



HELLENIC REPUBLIC
Ministry of Culture

*National Strategy
for the Protection of Cultural Heritage
from the Impacts of Climate Change*



GENERAL DIRECTORATE OF ANTIQUITIES AND CULTURAL HERITAGE
DIRECTORATE OF PREHISTORIC AND CLASSICAL ANTIQUITIES

Greece 2.0
NATIONAL RECOVERY AND RESILIENCE PLAN



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NATIONAL STRATEGY
FOR THE PROTECTION OF CULTURAL HERITAGE
FROM THE IMPACTS OF CLIMATE CHANGE

ATHENS 2026

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General view of the Acropolis of Athens (© Ephorate of Antiquities of the city of Athens)

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PROLOGUE

Climate change has become one of the principal global challenges of the 21st century, with strong environmental, social and cultural impacts. One of the most vulnerable sectors is cultural heritage, which faces heightened risk from the impacts of climate change. These threaten the monuments and archaeological sites themselves, their broader natural landscape, as well as intangible cultural heritage. In Greece, a country with an unusually large number of extended archaeological sites and monuments, the challenges are especially great, underscoring the pressing need to adopt integrated strategies of adaptation, resilience and sustainable management.

Recognizing this urgency, the Hellenic Government has made the adaptation to climate change a main political priority, incorporating it into its social, economic, political and cultural planning. Cultural heritage is now not only recognized as a bearer of historical memory, but as a vulnerable resource that requires protection policies.

The Hellenic Ministry of Culture has been implementing an integrated, multidimensional program since 2019 to identify and evaluate climate hazards that threaten cultural heritage monuments, also focusing on prevention and strengthening their resilience. This initiative aligns with UN, UNESCO and European Union international standards and guidelines and recommendations by the scientific community, and complies with Greece's National Climate Change Adaptation Strategy.



Delos (© Ephorate of Antiquities of Cyclades)

The result of this effort is the formulation of a targeted National Strategy for the protection of archaeological sites and monuments from the impacts of climate change.

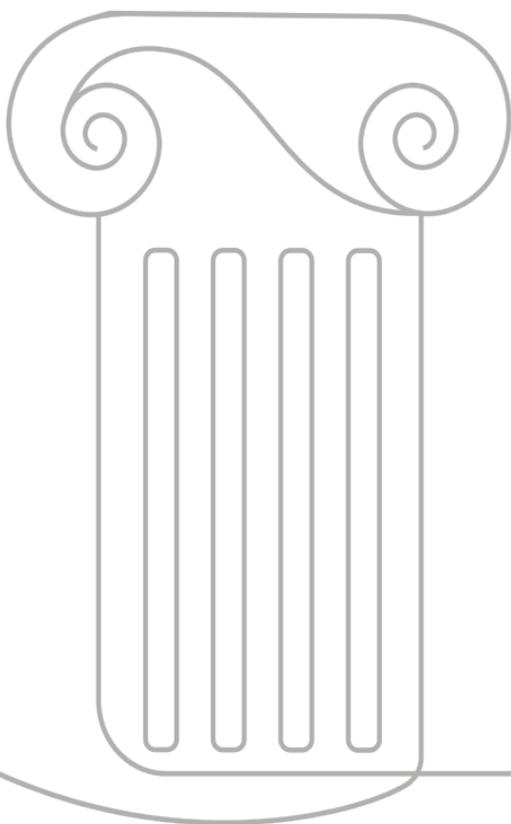
Encompassing all current policies related to cultural heritage and its connection to the landscape, the environment and climate, the National Strategy highlights the importance of interdisciplinary and multilevel interconnectivity. A long-term plan with a horizon of 2050 sets intermediate, five-year objectives, taking into consideration climate hazard predictions for the immediate future, thus strengthening preventative measures and timely adaptation.



The experience of Greece demonstrates that cultural heritage protection is not exclusively about safeguarding material evidence of the past. It is a strategic choice inherently linked to cultural identity, social cohesion, collective memory and creativity, in an environment of multiple global crises. Through the link between culture, environment and society, Greece provides a modern example of how culture is a key pillar of sustainable development and resilience, actively contributing to the creation of international policies for the future.

Dr Lina Mendoni
Hellenic Minister of Culture

**National Strategy
for the Protection
of Cultural Heritage
from the Impacts of Climate Change**



The climate crisis is reshaping natural and social landscapes globally. Greece's cultural heritage is not impervious to this threat; on the contrary, it is at the epicenter of a new historic challenge that highlights the need for modern, dynamic and forward-looking protection strategies. The protection of archaeological sites and monuments is no longer merely a matter of preservation, but a key policy field linked to sustainability, resilience, social cohesion and development.

Monuments are in constant interaction with their natural environment, making them particularly vulnerable to shifts in climate and meteorological conditions. Climate change amplifies natural hazards (such as flooding, wildfires, drought, heatwaves, and rising sea levels) already present in their surroundings. At the same time, factors such as fluctuations in temperature and humidity, intense or extreme rainfall, strong winds, atmospheric pollution and salination in coastal regions have direct impact on the materials of monuments, causing corrosion, decay, cracking and biological accretions.

Under these conditions, cultural heritage protection can no longer rely on traditional practices of conservation, but must develop comprehensive policies of adaptation and risk management based on scientific documentation, systematic monitoring, prevention and robust planning.

Through the formulation of national policies, investment in pioneering research, participation in European programs, and a long-term international presence, Greece is building a comprehensive cultural heritage protection framework that addresses climate hazards. It is a strategy that supersedes the traditional logic of conservation to system-

Integrated Framework for the Protection of Cultural Heritage against Climate Risks

Risk Identification

Systematic recording and mapping of climate risks threatening monuments

Analysis and Assessment

Application of modern risk assessment methodologies

Adaptation Planning

Development of targeted adaptation measures

Institutional and Financial Support

Utilization of funding resources

Institutional safeguarding:

- Procedures
- Guidelines
- Regulations

Ensuring continuity and sustainability

Support and Feedback System

Decision-support tools

Mechanisms for:

- Monitoring
- Evaluation
- Feedback

Policy Revision Based on:

- Emerging data
- Changing climate conditions

atically incorporate prevention, adaptation and long-term planning, responding to threats that are complex, dynamic and continually escalating.

The steps implemented so far are not disconnected but are integrated into a coherent and scientifically documented course passing from knowledge to action. The approach began with the systematic recording and cartography of climate risks threatening monuments and archaeological sites, proceeded with their analysis and evaluation based on modern risk assessment methodologies, and evolved into the planning of targeted adaptation measures. In parallel, the country made use of available financial resources and strengthened the institutional framework with procedures, guidelines and regulations that ensure the continuity and sustainability of the interventions.

