org/learn/green-chemistry-and-green-engineering/principles-green-chemistry>

Core idea:

- reduce toxicity
- safer materials
- minimise waste

Discussion: Applications in conservation

- solvent substitution / greener solvents
- safer adhesives
- lab practices

Passive Design & Low-Energy Systems

<https://www.sciencedirect.com/science/article/abs/pii/S0360544218317791>

Core idea:

- reduce reliance on mechanical systems

Discussion: Applications in conservation

- climate control strategies
- building design
- environmental buffering
- low energy storage

Sustainable Logistics & Supply Chains

https://www.researchgate.net/publication/384834807_GREEN_LOGISTICS_TRANSFORMING_SUPPLY_CHAINS_FOR_A_SUSTAINABLE_FUTURE

Core idea:

- efficiency and reduction of transport impact

Discussion: Applications in conservation

- exhibition planning
- loans and transport
- shared resources

Life Cycle Thinking

<https://www.lifecycleinitiative.org/activities/what-is-life-cycle-thinking/>

Core idea:

- consider full lifecycle impacts

Discussion: Applications in conservation

- material choices
- exhibition design
- conservation treatments

Emphasise throughout: these frameworks are not designed for conservation—but they can inform it.

Part 3: Case-Based Examples (25 minutes)

Use **real-world examples** to ground the frameworks.

Example 1: Reusable Crate Systems (Logistics)

- multi-use shipping systems
- Application: art transport
- Examples: [RokBox](#), [Turtle Box](#)

Example 2: Passive Climate Buildings (Architecture)

- reduced HVAC dependence
- Application: museum environments
- Low Energy Storage Facilities https://mga.danskemuseer.dk/wp-content/uploads/sites/6/2026/01/Low-energy-storage-facilities_MGA_web.pdf

Example 3: Modular and Circular Exhibition Design (Design)

<https://www.wearemast.eu/projects?project-tags=Planet-proof+design>

Modular design is an approach to creating systems, objects, or spaces using standardised, interchangeable components (modules) that can be easily assembled, disassembled, reconfigured, and reused. Think LEGOs.

- reusable walls and mounts
- reusing and repurposing materials
- Application: exhibitions

Example 4: Green Solvent Selection (Chemistry)

- reduced toxicity
- Application: conservation treatments
- Greener Solvents Handbook <https://siconserve.wpengine.com/greener-solvents/greener-solvents-hand-book/>

Part 4: Translation to Conservation Practice (15 minutes)

Translation does not mean direct application. Discuss how the abovementioned practices fit into conservation, and what might be concerns or additional considerations that need to be accounted for:

- conservation constraints
- preservation requirements
- risk tolerance
- ethical considerations

Key message: Not everything that is “green” elsewhere will work in conservation without adaptation.

Summary / Wrap-up

One of the important things to remember is that industry is a key partner for cultural heritage. While conservation specifically is not a big enough market for many companies to make specific products for, we rely on research and innovation and material development from other fields to support our work. So keeping up with trends in other fields is very valuable!

METHODOLOGY

Delivery Format

This session is a combination of presentation and discussion.

Activities / Exercises / Assessments *

Assessment worksheet **App 7.1**

Facilitator Notes

Remember to remind students that we don’t have solutions for everything yet – so don’t get frustrated if they don’t find the perfect solution – and also remind them that perfection doesn’t exist and improvements are also the right answer.

ADDITIONAL RESOURCES

World Green Buildings Council <https://worldgbc.org/>

APPENDIX 7.1

Assessment: Interdisciplinary Considerations for Green Conservation Practices

Prompt

Part A

Investigate a sustainable material currently being used in other fields and evaluate its relevance to conservation. Pick your own or select from the following: mushroom / biodegradable foams, plastic alternatives, biodegradable nitrile gloves, electronic vehicles for shipping art.

Task

1. Introduces the material

- what it is
- where it is used

2. Explains why it is effective

- what problem it addresses
- how it works

3. Applies it to cultural heritage

- where it could be used
- what adaptations are needed

4. Identifies challenges

- technical
- ethical
- practical

5. Evaluates potential impact

- short-term
- Long-term

Part B

Address a current sustainability challenge from the cultural heritage world and see if you can find influence or solutions from another sector. Select from the following or come up with your own! Unsustainable transportation for art, unsustainable/wasteful exhibition materials, unsustainable packaging / storage materials, lack of storage space, high intensity energy usage in buildings.

