



ReInHerit WEBINAR



ReInHerit

“ How to make your museum ‘green’ ”



European
Commission

30 June 2023 | 3:00-4:00 pm (CET)



Bank of Cyprus



Museums and the Environment

June 30th, 2023

Agenda

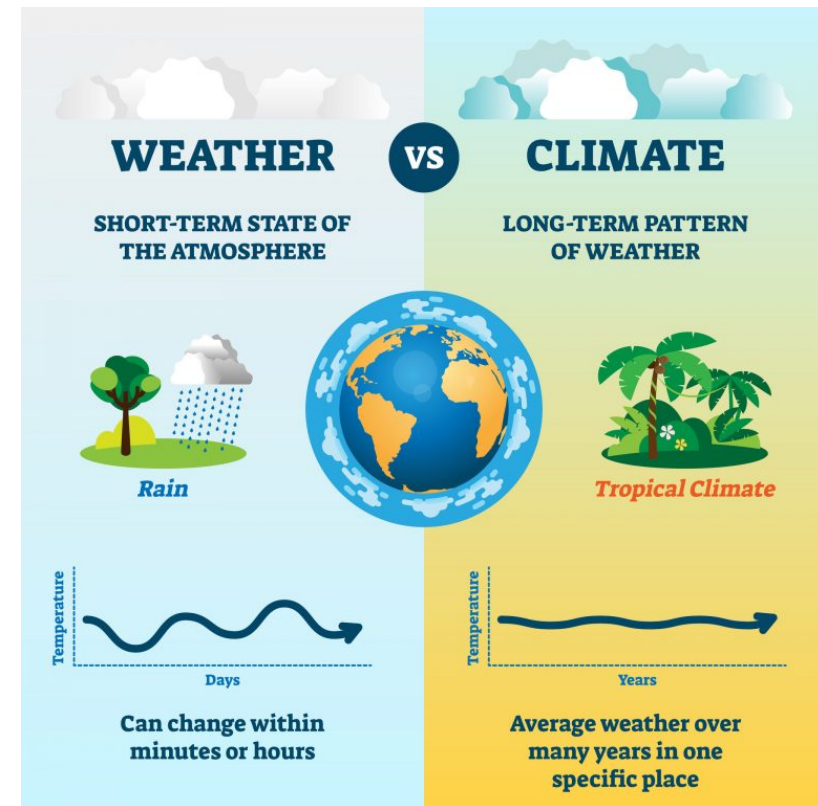
- 1. Climate Change**
- 2. EU Policies and Strategies**
- 3. Museums and Environmental Challenges**
- 4. The Role of Museums on the Environment**
- 5. Going Green and its Challenges**



1. Climate Change

Weather vs Climate

- **Weather** is the state of the atmosphere at a particular place during a short period of time
- **Climate** is defined as an area's long-term weather patterns. The simplest way to describe climate is to look at average temperature and precipitation over time.