The development of decision-making support tools, as well as systematic monitoring, evaluation and feedback mechanisms, which allow policies to be updated based on new data and evolving climate conditions, has also been crucial. In this way, cultural heritage management is gradually transforming from a reactive practice to a proactive one, a flexible and adaptable model of modern governance.

In this context, Greece's National Strategy aims to serve as a frame of reference for all institutional bodies involved in the protection of monuments and archaeological sites, integrating climate resilience into cultural heritage management.

Figure 1. Framework for the Protection of Cultural Heritage against Climate Risks.



UNFCCC United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty adopted in 1992 (entered into force in 1994) with the objective of stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. With 198 Parties, it constitutes the primary legal framework for global climate action.

UN General Assembly

The General Assembly is the main policy-making body of the United Nations. Comprising all Member States, it provides a unique forum for multi-lateral dialogue on the full range of international issues covered by the United Nations Charter.

UNEP United Nations Environment Programme

Global authority on the environment, with programs focusing on climate, nature, pollution, sustainable development, and related issues.

WMO World Meteorological Organization

A specialized United Nations agency with a mandate covering weather, climate, and water resources.

IPCC Intergovernmental Panel on Climate Change

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body responsible for assessing scientific knowledge on climate change. It was established to provide policymakers with regular scientific assessments on climate change, its impacts, and potential future risks, as well as to propose options for adaptation and mitigation.

INTERNATIONAL ORGANIZATIONS, AGREEMENTS AND INITIATIVES

The formulation of climate change adaptation policies is part of a broader and dynamically evolving international environmental governance framework that has gradually formed under the auspices of the United Nations, based on the connection between scientific documentation, international agreements, and national implementation policies. It quickly became clear to all involved parties that in addition to reducing emissions, it is also necessary to develop adaptation strategies for addressing the inevitable consequences of climate change.

Of seminal importance for the development of international policy, the *United Nations Framework Convention on Climate Change* (UNFCCC, 1992) established the institutional framework for international cooperation. By introducing the principle of “common but differentiated responsibilities”, it recognizes that all countries are responsible, but not all to the same degree. Vital for the international discussion of the subject are the *Conferences of the Parties* (COPs), which serve as the primary mechanism for negotiating and strengthening political actions, and the *Intergovernmental Panel on Climate Change* (IPCC), contributing to the scientific documentation of climate hazards, vulnerability and adaptation options, covering various sectors such as infrastructure, agriculture, health, the ecosystem and cultural heritage.

The international discourse intensified after the adoption of the *Kyoto Protocol* (1997), while another key development was the *Paris Agreement* (2015) that explicitly recognized adaptation as a core concept in global climate policy.

In parallel, the concept of adaptation was linked to the *Agenda for Sustainable Development*, the international action plan adopted by the United Nations in 2015 with a



View of the Old City of Corfu (© Ephorate of Antiquities of Kerkyra)



Propylaea, Acropolis of Athens (© Ephorate of Antiquities of the city of Athens)

horizon of 2030, for improving people's quality of life in a way that ensures environmental protection. More specifically, Goal 13 incorporates climate action as an urgent priority. Adaptation is also linked to the [Sendai Framework for Disaster Risk Reduction 2015-2030](#), a global agreement adopted by UN member-states to prevent and minimize risks from natural and manmade disasters. It highlights the importance of climate risk assessment, early warning systems, and strengthening the resilience of critical infrastructure and communities.

Within this international environment, the European Union gradually developed a coherent and institutionally sound policy framework for climate change mitigation and adaptation, incorporating international directives into European strategies and community initiatives.

This development also included an assessment of climate risks at the European Union level (2024) and the integration of adaptation into its individual policies, reinforcing the perception that climate adaptation is a major priority. In this frame, member-states were called to develop national strategies and adaptation plans guided by scientific documentation and knowledge, regional characteristics, and climate risk forecasts.



NATIONAL INSTITUTIONAL FRAMEWORK

On a national level, Greece has recently developed a coherent policy framework for the adaptation to climate change. An important point of reference is the 2016 *National Strategy for Adaption to Climate Change* (NSACC), which shaped the main strategic foundation for strengthening the country's adaptive capabilities and the capacity to address climate hazards at the sectorial level. In this context, cultural heritage was integrated as a discrete policy sector, recognizing the vulnerability of monuments to the impacts of climate change.



Osios Loukas Monastery (© Ephorate of Antiquities of Boeotia)

The NSACC formed the basis for Regional Adaptation Action Plans for the country's thirteen regional units, ensuring the link between national planning and local implementation, and promoting the formulation of measures adapted to the particular geographical and climate conditions of each area.

In 2022, the adaptation policy was further consolidated by the enactment of a *National Climate Law* (LAW 4936/2022) that introduced an integrated regulatory framework for bolstering climate resilience.

INTERNATIONAL AND EUROPEAN DEVELOPMENTS SHAPING THE NATIONAL PLAN

Greece's national policy on climate change and protection of cultural heritage is developing in close collaboration with the European and international framework, making use of directives, institutional tools and reliable scientific data. Key to this effort have been the *European Climate Law*, European initiatives on cultural heritage, reports by the *Intergovernmental Panel on Climate Change* (IPCC), the report by the *European Environment Agency* evaluating climate hazards in Europe, and guidelines provided by the European Union Scientific Advisory Board, offering a solid scientific foundation for evaluating climate risks and charting adaptation policies.

In parallel, the *OMC* (Open Method of Coordination) working group was convened by the member-states of the European Union to assess the impacts of climate change



Palatial Centre of Malia (© Ephorate of Antiquities of Heraklio)

on cultural heritage and propose means to strengthen the resilience cultural heritage to climate change.

UNESCO's contribution is particularly important to the international discourse on the subject, especially through a policy referendum on the impacts of climate change to World Heritage monuments adopted in November 2023 by the General Assembly of member-states of the Convention for the protection of world cultural and natural heritage.

Greece utilized this international and European framework to shape its own national vision and strategy, presenting its globally-oriented positions in 2019 at key international meetings on the climate, such as the Pre-Summit Event at the UN in New York and the Madrid *Conference of the Parties on Climate Change* (COP25), where it promoted the partnership of cultural heritage bodies in addressing the effects of climate change. This



Acropolis of Mycenae (© Ephorate of Antiquities of Argolis)



Archaeological site of Vravrona (© Directorate of Prehistoric and Classical Antiquities)

initiative gained the support of the UN Secretary General and leading international organizations, including UNESCO, the *International Council on Monuments and Sites* (ICOMOS) and the *World Meteorological Organization*, and was advanced for discussion by heads of state, strengthening Greece's position in the international discourse on cultural heritage protection. The initiative focuses on strengthening resilience, promoting adaptation policies and forging cooperation between member-states, scientists, and cultural heritage institutions to address climate risks to monuments and cultural areas on a global scale.