1. Introduces the solution

- what it is
- where it is used

2. Explains why it is effective

- what problem it addresses
- how it works

3. Applies it to cultural heritage

- where it could be used
- what adaptations are needed

4. Identifies challenges

- technical
- ethical
- practical

5. Evaluates potential impact

- short-term
- Long-term

8. The Role of Advocacy in Cultural Heritage Care

Author: Caitlin Southwick

This session focuses on the role of advocacy in advancing Green Conservation within cultural heritage practice. Learners are introduced to communication strategies, community-building approaches, and methods for influencing change within their personal and professional spheres. Through guided discussion, reflection, and role-playing exercises, the session builds confidence in discussing sustainability, navigating resistance, and promoting greener practices. The module emphasises accessibility, inclusivity, and collaboration as essential components of effective advocacy.

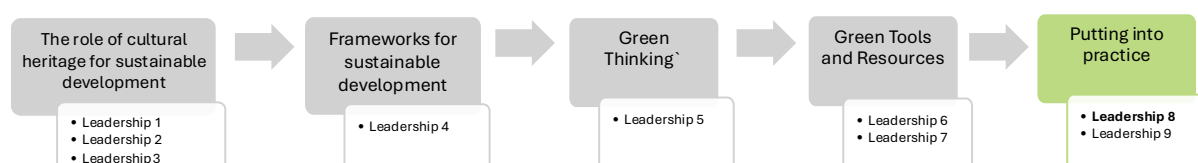
Key Concepts

- Advocacy
- Communication strategies
- Behaviour change
- Sphere of influence
- Accessibility and inclusion
- Social cohesion
- Community-building
- Resistance and barriers
- Professional responsibility

Objectives

- | | |
|-------------|---|
| Objective 1 | Understand the role of advocacy in promoting Green Conservation practices. |
| Objective 2 | Develop confidence in discussing sustainability and green practices with different audiences. |
| Objective 3 | Identify personal spheres of influence and opportunities for impact. |
| Objective 4 | Build practical communication and advocacy skills through role-play and discussion. |
| Objective 5 | Recognise the importance of accessibility, inclusion, and social cohesion in sustainability advocacy. |

Module placement in Leadership in Green Conservation learning trajectory



SESSION OUTLINE (total 2 hours)**Part 1: Setting the Tone – Creating a Safe Space**

- Acknowledge:
 - Sustainability conversations can feel uncomfortable
 - People have different levels of knowledge and confidence
- Establish:
 - Respect
 - Openness
 - No wrong answers

Key message: This session is about practice, not perfection.

Part 2: What Does Sustainability Mean to You?

Activity: Personal Reflection & Discussion

Prompts (can ask students to discuss directly or write down then discuss)

- What does sustainability mean to you?
- What does “green” mean to you?
- How comfortable do you feel talking about sustainability?
- What would make you feel more comfortable?

Purpose

- Identify assumptions
- Build awareness of confidence levels
- Normalise uncertainty

Facilitator Note: Your role is to support your students and instil confidence by validating all responses and reduce fear of “getting it wrong”

Part 3: Introduction to Advocacy

Advocacy doesn’t mean being an expert, it means influencing.

Advocacy is the act of actively supporting, promoting, and influencing others to adopt a particular idea, practice, or change. Advocacy means using your voice, knowledge, and position to encourage and support more sustainable and responsible practices within your professional and social environment.

Networks for impact:

- Colleagues / peers
- Institutions
- Audiences
- Professional networks

Types of advocacy:

- Direct conversations
- Internal workplace influence
- Public-facing communication
- Sector-wide engagement

Advocacy doesn't require authority - it requires awareness and communication.

Part 4: Communication

Communication for Green Advocacy

Effective advocacy is not just about what you say, but how, where, and to whom you say it. Communication is a core skill that enables sustainable change.