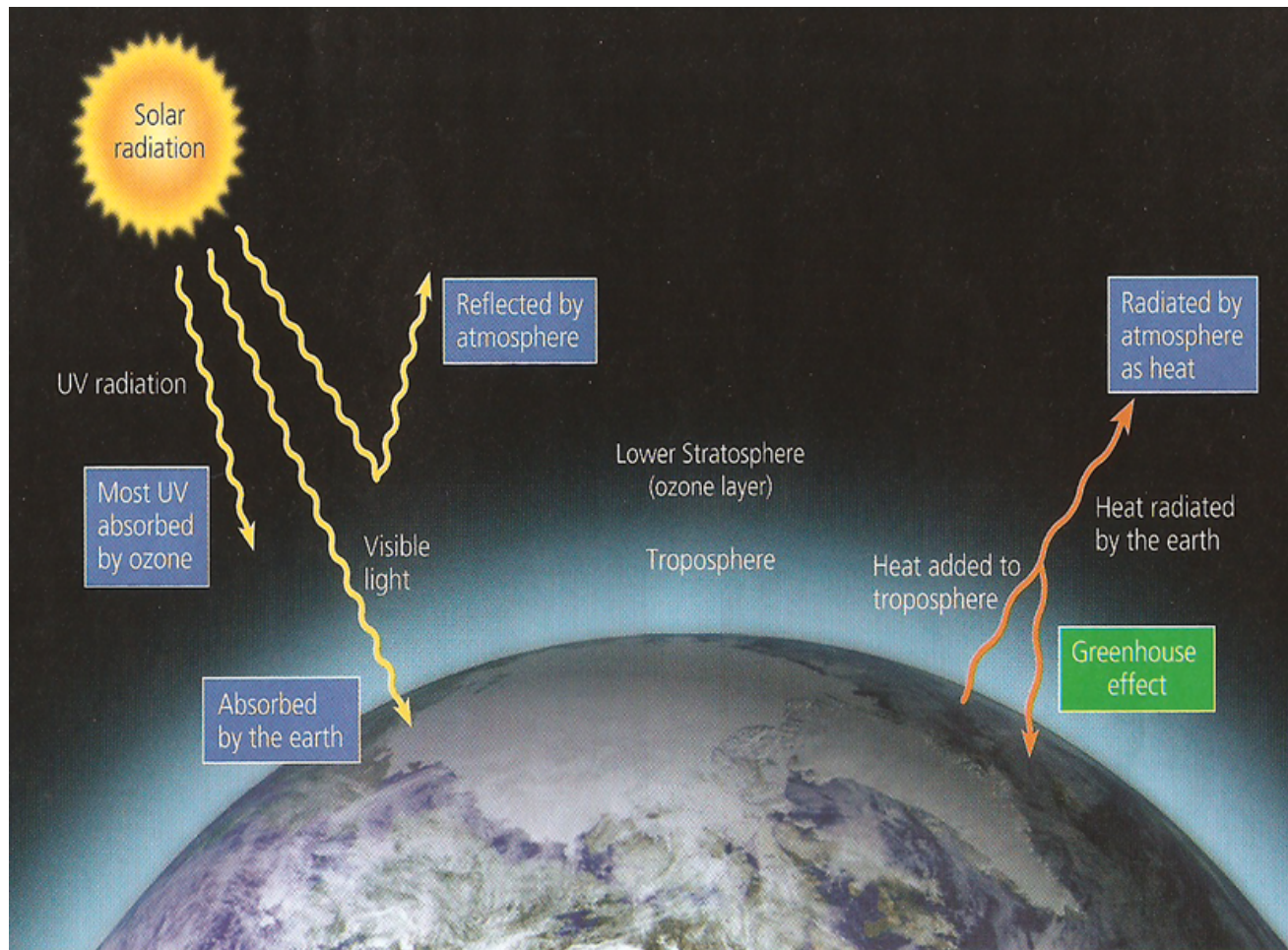
What is Climate Change?

- Climate change refers to long-term shifts in temperatures and weather patterns.
- Such shifts can be natural, due to changes in the sun's activity or large volcanic eruptions.
- But since the 1800s (industrial era), human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (coal, oil and gas), deforestation and land-use change

(Ref: www.un.org)



The Greenhouse Effect



Consequences of Climate Change

Changes in:

- Glaciers and Ice Sheets
- Sea level change
- Sea ice
- Heavy rainfall across the globe
- Extreme Drought
- Decline in crop productivity
- Changes in ecosystems
- Hurricanes
- Rise in temperature
- Acidification of seawater





2. EU Policies and Strategies

European Policies 2030 - 2050



IPCC – 5th Report on Climate Change 2014

- The most comprehensive scientific analysis of climate change ever undertaken, resulting from the work of hundreds of scientists from around the world.
- The report **was finally the scientific proof** that there is no longer any doubt that **human activities are a very large contributor** to this phenomenon.
- An increase in the temperature of both the atmosphere and the seas is observed. Ice caps have shrunk, while sea levels have risen. Extreme weather events have also increased and are affecting the lives of thousands of people



European Energy Strategy 2030

European Council Conclusions, October 2014:

- 40% reduction in CO2 emissions compared to 1990 levels
- Increase in RES penetration to 27%
- Increase in Energy Efficiency to 27%
- Completing the internal energy market by achieving electrical interconnection of up to 15% of each Member State's total electricity production
- Increasing Energy Security in relation to electricity and natural gas



COP 21 - The Paris Agreement

- Governments must hold temperature rise to well below 2.0 degrees Celsius by 2100, and try to limit it even further to 1.5 degrees.
- From 2050 onwards carbon dioxide emissions must be reduced to the levels that forests can absorb, so as to reach a **balance of zero net emissions**.
- From 2020, developed countries will provide \$100 billion a year in aid to help developing countries switch to clean energy sources and deal with the ravages of climate change. There is also the promise that this funding will continue into the future.
- All countries will sign up to a common emissions reporting, monitoring and confirmation system.