Ancient Messene, Gymnasium and Stadium (© Ephorate of Antiquities of Messenia)

Making the most of this international groundwork, the Ministry of Culture created a comprehensive action framework to timely identify climate threats, take preventative measures, and reinforce the resilience of monuments. In 2019, an Interdisciplinary Committee was convened to analyze international policies and best practices, assess the risks to cultural heritage, evaluate the existing institutional framework, and propose measures for good governance and enhanced readiness. The findings of this study formed the core of the National Strategy for the protection of monuments from the impacts of climate change, centering on four main axes: diagnosis, monitoring, prevention, and treatment.



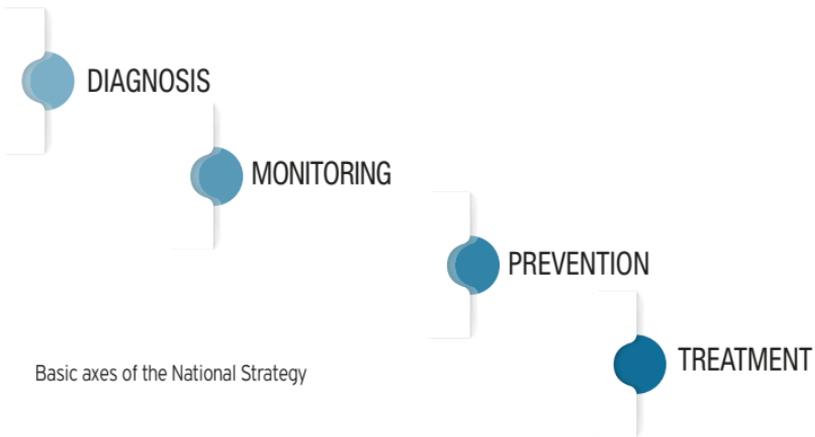
The objective of the National Strategy is to create an integrated adaptation framework that incorporates current scientific knowledge on climate risks and translates data into management directives and protection measures for cultural heritage, especially for open-air archaeological sites and monuments which, due to their direct exposure to the environment, are particularly vulnerable to changing climate and environmental conditions.

The interconnected network of measures combines technical interventions, management improvements, institutional and administrative restructuring, improving know-how, and activating local participation through dialogue. It defines the climate scenario and reference time period as the common basis for impact assessments and future planning, with the possibility of reevaluation based on new scientific data.

Through these approaches, the National Strategy strengthens the integration of cultural heritage into national and regional adaptation frameworks, promoting mechanisms for monitoring, exchanging knowledge and continuing education, while it is founded on a long-term plan with intermediate, five-year objectives and the capacity for revision. It thus ensures the preventative nature of the plan, as well as flexibility and adaptability and the incremental strengthening of the monuments' resilience in a constantly shifting environment.



The National Strategy for the protection of archaeological sites and monuments from the impacts of climate change is formulated on a comprehensive intervention framework articulated in four complementary and successive axes: Diagnosis – Monitoring – Prevention – Treatment. These core concepts were taken into consideration for the planning and preparation of interventions by the Ministry of Culture in the context of the National Recovery and Resilience Plan “Greece 2.0 – NextGenerationEU”, through which key research and technical works were implemented. These works contributed to the creation of a coherent framework of strategic and operational directives, as well as a uniform implementation methodology, covering all stages of adaptation: from the evaluation of climate hazards, risk assessment and prioritization, to the development, monitoring and implementation of necessary adaptation measures.





DIAGNOSIS

The starting point for the National Strategy is the identification and systematic mapping of climate threats that impact the preservation, resilience and safety of monuments. The research program “Designing a National Strategy for Adapting the Protection of Cultural Heritage Monuments to the Impacts of Climate Change” (2022-2025), implemented by the Directorate of Prehistoric and Classical Antiquities in collaboration with the National and



Vravra, Temple of Artemis (© Directorate of Prehistoric and Classical Antiquities)

Kapodistrian University of Athens and the National Research Foundation, undertook the necessary scientific documentation and mapping of climate risks across the country (*EUCRA, 2024*), used climatic and non-climatic parameters to assess the exposure and vulnerability of archaeological sites and monuments to climate hazards, and defined climate risk as a combination of factors (climate hazard – exposure – vulnerability) which can assist in prioritizing and planning adaptation measures.

The research results led to a special Adaptation Plan, prepared by the National and Kapodistrian University of Athens, for the main climate hazards (wildfire, flooding, drought, extreme heat, sea level rise) threatening the country's monuments and archaeological sites. Future climate conditions and scenarios are also taken into consideration in formulating the Adaptation Plan, so that the adaptation approach is not only based on current impacts but also on those that are expected in the future with a high degree of confidence (*European Scientific Advisory Board on Climate Change, 2026*). With a team of historians and archaeologists, the National Research Foundation studied the long-term effects of natural phenomena on nineteen archaeological sites, most of which are UNESCO World Heritage monuments. This long-term approach was essential, since human history has repeatedly been marked by extreme climate or other natural events. The historical and archaeological assessment of impacts of climate and other natural phenomena on these 19 archaeological sites produced valuable data not only on the nature of the risks themselves, but on the reaction strategies of the societies that occupied or managed them through the ages.

The National Observatory also contributed to the study by assessing the climate hazard of wildfires, using new tools to identify specific features of a fire, such as the intensity of its thermal front. These tools provided support for selecting necessary adaptation measures on a case by case basis.

This is the first systematic effort to integrate climate risk into the management, protection and enhancement of cultural heritage in Greece. It is also one of the few



Ancient Olympia, Palaistra (© Ephorate of Antiquities of Ilia)

Adaptation Plans in the world to incorporate and combine the most recent and validated directives of the *Intergovernmental Panel on Climate Change* (IPCC, 2022), the European Climate Risk Assessment (EUCRA, 2024), and the *European Scientific Advisory Board on Climate Change* (2026).

The impact of climate change on archaeological sites is not limited to pressures imposed on the natural and anthropogenic environment, however. It is also directly influenced by the building materials of the monuments themselves, which can accelerate processes of wear and deterioration. Fluctuating temperatures, unstable humidity, higher atmospheric pollution, and increasingly frequent extreme weather conditions change a monument's microenvironment and cause stress to its building materials. In Greece, where cultural heritage is extensive, varied, and spatially dispersed, it is crucial to develop a uniform, scientifically documented system for monitoring and addressing climate threats, with a special focus on the resilience of the materials of which the monuments are made.