1. Communication Framework (Simple Model)

A useful way to structure communication is to consider:

- Audience - who are you speaking to?
- Message - what are you trying to communicate?
- Framing - how do you present it so it resonates?
- Channel - where does the communication happen?
- Outcome - what change are you aiming for?

Key idea: Effective advocacy adapts the message to the audience, not the other way around.

2. Communication as Infrastructure

Communication is not just a one-time act—it is an ongoing system that supports change over time.

This includes:

- Informal conversations
- Meetings and decision-making processes
- Documentation and reporting
- Professional networks and communities

Key idea: Sustainable change depends on consistent, repeated communication - not a single conversation.

3. Constraint Literacy

Constraint literacy is the ability to understand and work within real-world limitations, such as:

- Budget
- Time
- Institutional policies
- Risk tolerance
- Knowledge gaps

Rather than ignoring constraints, effective advocacy:

- Identifies and acknowledges them
- Works with them
- Reframes solutions within them

Key idea: Often communication fails because assumptions are made or barriers are not acknowledged. By first identifying what barriers exist (simply by asking!) you can then work to overcome those barriers.

Part 5: Roleplay – Everyday Conversations

Explore how students can be advocates in everyday conversations in and around the workplace. This explores direct communication strategies with peers and colleagues.

Give students various scenarios and assign them roles. Ask them to practice communicating and advocating. Let the scene play out for a few minutes, then pause to discuss what went well, and what tricky situations arose and how those could be navigated.

Scene 1: 2 students (1 Sustainability Lead and 1 Head Registrar)

A sustainability lead at a museum wants to update climate control parameters to Bizot. They confront the head registrar and tell them they should do this. The registrar says no – that while that is fine for other museums, their collection is too precious and has very specific needs.

- Why does the registrar say no?
- In what way could the sustainability lead have approached this differently for the registrar to say yes?

Hint: This is about ownership (being included in decision making) and respect for roles and responsibilities

Scene 2: 2 students (1 green team member and 1 kiosk barista)

The green team wants to reduce single use plastics at the museum. A green team member approaches the barista at the coffee kiosk at the museum and tells her to stop using plastic straws. The barista says no and gets mad at the green team member for asking.

- Why does the barista say no?
- What could the green team member have done to approach this in a more productive way?

Hint: This is about ownership, too, but also about hierarchical structures.

Scene 3: 3 students

Three conservators are getting coffee during a break. Two conservators get take away cups and the third brought their own reusable coffee cup. How could the third conservator influence their colleagues?

- What should the third colleague avoid?
- What would be a non-judgemental or non-accusatory way of getting their colleagues excited about bringing their own cups too?

Hint: See if the conservator can align with the other conservators interests – if they are not that interested in the environmental impact, maybe they mention that they get a discount for bringing their own cup, or that they read something online that to go cups have plastic lining and it's really dangerous to drink from.

Part 6: Community & Professional Networks

Focus: Advocacy in Networks

With the students, brainstorm platforms and means for advocacy on a larger scale. Where can influence the sector at large. Some ideas are listed below:

- Social media
- Join professional platforms (emerging professional networks or sustainability committees are great places to start!)
- Blogs
- Conferences
- Articles and publications

Ask the students for examples of advocates in the field and advocacy that they've seen. Ask them what is effective (think platform, tone, messaging, accessibility) and what they think is missing.

Part 7: Mapping Your Sphere of Influence – Activity

Think about where you can have impact and how!

Use the Activity Worksheet **App 8.1** and the mapping sheet

Then consider:

- where can you influence change?
- what strategies work in each context?

Facilitator Notes:

Emphasize:

- Influence ≠ hierarchy
- Informal influence is powerful
- Small changes matter

Summary / Wrap-Up

Everyone can be a leader and everyone can have a voice and make a difference!