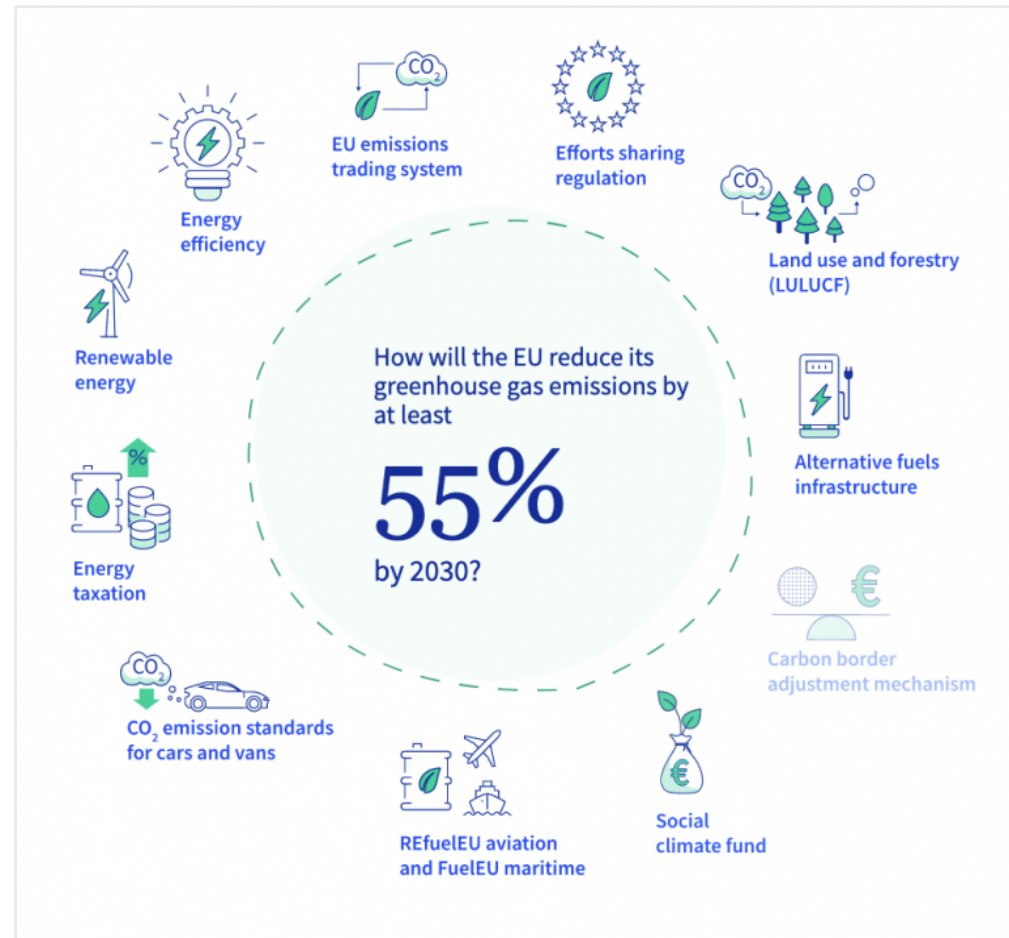
The EU's Green Deal

- It was developed by the EU to face the challenges of climate change and environmental degradation, but also to achieve its goal of being climate neutral by 2050.
- Through the Green Deal, the EU will provide financial support and technical assistance to those most affected by the transition to the green economy.
- This action will contribute to the mobilization of at least 100 billion euros for the period 2021-2027 in the regions most affected.