General view of the ancient theatre of Epidauros (© Ephorate of Antiquities of Argolis)

This field was the subject of the research program “Systems of recording and monitoring the impacts of climate change on the microenvironment and materials of monuments” undertaken by the Directorate of Conservation of Ancient and Modern Monuments in collaboration with the National Center for Scientific Research Demokritos. Created in the context of this program was a comprehensive model for monitoring and prognosing the microclimatic conditions, utilizing a network of highly sensitive sensors, *Internet of Things* technologies, and computational prediction models based on scenarios



proposed by the *Intergovernmental Panel on Climate Change* (IPCC). The data thus produced was translated into targeted field applications and documented conservation decisions, with emphasis on the behavior and durability of building materials. It also produced model protocols for non-destructive sampling for diagnosing and monitoring the state of preservation, as well as protocols for testing sustainable conservation materials in terms of compatibility, reversibility, and durability under real microclimatic stresses, with the aim of formulating best practices for each category of monument.



MONITORING

The National Strategy adopts mechanisms of periodic review and adjustment so that adaptation plans respond to new scientific data and changing climate conditions on a national, regional and local level.

Specifically, the Adaptation Plans incorporate mechanisms for monitoring and assessing the effectiveness of measures, making use of indicators ratified at the *UN Climate Change Conference* (Belem, 2025). They also stipulate a periodic review every five years so that the proposed actions can be updated according to recorded trends in climate hazards and newer scientific data regarding climate risk. In this way, adaptation is addressed



Mycenaean acropolis of Glas, aerial view (© Directorate of Prehistoric and Classical Antiquities)

as a dynamically evolving process and not a static intervention.

Created to monitor the resilience of microenvironments in the monuments and their building materials, the specially-equipped “Deucalion” mobile unit serves as a mobile diagnostic laboratory for immediate intervention in case of natural disaster, providing the ability to swiftly assess hazards and apply immediate protective measures. The unit also augments professional training and the spread of know-how, contributing to increasing the readiness of competent services. It is a crucial tool for continually monitoring the condition of monuments and making timely decisions for their protection.



PREVENTION

Prevention is another fundamental axis of the National Strategy, aiming at addressing and mitigating the impacts of climate change. It is based on the best possible utilization of the results of Diagnosis and Monitoring, turning scientific knowledge and documentation into an organized framework of measures, procedures, and interventions intended to strengthen the resilience of cultural heritage.

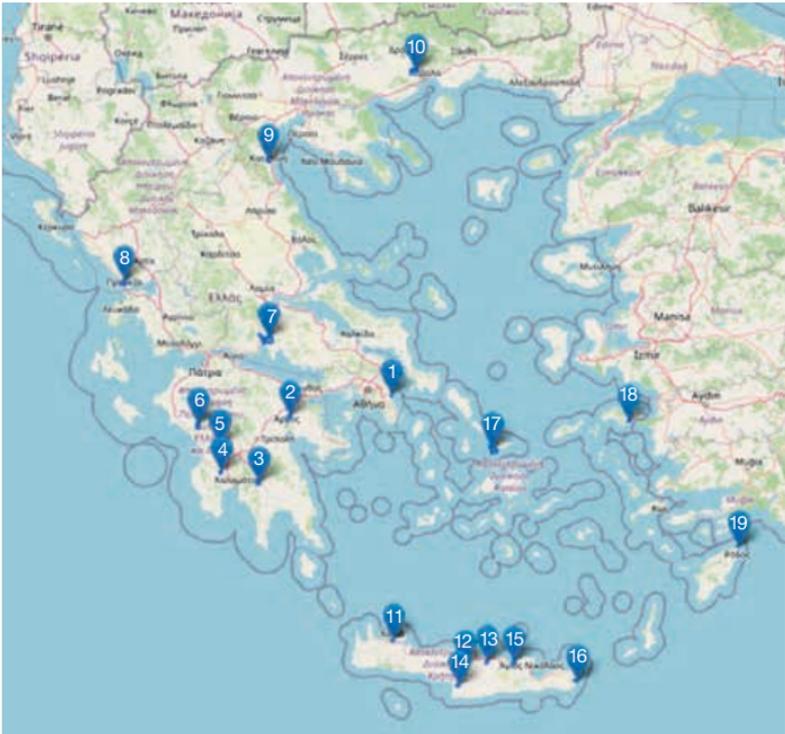
The main tools in preventative planning are the Adaptation Plans for monuments and archaeological sites, which comprise a comprehensive framework for protection and timely management of climate impacts. So far, targeted Adaptation Plans have been prepared for 19 archaeological sites with moderate or high climate risk, while five new Plans are to be added each year (for a total of 25 by 2030), so that the coverage of archaeological sites gradually grows based on a documented hierarchy of priorities.

A special feature of the Adaptation Plans is the differentiation of interventions depending on the level of risk and the time horizon for implementation. In particular, there are three distinct categories of adaptation: reactive, incremental, and transformational, which are implemented according to the urgency of the threat and estimated future developments. In this context, the Plans provide for preventative adaptation measures based on expected impacts over the period 2026-2045, while for sites and monuments at high or extremely high risk, the transformational approach is preferred as it includes more drastic and long-term interventions to strengthen resilience.

A digital platform created by the National and Kapodistrian University of Athens supports the Adaptation Plans, providing a database with climatic, geophysical and cartographic data in a Geographic Information Systems environment that includes an analysis and evaluation of climatic and non-climatic parameters and a risk assessment for all of Greece. It additionally provides tools for prioritizing climate risks per archaeological site or monument, contributing to an assessment of risk under various scenarios and for different periods of time for all climate threats, suggesting the appropriate adaptation approach and suitable measures.

In terms of infrastructure, prevention is substantially enhanced by the installation of an Integrated Fire Detection and Warning Information System at 21 archaeological sites and cultural heritage monuments across Greece, ensuring coverage both within the visitable zones as well as the surrounding forestland. The project, to be completed within 2026, is implemented by the Greek Ministry of Climate Crisis and Civil Protection with funding from the Recovery and Resilience Fund, and forms a crucial intervention to enhance the resilience of monuments against increased wildfire risk due to climate change.

These systems combine new technologies with artificial intelligence, strengthening civil protection mechanisms and improving the efficiency of fire suppression operations. They have optoelectronic equipment with multiple sensors that produce optical and thermal images and videos, a meteorological station, telecommunications equipment and the necessary operating and interconnection infrastructure, for the immediate detection of fire from the early stages of outbreak, the automatic



Map of Greece showing the locations of archaeological sites for which a Climate Change Adaptation Plan has been developed (© National and Kapodistrian University of Athens):

1. Brauron, 2. Mycenae, 3. Mystras, 4. Ancient Messene, 5. Temple of Apollo Epicurius, 6. Ancient Olympia, 7. Delphi, 8. Nicopolis, 9. Dion, 10. Philippi, 11. Kydonia, 12. Zominthos, 13. Knossos, 14. Phaistos, 15. Malia, 16. Zakros, 17. Delos, 18. Heraion of Samos, 19. Old Town of Rhodes

activation of an alarm with simultaneous determination of geographical coordinates, and the transmission of data to the competent Regional Fire Control Center in real time.