Key messages:

- advocacy happens at all levels
- communication is a skill that can be developed
- small actions create change
- sustainability requires collaboration

METHODOLOGY

Delivery Format

- Guided discussion
- Reflection exercises
- Roleplay
- Group work
- Peer learning

Activities / Exercises / Assessments

Assessment worksheet **App 8.2** to be completed at home

Spheres of Influence Mapping Sheet **App 8.3**

Facilitator notes

- This session is: interactive, reflective, confidence-building
- Focus on: encouraging participation, validating uncertainty, building confidence
- Avoid: overly technical content, lecturing too much
- Reinforce: no one has all the answers, advocacy is a process, small conversations matter

ADDITIONAL RESOURCES

- No One Is Too Small to Make A Difference, Greta Thunberg
<https://www.climatelit.org/literature/no-one-is-too-small-to-make-a-difference/>
- Icon Sustainability Committee
- AIC Sustainability Committee
- Ki Culture
- Gallery Climate Coalition
- Green Tea Podcast
- ICOM Sustain

APPENDIX 8.1

Activity: Role of Advocacy in Cultural Heritage Care

What is a Sphere of Influence?

Your sphere of influence is the range of people, groups, and systems you can directly or indirectly affect through your actions, communication, and relationships.

This includes:

- Friends and family
- People you work with (colleagues, supervisors)
- People you communicate with
- Spaces where your voice is heard (at your work, in your networks)
- Systems you can contribute to or shape

Key idea: You don't need authority to have influence - your influence comes from your relationships, knowledge, and communication.

What is Sphere of Influence Mapping?

Sphere of influence mapping is a way to identify where you can create change, understand different levels of influence, and develop realistic advocacy strategies. In Sphere of Influence mapping, you make the distinction between levels of control, influence and awareness.

Why This Matters

When advocating for Green Conservation, it's important to remember:

- Not all audiences are the same - and different audiences need different messaging
- Not all change happens at the same level
- Small-scale influence can lead to larger change

Your Sphere of Influence Map

Instructions

1. Think about your current context (work, study, networks)
2. Place people/groups into the circles on the attached sheet
3. Start from the centre and move outward

Circle 1 – Direct Control (*where you make decisions*)

Examples:

- your own work practices
- personal material choices
- how you carry out tasks

Circle 2 – Direct Influence (*You can influence through conversation and collaboration*)

Examples:

- colleagues
- peers
- project teams
- students

Circle 3 – Indirect Influence (*You can influence through communication, suggestions, or participation*)

Examples:

- supervisors
- institutional processes
- professional networks
- committees

Circle 4 – Wider System / Awareness (*You have awareness but limited direct influence*)

Examples:

- institutional policies
- national/international frameworks
- large organisations
- sector-wide practices

After filling in the worksheet, reflect on the following:

1. Where do you have the most influence? Why?

2. Where would you like to have more influence?

3. What is one realistic action you could take within your sphere of influence?

Remember! Most change doesn't start at the top - it starts in the middle, through everyday decisions and conversations.

APPENDIX 8.2

Assessment: Role of Advocacy in Cultural Heritage Care

Instructions

This worksheet will guide you in developing your **Green Advocacy Strategy Plan**. Your responses will form the basis of your final written submission (500–800 words).

There are no “right” answers—this exercise is about **reflection, strategy, and practical thinking**.

Part 1: Your Context

1. What is your current context?

(e.g. student, conservator, museum professional, freelancer, etc.)

2. Describe your working or learning environment.

(e.g. institution, lab, studio, university, independent practice)

3. What sustainability challenges or opportunities do you see in this context?

Part 2: Mapping Your Sphere of Influence

4. Who can you influence?

(List individuals or groups)

- Colleagues:
- Supervisors / leadership:
- Peers / students:
- External partners:
- Public / audiences:

5. Where do you have the most influence? Why?

6. Where do you have the least influence? Why?

Part 3: Advocacy Strategy

7. What specific green or sustainability idea do you want to advocate for?

(e.g. reducing material use, changing climate control practices, reusing packing materials, etc.)

8. Why is this important in your context?

9. How will you communicate this idea?

(Check or describe all that apply)

- One-on-one conversations
- Team discussions
- Presentations
- Written proposals
- Social media / professional platforms
- Informal conversations

10. How will you tailor your message for your audience?

(e.g. focus on cost, efficiency, risk, sustainability, ethics)

Part 4: Anticipating Challenges

11. What challenges or resistance might you encounter?

- Risk concerns
- Budget limitations
- Time constraints

- Lack of knowledge
- Resistance to change
- Institutional policies

12. How might people respond negatively or sceptically?

13. How could you respond constructively to these challenges?

Part 5: Practical Action Plan

14. What is one realistic first step you can take?

15. What would success look like?

(e.g. small change, conversation started, pilot project, etc.)