Fit for 55

- As part of the European Green Deal, the EU has set itself the binding goal of achieving climate neutrality by 2050.
- As an intermediate step towards climate neutrality, the EU has increased its 2030 climate ambition, pledging to reduce emissions by at least 55% by 2030.



IPCC – 6th Report on Climate Change 2021

- Milestone climate report (4000+ pages).
- Conclusion: **The only way to limit global warming is to achieve net zero CO2 emissions globally by 2050.**
- Clearly the gap remains huge as atmospheric CO2 concentrations in 2019 were higher than at any time in the last 2 million years.
- Require rich countries to mobilize \$100 billion a year in financing to help poor countries invest in green technologies

Sixth Assessment Report
WORKING GROUP I
The Physical Science Basis

Available
to read
now

#IPCC
#ClimateReport

ipcc
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE
Climate Change 2021
The Physical Science Basis
Summary for Policymakers

WGI
Working Group I contribution to the
Sixth Assessment Report of the
Intergovernmental Panel on Climate Change
WHO UNEP

COP26 – Sir David Attenborough

“During my lifetime I saw a terrible decline. In your own lifetime you could and should witness a wonderful recovery. That desperate hope, ladies and gentlemen, delegates, excellencies, is why the world looks to you and why you are here”.

“We must seize this opportunity to create a more equal world, motivated not by fear, but by hope. To be able to limit the increase in global temperature to 1.5 degrees Celsius, what we need is a new industrial revolution, which will be made through millions of sustainable innovations”