Climate risks for archaeological sites and monuments

 Forest Fires	 Extreme High Temperature	 Sea Level Rise	 Floods	 Drought
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TREATMENT - ADAPTATION IN PRACTICE

In implementation, the National Strategy for the adaptation of cultural heritage to climate change has already become a coherent group of operational interventions combining comprehensive technical infrastructure works with targeted prevention and mitigation measures for risks including flooding, wildfires, and landslides.

In this direction, the first projects were completed in 2025, implemented by the Greek Ministry of Culture with funding from the Recovery and Resilience Fund. They demonstrate the effectiveness of prevention strategies, strengthen the resilience of monuments and the operational readiness of the Greek Ministry of Culture Services, and ensure the safety of visitors and employees.

A targeted program of protection and resilience enhancement by the Directorate of Restoration of Ancient Monuments was completed at the archaeological site of **Delphi**, defending the monuments against geodynamic threats recorded in the region that have intensified due to the impacts of climate change and extreme weather phenomena. Even in antiquity, the area around the archaeological site was prone to heavy rainfall, but in recent decades there have been frequent instances of boulders collapsing from the Phaedriades cliffs, making measures to protect the monuments and visitors an urgent priority. Through well-studied and technologically advanced interventions, works were implemented to stabilize the slopes and build ditches and dams to channel rainwater, taking decisive steps to protect the site and ensure visitor



Project

Rockfall mitigation measures in Delphi

Implementation Agency

Directorate of Restoration of Ancient Monuments

in collaboration

with the Ephorate of Antiquities of Phocis

safety. Particular emphasis was placed on the eastern section of the archaeological site, especially the areas around the Castalian Spring and the Ancient Theater, where geological conditions have historically been of high risk. These interventions not only prevent further damage, but bolster the protective infrastructure of the site, safeguarding one of the most iconic monuments of Greece and of world heritage, ensuring it remains accessible for enjoyment by its thousands of visitors.

Stabilization works on rocky slopes and construction of rockfall protective barriers within the archaeological site of Delphi (© Directorate of Prehistoric and Classical Antiquities)



Project

Flood protection works in Dion

Implementation Agency

Directorate of Restoration of Ancient Monuments
in collaboration
with the Ephorate of Antiquities of Pieria

At the archaeological site of **Dion**, the same Directorate concluded an innovative flood protection program to safeguard the famous ancient city of Olympus. Targeted and advanced interventions restored torrent beds, stabilized slopes and installed special dams and levees to hold back alluvial debris and mitigate erosion. Additionally, the Ourlia and Vaphyra riverbeds were redesigned and restored, preventing uncontrolled flows that in the past had threatened the monuments. Another important feature of the project was the construction of a new metal bridge over the Vaphyra river, replacing an older wooden bridge swept away in the large flood of 2017, thus reconnecting critical pathways through the archaeological site and allowing guests to circulate safely among the important monuments. These infrastructure works – implemented after specialized studies – not only protect the monuments from flooding but reinforce the sustainable management of the site, preserving the cultural and natural values of the archaeological site and its surrounding environment.

Archaeological site of Dion, restoration of Vaphyra's riverbeds
(© Directorate of Prehistoric and Classical Antiquities)



Implementation of flood protection works at the archaeological site of Dion, 2025
(© Directorate of Prehistoric and Classical Antiquities)



Construction of flood protection works at the archaeological site of Dion, 2025
(© Directorate of Prehistoric and Classical Antiquities)



Project

Flood protection works at Malia Palatial Center

Implementation Agency

Directorate of Restoration of Ancient Monuments
in collaboration
with the Ephorate of Antiquities of Heraklion

Flood prevention works by the Directorate of Restoration of Ancient Monuments were also implemented at the Minoan Palace of **Malia** to more effectively address the increasing impacts of rainfall and flooding recorded in the area in recent years. An extensive drainage network was constructed with ditches around the roofed areas and a general drainage system to channel rainwater outside the archaeological site, preventing water from collecting and damaging the monuments. At the same time, the decayed polycarbonate sheets in the shelters covering the monuments were replaced with new, more durable materials that offer greater protection from hail and intense rainfall, and the grades of the gutters were adjusted to ensure smooth drainage of water and limit the risk of erosion. The combination of technical infrastructure and upgraded roofing materials creates a comprehensive protective mechanism that safeguards the ancient remains, limits erosion and ensures the durability of the monuments' fragile building materials.

Archaeological site of Malia, upgrading interventions at the protective shelters
(© Directorate of Prehistoric and Classical Antiquities)



Project

Fire protection works at the Archaeological Site of Philippi

Implementation Agency

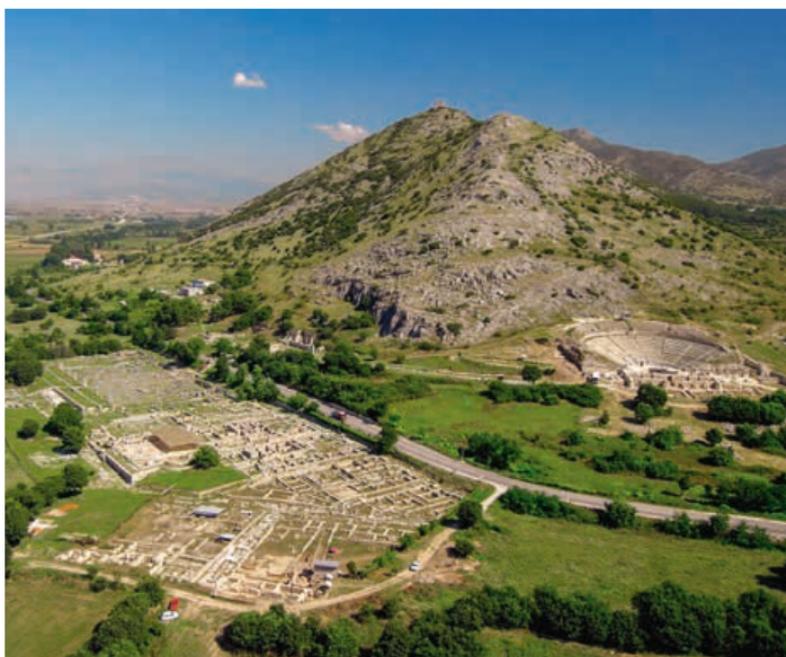
Directorate of Studies and Conduction
of Technical Works in Museums
and Cultural Buildings in collaboration
with the Ephorate of Antiquities of Kavala

At the archaeological site of **Philippi**, the Directorate of Studies and Conduction of Technical Works in Museums and Cultural Buildings undertook the construction of a comprehensive fire protection system for the archaeological site and its Archaeological Museum. A permanent firefighting water supply network was installed with tanks of appropriate capacity, pumping units, piping networks, fire hydrants, sprinklers, a water supply network, automation control system, as well as a public address system (loudspeakers). Thirteen wheeled and 12 Firefighting Stations were created in the archaeological site, with four additional firefighting posts in the museum. In parallel, an announcement/voice alarm system was created with six zones and the ability to broadcast pre-recorded messages in three languages or give live evacuation orders. The system is controlled by the guard desk in the Museum and covers the entire archaeological site and areas outside the museum, with appropriately spaced loudspeakers and points with announcement microphones.