16. What support or resources might you need?

Part 6: Reflection

17. How comfortable do you feel advocating for sustainability after this exercise?

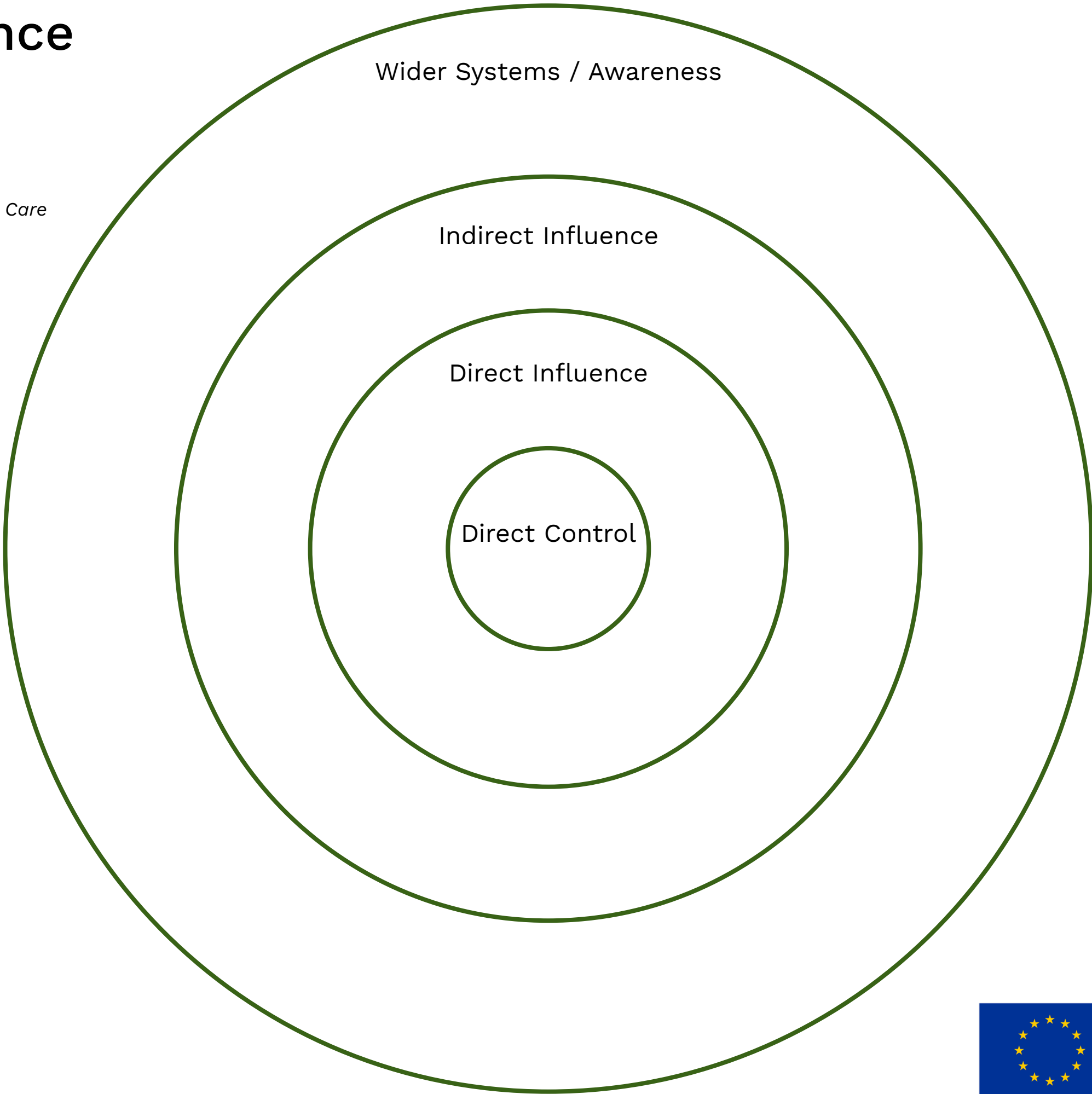
- Very comfortable
- Somewhat comfortable
- Not very comfortable