<https://www.youtube.com/watch?v=qjq4VWdZhq8>

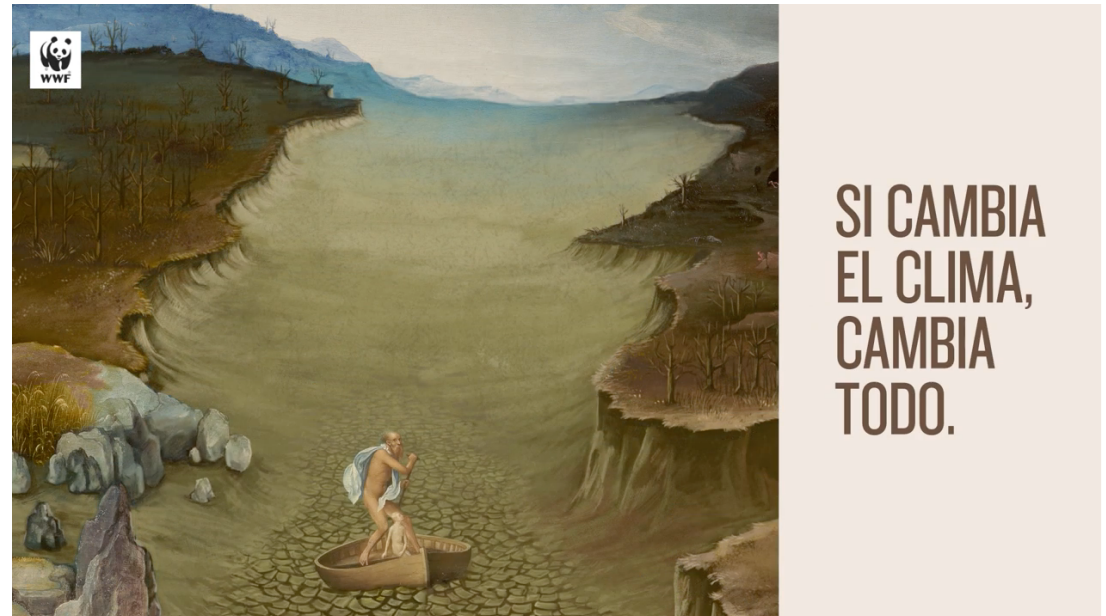




3. Museums and the Environment

Why Museums Matter

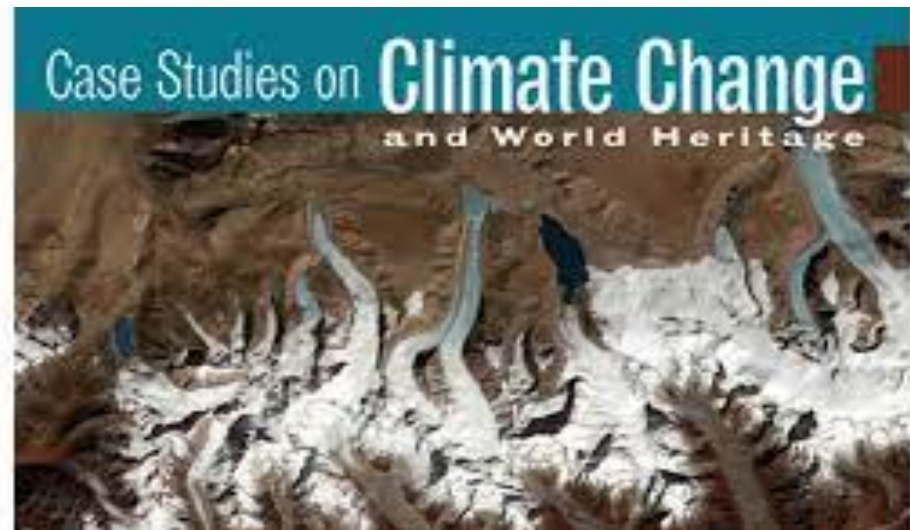
- Museums shape our view of the world.
- They help us understand who we are and the world in which we live.
- They influence how we think and the way in which we behave.
- They are uniquely placed to help change attitudes towards all sorts of contemporary issues.
- Museums are ideally placed to make a difference



https://youtu.be/pAtmZjij_cw

The Environmental Challenge for Museums and Sites

- **Loss of cultural heritage** –or the fear of it- due to climate change has been often considered a motivating factor in natural and heritage practices, as heritage is considered **a non-renewable resource and must be sustained at all cost in accordance with a set of specific values.**
- **However**, today, in the face of climate emergency, promises of permanence and long-term conservation seem unsustainable as the loss of heritage (in coastal towns, for example) seems inevitable.



Agenda 2030 - Transforming Our World

- The resolution aligns museums' work with the United Nations Sustainable Development Goals (SDGs).
- These goals are “*an amazing opportunity for museums, museum workers and museum networks, and if they seize this opportunity, they will benefit greatly from playing their part in this ambitious agenda*”.



Museums and Environment: Issues to Address

- How the cultural heritage sector deals with important issues that are related to climate and environmental concerns?
 - the response of the cultural heritage sector to the evolving environmental emergency is pointing out that cultural heritage institutions are now encouraged to play a leading role globally acting as agents of positive change.

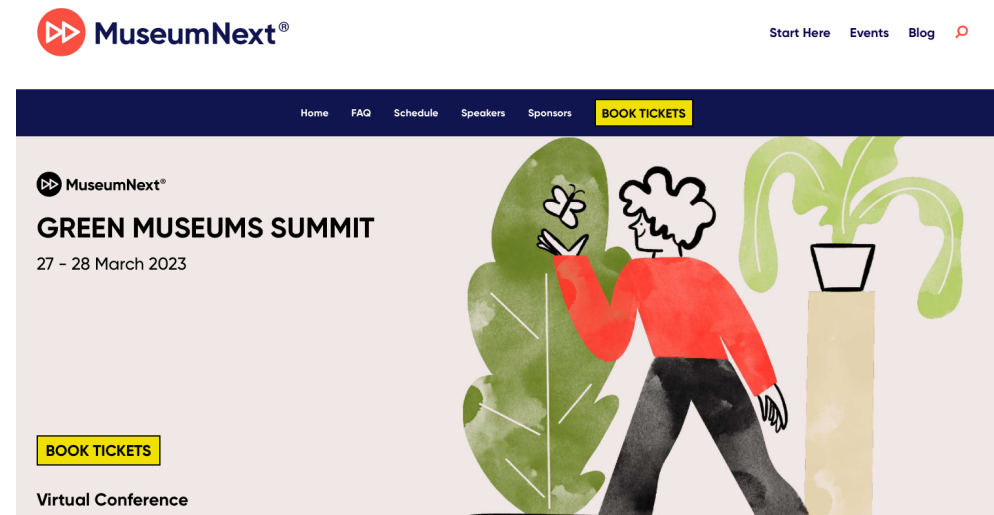
- How to present innovative sustainability and climate action practices that can be integrated into various aspects of museums, other cultural institutions and sites work?
 - stress the need for the creation of networks of communication that facilitate the museums, cultural institutions and sites to expand and refine their climate work
 - highlight the importance of energy management in museums and other cultural institutions, which should operate in a more 'eco-conscious' manner
 - place emphasis on the impact of climate change on monuments, archaeological sites and historical buildings
 - assist professionals in the challenge they face in their climate action based on the state-of-the-art literature in the area.