Archaeological site of Philippi

Installation of a permanent water-supply fire-fighting network

(© Directorate of Prehistoric and Classical Antiquities)



Archaeological site of Philippi (© Ephorate of Antiquities of Kavala)



Project

Fire protection works in Mystras

Implementation Agency

Directorate of Studies and Conduction
of Technical Works in Museums
and Cultural Buildings in collaboration
with the Ephorate of Antiquities of Lakonia

The archaeological site of **Mystras** is particularly vulnerable to fire hazard due to its steep slope, large area and densely arranged monuments. To enhance its fire protection, a comprehensive firefighting system was installed at Mystras by the same Directorate. An extensive permanent firefighting water supply system provides water to firefighting posts and sprinklers (water cannons), permitting direct and targeted intervention in the event of fire. Additionally, four water tanks were set up at selected points to secure sufficient and readily available water reserves throughout the archaeological site, while two pumping stations ensure the necessary water pressure and supply for the network to function effectively. The system includes remote sprinkler activation in combination with a manual fire alert system, providing rapid response and increased control in case of emergency. For visitor information and safety, a loudspeaker system is to be installed that will cover the entire archaeological site, with the capability of transmitting audio announcements in real time as well as pre-recorded alerts in three languages.



Archaeological Site of Mystras: Reinforcement and Expansion of the Firefighting System
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Knossos



Zominthos



Phaistos



Malia



Zakros



Kydonia

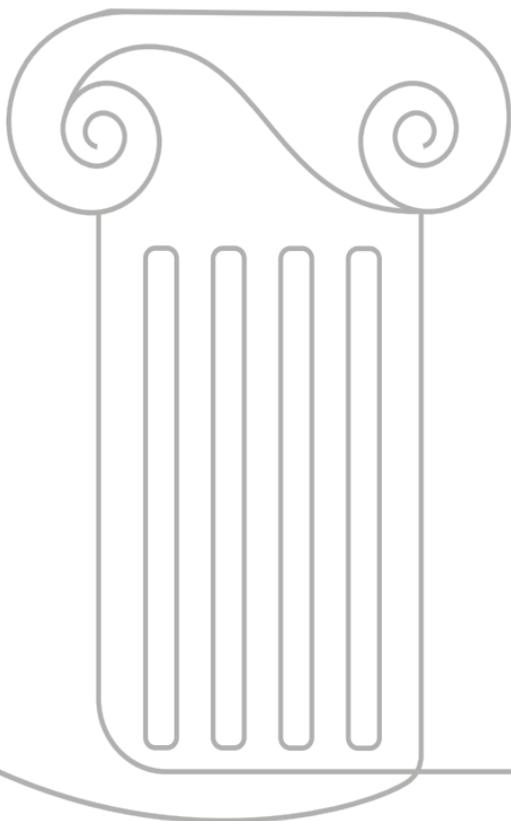


Snapshot from the examination of the Minoan Palatial Centres' nomination by the UNESCO World Heritage Committee (July 2025, © Ministry of Culture)

The National Strategy is also implemented through the systematic integration of climate as a parameter in the central planning for the protection and management of monuments, spearheaded by the Management Plans for UNESCO World Heritage monuments prepared by the competent Services of the Ministry of Culture. These Plans recognize the climate crisis as a fundamental factor impacting the monuments and introduce measures to analyze, evaluate and address the threats that arise.

An indicative example of this new approach in practice is the candidacy file for the Minoan Palatial Centers as UNESCO World Heritage monuments, which was accompanied by a special appendix with a targeted analysis of climate risks and a comprehensive adaptation plan, a first on the national and international level. It documents the intention to integrate climate as a parameter even at the candidacy stage, marking an essential shift in the way climate resilience is incorporated into the strategic planning and management of cultural heritage.

Best Practices



MEMORANDUM OF COOPERATION BETWEEN THE MINISTRY OF CULTURE AND THE MINISTRY OF CLIMATE CRISIS AND CIVIL PROTECTION

Implementation of the National Strategy for the adaptation of cultural heritage to climate change requires coordinated interventions that supersede the bounds of cultural policy, since climate risks are directly linked to civil protection, the environment, spatial planning and infrastructure. In this context, the cooperation developed between the Ministry of Culture and other co-competent ministries constitutes best practices as it ensures coherent planning and the utilization of shared data and tools, thus enabling more effective threat prevention and management.

Of key significance is the operational cooperation with the Ministry of Climate Crisis and Civil Protection under a Memorandum of Cooperation, in effect since December 2021. The Memorandum, scientifically supported by the National and Kapodistrian University of Athens, relates to the defense of archaeological sites against natural threats associated with the impacts of climate change, with an emphasis on wildfire risk. In this context and with the active participation and support of the Ministry of the Environment and Energy, fire prevention and protection actions have been implemented at more than 60 archaeological sites, civil protection plans have been prepared, educational seminars have been organized, and evacuation drills have taken place at archaeological sites with high visitation. The methodology employed and the coordination model created now serve as a guide to expand actions to all other archaeological sites in Greece.



Evacuation drills at the Ancient Theatre of Epidaurus and the archaeological site of Ancient Olympia
(© Directorate of Prehistoric and Classical Antiquities)





Map showing the locations of archaeological sites examined within the framework of the Memorandum of Cooperation between the Ministry of Culture and the Ministry of Climate Crisis and Civil Protection

The culmination of the cooperation is the ongoing preparation of a special Regulation on Fire Protection for archaeological sites which incorporates the experience, know-how and operational data gained through the systematic cooperation of the two ministries over the past six years.

Preparation of the Regulation reflects the state's intention to institute a comprehensive, uniform and applicable regulatory framework for fire prevention and readiness, addressing and monitoring fire protection means and measures in the country's archaeological sites while taking into consideration the growing frequency and intensity of wildfires in the context of climate change.



Ο ΛΑΜΠΡΟΣ
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**RESEARCH PROJECT OF THE MINISTRY OF CULTURE,
THE MINISTRY OF ENVIRONMENT AND ENERGY,
THE NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS,
AND THE NATURAL ENVIRONMENT AND CLIMATE CHANGE
AGENCY**

In the context of the National Strategy, safeguarding cultural heritage against the challenges of climate change goes beyond the narrow concept of protecting the monuments themselves; it is also a strategic opportunity to study and preserve the biodiversity recorded in the archaeological sites across the country. Biodiversity includes all the plants, animals and microorganisms, the genes they carry and the ecosystem they form, in mutual relation to the climate. Climate directly influences the geographical distribution of species and their living conditions. Simultaneously, however, healthy ecosystems serve as natural shields against extreme climate conditions: they bind large quantities of carbon, regulate the water cycle, preserve humidity in the soil, reduce peak temperatures and reinforce the resilience of areas against natural disasters such as wildfires, flooding and storms.