18. What would help you feel more confident?

19. What is one key takeaway from this module?

Spheres of Influence Mapping

Leadership in Green Conservation
Module 08 Role of Advocacy in Cultural Heritage Care



9. Green Leadership in Action: Personal Projects

Author: Caitlin Southwick

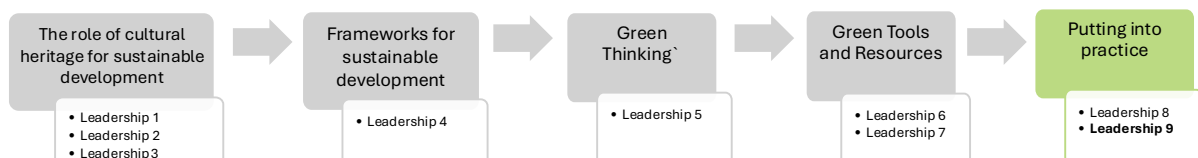
The Action Project is an ongoing, practice-based assignment that runs throughout the course. Participants design and implement a focused sustainability initiative within their own professional or personal context. The project encourages learners to apply course concepts—including Green Conservation, decision-making frameworks, tools, and advocacy—into real-world action. Projects are developed progressively, revisited across modules, and presented at the end of the course as a reflection on impact, challenges, and future potential.

<i>Key Concept 1</i>	Applied sustainability
<i>Key Concept 2</i>	Monitoring and evaluation
<i>Key Concept 3</i>	Iterative practice
<i>Key Concept 4</i>	Ownership and agency for sustainable action

OBJECTIVES

Objective 1	Apply Green Conservation principles, frameworks and tools in a real-world context.
Objective 2	Develop practical skills in planning, implementing, and evaluating sustainable actions.
Objective 3	Reflect on challenges, constraints, and opportunities for sustainable change.
Objective 4	Build confidence in initiating and sustaining change beyond the course.

Module placement in Leadership in Green Conservation learning trajectory



CONTENT OUTLINE

Project Overview

Throughout the Leadership in Green Conservation program, participants will conduct a long term project. They will select one activity and execute the action as outlined in the timeline below.

Participants should:

- Design a **focused, achievable sustainability action**
- Implement it over the duration of the course
- Evaluate outcomes and reflect on impact
- Present findings at the end

Project Criteria

Projects should be:

- Realistic and achievable
- Relevant to participant context
- Measurable (qualitative or quantitative)
- Connected to course content
- Completed within course timeframe

Examples of Projects

- **Green Transportation**
Shift commuting habits and track behavioral and carbon impact
- **Water Use in Conservation**
Track and evaluate water use in treatments; propose improvements
- **Preventive Conservation**
Assess and propose updates to climate control strategies
- **Material LCA Analysis**
Use STiCH to compare materials and propose alternatives
- **Carbon Footprint Analysis**
Use GCC calculator to calculate the carbon footprint of an exhibition, daily operations, or your own personal footprint!
- **Waste Stream Mapping**
Conduct waste audit and propose reduction strategies
- **Energy Use (Phantom Energy)**
Measure and reduce unnecessary energy consumption using a meter reader
- **Audience Engagement**
Survey public perceptions of sustainability in museums
- **Self-Directed Project**
Get inspiration from the Ki Books, Sustainability in Conservation, GCC, Curating Tomorrow, Julie's Bicycle or come up with your own idea!