4. The Role of Museums on the Environment

How Should Museums and Sites Tackle the Environment Challenge?

- Tackling this energy and climate crisis is a global challenge that requires immediate action and a radical and urgent approach in the context of Cultural Heritage Management
- There is a need for cultural heritage professionals to find sustainable funding to pay their energy bills, to revisit and adapt environmental plans, to reduce energy consumption, to improve sustainability of their buildings, to find alternative energy sources and to have guidance on how to address the energy and cost of living crisis



Roles that Museums can Play in their Communities Regarding the Environment

- Present lessons from the past
- Pose questions about the future and provide inspiration for the future
- Take steps to close the gap between climate change and climate justice
- Build concern and empathy for people, cultures, places and wildlife beyond where people live themselves, and support them to make and take personal and local actions for a sustainable future
- Bring together the public, policy workers, researchers and others, to shape and implement locally relevant and effective strategies and plans for climate change.



Roles that Museums can Play in their Communities Regarding the Environment (2)

- Museums, cultural institutions and sites as educational bodies can include in their mission to convey the important message of environmental concerns in order to inspire people and activate individual and collective agency.
- Create collections, exhibitions, and education programs as well as undertake a variety of campaigns and community engagement activities. These activities can be used as a vehicle to:
 - raise awareness
 - Inspire climate action
 - build and share knowledge about human impacts on environment and climate as well as teach skills



18 MAY 2023

MUSEUMS, SUSTAINABILITY AND WELL-BEING

International Museum Day

ICOM international
council
of museums





5. Going Green and its Challenges

Activities for Museums on Focusing on Energy Efficiency and Sustainability

- Use air-conditioning less
- Printers should be default set to print on both sides of the paper and reuse paper when possible.
- Good ventilation.
- Lights, unnecessary computers, printers, and laboratory equipment should be turned off overnight and when not in use during the day.
- Replace dead light bulbs with energy-efficient alternatives in needed places. Use also natural light.
- Increase electronic communication.
- Institution should regularly conduct an energy audit. The energy audit should be regularly analyzed to determine the carbon footprint of conservation activities. As a respond to the energy audit recommendations the museums can set an action plan.
- Rinsing treatments should be revised to assess water flow, duration, and potential for reuse of rinse water. Use sensors and low-flow fixtures for fixtures, gray and black water reuse practices, and rainwater harvesting.
- Temperature settings should accord to human comfort.
- Environmental standards for collections should be reviewed to identify potential energy savings.
- Timers or motion sensors for lights should be placed where possible.
- Adaptations should be made to the building to reduce energy loss, such as insulation and draft reduction.
- Alternative sources of green energy production and heat generation should be regularly investigated. Utilize green materials and technologies.

Challenges of Museums for Going Green

- Museums may not have adequate facility staff or the budget to handle aging infrastructure or deferred maintenance.
- Not all museum staff may be aware of the benefits of energy and water efficiency.
- Lack of building systems zoning control may point to degrees of waste.
- Unexpected visitor surge could add burden to systems designed for different parameters.
- Due to collection care requirements, many museums need to maintain a regulated range of temperature and humidity around the clock.



ReInherit's Contribution to the Discussion

ReInherit Digital Hub will host a variety of digital content (WP4), the e-shop that can facilitate museums to increase their income, a training course on how to use the digital tools (WP3), a webinar on how to design an environmental policy and plan (WP3), the development of strategies and tools for a sustainable smart tourism (WP7) and the presentation of best practices on alternative energy sources (WP5) constitute important steps to this direction.

Furthermore, the development of hub for professionals within the ReInHerit's platform will enable meaningful exchanges of knowledge, experiences and best practices on how to address energy crisis in the context of Cultural Heritage Management.





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Thank You