Under this lens, biodiversity and ecosystem protection is now a primary objective in international and European policy, recognizing their crucial role in the resilience of the planet and of society. The *European Union Convention on Biological Diversity* (1992) and the *Global Biodiversity Framework* adopted in December 2022 during the 15th Conference of the Parties (COP15) of the UN Convention on Biological Diversity set the protection of global ecosystems and species as a clear target, and at the same time defined directives for the sustainable use of natural resources. On a European level, the *Natura 2000*



General view of Gramvousa Castle (© Ephorate of Antiquities of Chania)

network, the largest system of protected regions in the world, together with the *Strategy for Biodiversity 2030*, aim to protect at least 30% of European land and marine territory, restore degraded ecosystems and effectively protect threatened species and eco-landscapes, making biodiversity a pillar of sustainable development and of the conservation of natural and cultural riches.

In this context, the Mediterranean stands out as one of the most important biodiversity “hot spots” in the world, a region with an exceptional variety of species which are, however, gravely threatened by human activities and climate change. Greece, as part of this ecologically critical geographical area, and thanks to its combination of island and mountainous landscapes, has an impressive coexistence of microclimatic conditions and a rich mosaic of ecosystems with a high degree of diversity in flora and fauna and a large percentage of endemic species. Despite its small size, Greece hosts 1/3 of the species found in Europe, situated as it is on the edges of the ranges of many species living on the three continents surrounding it. At the same time, however, this vulnerable biodiversity is threatened: according to the Greek Red List



General view of the archaeological site of Ancient Messene (© Ephorate of Antiquities of Messenia)



Aerial view of the archaeological site of Nicopolis (© Ephorate of Antiquities of Preveza)



Archaeological site of Acrocorinth (© Ephorate of Antiquities of Corinth)

of 2024, around 11,500 species of plants and animals, or 21% of recorded species, are under threat, demonstrating the need for direct and targeted protective actions.

Hence, biodiversity is incorporated into the policies and strategies of cultural heritage management as an integral part of a comprehensive approach to preserve cultural and natural wealth. Listed archaeological sites, which are established and protected by the Ministry of Culture, are areas where the anthropogenic and natural environment seamlessly coexist. Protection of the antiquities through building restrictions, land-use controls, and long-term care for the surrounding landscape indirectly serves as a mechanism for protecting nature. Thus, archaeological sites evolve into biodiversity pockets, demonstrating in practice that cultural and natural heritage comprise a single, organic whole.

Tangible proof of the value and effectiveness of this model of protection comes from the recent research program “Biodiversity in Archaeological Sites (BIAS)” implemented in 2022-2025 as a collaboration between the Ministry of Culture and the Ministry of the Environment and Energy, the Biology Department of the National and Kapodistrian University of Athens, the National Research Foundation, and the Natural Environment and Climate Change Agency. This pioneering interdisciplinary action, recording the biodiversity in 20 iconic archaeological sites, demonstrated that Greece’s archaeological sites serve as “islands of life” and natural protection zones: 10,463 species of flora and fauna were recorded, of which 4,399 are unique. This corresponds to 10.8% of the country’s biodiversity, deriving from an area covering only 0.08% of its total surface area.



Island of Ioannina (© Directorate of Byzantine and Post-Byzantine Antiquities)

These findings emphatically demonstrate that efforts to preserve and highlight the country's cultural capital simultaneously contribute to conserving its natural wealth, making archaeological sites not only monuments of history, but pockets of life.

The program's success led to its extension and expansion. In the ongoing second phase, a synthetic study is underway that examines biodiversity in many more archaeological sites, and in two parallel fields of research: the past, through the prism of the anthropogenic environment, and the present, through recording the species present today. The anticipated results can be utilized in modern societies' general effort towards a more sustainable cultural evolution, placing this fragile human-nature relationship at the center.



The Greek Ministry of Culture takes the lead, actively participating in international initiatives developed by the United Nations to shape policies that systematically integrate cultural heritage into strategies of sustainable development, adaptation, and means to address climate change. This participation rests in the modern scientific and political perception that cultural heritage is not just a bearer of identity, memory and historical continuation, but also a crucial factor in social, environmental/climate and institutional resilience in the face of complex and interrelated natural threats intensified by climate change.

In this context, Greece maintains an active and essential presence in the *United Nations Framework Convention on Climate Change* (UNFCCC), joining international collaborations that promote the link between cultural and climate policy. Our country emphasizes its priority for preventative actions in this sector at all the *Conference of the Parties* (COPs), the highest decision-making body of the UN's Convention on Climate Change. The Ministry of Culture has represented the country at these meetings, demonstrating the criticalness of the subject and calling for international cooperation and the sharing of experience and best practices.

Greece is also an active member of the international initiative *Group of Friends for Culture-Based Climate Action* (GFCBCA), an informal group under the United Nations Framework Convention on Climate Change (UNFCCC) composed of over 56 member-states, as well as international organizations such as UNESCO, *ICCROM*,



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ICOM, and *ICOMOS*, together with representatives of civil society. The aim of the GFCBCA initiative is to highlight and strengthen the role of culture as a catalyst for climate action, encouraging states to incorporate cultural heritage, the arts, creative industries, intangible cultural heritage, and traditional knowledge into national strategies for mitigating climate change and adapting to its impacts.

The strategic international presence of the country is also reflected in the fact that Greece hosts many important international events and conferences. In 2022, Greece organized in collaboration with UNESCO's World Heritage Center, the main anniversary event celebrating 50 years since the Convention on the Protection of the World Cultural and Natural Heritage. At the core of the meeting was the construction of climate resilience for cultural heritage and the presentation of best practices and proposals for safeguarding monuments and landscapes against the increasingly intense impacts of the climate crisis, strengthening the international image of the country and confirming its commitment to chart policies that combine cultural management with sustainable growth and environmental responsibility.

The Greek presidency of the *Ancient Civilizations Forum* (ACF) in 2025 contributed to the further consolidation of the country's leading role in the discussion on the relationship between cultural heritage, climate change and sustainable growth on a global level. Discussions at the level of ministers and experts focused on this subject, aiming at a common action to develop tools for preventing and mitigating the impacts of climate change on monuments, and to disseminate best practices.