Project Timeline

Stage 1: Proposal (Beginning of Course – weeks 1-2)

- Define project idea
- Identify goals
- Outline method

Deliverable: **Project Proposal Worksheet (App 9.1)**

Stage 2: Development (Mid-Course Check-In)

- Begin implementation
- Identify challenges
- Adjust approach as needed

Deliverable: **Progress Reflection**

Stage 3: Integration (Later Modules)

- Apply tools (DMM, STiCH, etc.)
- Connect to advocacy and frameworks

Stage 4: Final Output (End of Course)

- Present project
- Reflect on outcomes
- Evaluate impact
-

Deliverables / Checkpoints

Deliverable 1: Project Proposal

Students define:

- Project focus
- Goals
- Method
- Expected outcomes

Deliverable 2: Mid-Project Reflection (App 9.2) and Peer Feedback (half way through course)

Students use the worksheet to reflect on:

- Progress
- Challenges
- Adaptations

In class, students discuss:

- Progress
- Receive input
- Refine approach

Deliverable 4: Final Reflection (App 9.3) and Presentation (10-15 minutes)

- Submit Final Reflection Worksheet
- Present results in class
 - Reflect on process
 - Key insights
 - Impact
 - Lessons learned
 - Discuss next steps

Summary / Wrap-Up

Make sure to be positive! No results are still results – this is about encouraging agency and giving students ownership over sustainability actions – not about being perfect or doing the best. Students will be more motivated to continue if they have successes to celebrate and build on so highlight and celebrate what went well.

METHODOLOGY

Delivery Format

- Independent project work with classroom engagement
- Periodic check-ins
- Worksheets
- Peer discussion
- Integration across modules
- Final presentation

Activities / Exercises / Assessments

Final Assessment: Action Project, Final Reflections + Presentation**Part 1: Worksheet****Part 2: Presentation (10-15 minutes)**

- **Introduce the project**
 - context
 - motivation
- **Define the approach**
 - methods
 - tools used
- **Present findings**
 - results (quantitative or qualitative)
- **Evaluate impact**
 - environmental / resource / social
- **Reflect on challenges**
 - constraints
 - limitations
- **Propose next steps**
 - scalability
 - future application

Assessment Criteria

- clarity of project design
- application of course concepts
- depth of reflection
- practicality and realism
- communication

Facilitator notes

- Emphasise that these should be small and achievable independent projects.
- Ensure that students are able to get support throughout the project.

ADDITIONAL RESOURCES

- Ki Books
- Gallery Climate Coalition
- Julie's Bicycle
- Sustainability in Conservation

APPENDIX 9.1

Green Leadership in Action: Personal Projects

Worksheet 1: Project Proposal

Instructions

This worksheet will guide you in developing your Action Project for this course. Your project should focus on one clear, achievable sustainability action in your work or daily life.

Keep it:

- focused
- realistic
- measurable

Part 1: Project Overview

1. Project Title

(Give your project a short, clear title)

2. Your Context

(e.g. student, conservator, museum professional, freelancer)

3. Project Setting

(Where will this take place? e.g. lab, museum, studio, home, university)

Part 2: Defining the Focus

4. What is the problem or opportunity you want to address? (Describe briefly)

5. Why is this important? (Consider environmental, resource, health, or societal impact)

6. What is your main goal? (What do you want to change, test, or improve?)

Part 3: Project Plan

7. What action will you take? (Be specific—what will you actually do?)

8. What steps are involved? (List 3–5 key steps)

- 1.
- 2.
- 3.
- 4.
- 5.

9. What resources or tools will you use? (e.g. STiCH, carbon calculator, observation, data tracking, etc.)

Part 4: Measuring Impact

10. How will you measure success? (Check or describe all that apply)

- Quantitative (numbers, data, tracking)
- Qualitative (observations, feedback)
- Behaviour change
- Reduction (waste, energy, materials)
- Other _____

11. What indicators will you track?

(e.g. litres of water, number of items reused, energy saved, etc.)

Part 5: Constraints & Challenges

12. What challenges might you face?

- Time
- Budget
- Access to resources
- Institutional constraints
- Knowledge gaps
- Other _____

13. How might you address these challenges?

Part 6: Scope & Feasibility

14. Is this project achievable within the course timeframe?

- Yes
- Maybe (needs adjustment)
- No (needs to be simplified)

15. If needed, how could you simplify your project?

Part 7: Initial Reflection

16. What are you most interested or excited about in this project?

17. What are you unsure about?

Instructor feedback

(To be completed by instructor)

Feasibility

Scope

Suggested adjustments:

Comments:

Remember: This project does not need to be perfect—it needs to be doable, thoughtful, and meaningful.

APPENDIX 9.2

Green Leadership in Action: Personal Projects **Worksheet 2: Action Project Midpoint Check-In**

Instructions

This worksheet helps you reflect on your progress and adjust your project if needed. This is not an evaluation—it’s an opportunity to reflect on your purpose, get input and feedback, and adapt if needed.

Part 1: Project overview

1. Project Title

2. Brief reminder: What is your project about? (1–2 sentences)

Part 2: Progress so far

3. What have you completed so far? (List key actions you’ve taken)

4. What stage are you currently at?

- Planning
- Early implementation
- Active implementation
- Data collection
- Evaluation

Part 3: What's working

5. What is going well?

6. What have you learned so far?

Part 4: Challenges & barriers

7. What challenges have you encountered?

- Time constraints
- Lack of data
- Access to tools/resources
- Institutional barriers
- Unexpected complexity
- Other: _____

8. Describe one key challenge in more detail:

Part 5: Adapting your approach

9. Do you need to adjust your project?

- No changes needed
- Minor adjustments
- Significant changes

10. What changes will you make (if any)?

11. How will these changes improve your project?

Part 6: Measuring impact

12. Are you able to measure your impact as planned?

- Yes
- Partially
- Not yet

13. If not, how could you adapt your measurement approach?

Part 7: Support & Resources

14. What support do you need to continue?

- Guidance from instructor
- Peer feedback
- Access to tools
- More time
- Other: _____

Please elaborate:

Part 8: Looking Ahead

15. What are your next 2–3 steps?

- 1.
- 2.
- 3.

Part 9: Reflection

16. How confident do you feel about your project now?

- Very confident
- Somewhat confident
- Not confident

17. What would help increase your confidence?

Instructor Feedback

(To be completed during check-in discussion in class)

Progress:

Feasibility:

Suggested adjustments:

Comments:

It's completely normal to adjust your project. Adapting your approach is part of the learning process!

APPENDIX 9.3

Green Leadership in Action: Personal Projects **Worksheet 3: Action Project Final Reflection**

Instructions

This worksheet will help you reflect on your Action Project and prepare your final presentation. This is your opportunity to evaluate your work, reflect on your learning, and identify future potential

Remember - there are no perfect projects—focus on what you learned and what changed. Even no result is still a result!

Part 1: Project overview

1. Project Title

2. Brief description of your project

(2–3 sentences)

Part 2: What you did

3. What actions did you take? (Summarise the main steps of your project)

4. Did your project change from your original proposal?

- No
- Yes (minor changes)
- Yes (major changes)

5. If yes, how and why did it change?

Part 3: Results & impact

6. What were the outcomes of your project? (Describe what happened)

7. What impact did your project have?

(Check and explain)

- Environmental (e.g. reduced waste, energy, materials)
- Resource use (e.g. efficiency, reuse)
- Human health & well-being
- Social / institutional impact

Please elaborate:

8. Were you able to measure your impact?

- Yes (quantitatively)
- Partially
- No

9. If yes, what did you measure?

(e.g. litres, energy, materials, behaviour change)

Part 4: Challenges & constraints

10. What challenges did you encounter?

11. How did you respond to these challenges?

12. What constraints affected your project? (e.g. time, budget, institutional limits)

Part 5: Reflection & learning

13. What did you learn from this project?

14. What surprised you?

15. What would you do differently next time?

Part 6: Future potential

16. Could this project be expanded or continued?

- Yes
- Maybe
- No

17. How could it be developed further?

18. How might this influence your future work or practice?

Part 7: Advocacy & communication

19. Did you communicate your project to others?

- Yes
- No

20. If yes, how? (e.g. conversation, presentation, report, blog, social media)

21. How could you share or advocate for this work more broadly?

Part 8: Final reflection

22. How do you now view your role in Green Conservation?

23. What is one key takeaway from this project?

Final submission guidance

Use your responses to structure your final presentation:

- Project overview
- Actions taken
- Results and impact
- Challenges and constraints
- Reflection and learning
- Future potential

This project is not about achieving perfection - it is about taking action, learning from experience, and building confidence in creating change.