The strengthening of monuments' resilience to the impacts of climate change is systematically supported through collaborations between the Ministry of Culture and research and institutional bodies that develop related innovative actions at national and European levels. These collaborations contribute to the formulation of evidence-based adaptation policies, utilizing modern risk analysis methodologies and decision-support tools. Regarding the topic, the following are presented as examples—without exhausting the full range of related initiatives or projects— of the most recent and representative research projects in which the Greek Ministry of Culture has participated. These projects cover different categories of monuments and a wide spectrum of climate-related threats, reflecting the holistic approach that has been adopted in the field of adaptation.

On a national level, the program CLIMASCAPE, funded through the NSRF 2014-2020, was one of the first systematic efforts to record the impacts of climate change on a statewide scale. Through the combination of geographical, environmental and climate data for eight UNESCO World Heritage monuments and sites that served as a case study, it developed an important methodological basis for identifying and prioritizing climate hazards per archaeological site.

On a European level, a number of projects funded under the Horizon program further contributed to assessing the impacts of climate change on monuments and specifying adaptation tools.

The programs HERACLES (HERitage Resilience Against CLimate Events on Site, 2016-2019) and STORM (Safe-



guarding Cultural Heritage, Technical and Organizational Resources Management, 2016-2019), with the participation of competent regional Services of the Ministry of Culture, focused on Mediterranean coastal cultural heritage. Monuments and historically important assemblages on Crete were selected for pilot field implementation, including the Palace of Knossos, coastal monuments of Heraklion, and the historical center of Rethymnon. Research focused on analyzing phenomena such as rising sea levels, coastal erosion, extreme weather phenomena, and marine stresses, and also developed tools for strengthening the procedures of prevention and monitoring.



Underwater and coastal heritage were particularly emphasized in the research program THETIDA (Preserving Underwater and Coastal Heritage), which utilized environmental modelling and climate change scenarios to conduct quantitative and qualitative assessments of seven pilot locations in Europe, one of which is the Castle of Mykonos, combining analyses of environmental parameters and pollution.

Completed in 2025, the program “Toolbox for assessing and mitigating climate change risks and natural hazards threatening cultural heritage (TRIQUETRA)”, also funded under Horizon, aimed to develop a digital platform for as-



View of the Kolona archaeological site, Aegina
(© Ephorate of Antiquities of Piraeus and Islands)

sessing and mitigating climate and natural risks. Its pilot implementation included eight European archaeological sites, including the Greek archaeological sites of Kalapodi in Phocis, Kolonas on Aegina, and the underwater ar-



Sanctuary of Kalapodi, temple complex (© Ephorate of Antiquities of Phthiotis and Evrytania)



View of the Kolona archaeological site, Aegina (© German Archaeological Institute)

archaeological site at Epidaurus. The resulting digital platform serves as a decision-making tool, proposing targeted protection measures for specific archaeological sites and strengthening the process of strategic planning.

All the aforementioned research projects as well as other related national and European initiatives have made a decisive contribution to establishing a strong scientific and technical base for understanding, evaluating and analyzing climate hazards threatening cultural heritage monuments and sites. The utilization of their results strengthens the link between scientific research and operational application, creating a cohesive framework of knowledge and best practices that supports strategic planning and promotes the resilience of cultural heritage on both a national and European scale.



PUBLIC AWARENESS CAMPAIGNS LINKING ART WITH CLIMATE CHANGE

Strengthen the resilience of cultural heritage in the face of climate change does not rest solely on developing institutional policies and technological tools, but also extends to activating society through news outlets, education, and participatory cultural actions. This approach aligns with European policy which makes education on the climate a strategical priority.

In Greece, corresponding directives are implemented through educational actions that strengthen the skills of cultural personnel in integrating adaptation to protection and management policies. An illustrative example is the “Cultural Heritage School”, a series of seminars organized in recent years in collaboration with the U.S. Embassy in Athens and the Hellenic Section of the International Council of Museums (ICOM). The seminars are aimed at cultural professionals and focus on the impact of climate change on monuments, as well as the presentation of innovative practices and approaches for managing its effects.

At the same time, public awareness initiatives such as the nationwide campaign “Green Cultural Routes”, now a key component of the *National Action Plan for Education for Sustainable Development*, promote the connection between cultural and natural heritage, highlighting the role of cultural landscapes as complex systems affected by climate change.



View of the archaeological site of Dodoni (© Ephorate of Antiquities of Ioannina)

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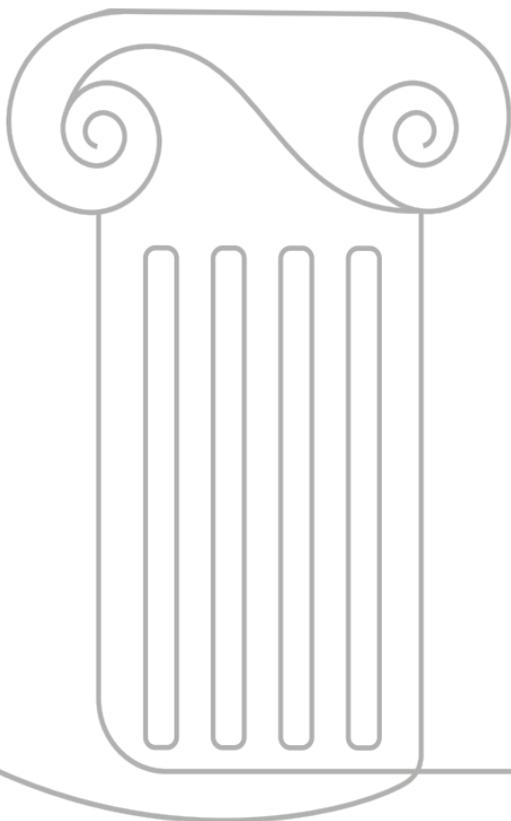



Through collaborations with municipalities, educational institutions, universities, environmental organizations, and networks of volunteers, the initiative has developed in many regional units, strengthening the participation of citizens – especially the youth – in cultural and environmental actions that cultivate environmental awareness and social cohesion.

In 2023 the emblematic initiative by the Ministry of Culture, *“All of Greece, One Culture”* placed the climate crisis at the center of cultural production, using monuments and archaeological sites as living landscapes of artistic expression and public dialogue. Through theatrical performances, musical events and visual interventions, the public came into contact with modern narratives that link the past to contemporary environmental challenges, raising consciousness about the need to protect cultural heritage in a changing climate.

Combining educational, artistic, and community actions, these initiatives demonstrate the crucial role of public awareness and cultural participation in the construction of a society capable of facing environmental challenges, strengthening cultural heritage resilience in times of climate change.

Glossary



2030 Agenda for Sustainable Development

An international framework approved by United Nations member-states in 2015 to promote sustainable development on an economic, social and environmental level through 17 Sustainable Development Goals, covering subjects such as fighting poverty, protecting the planet, and promoting peace and prosperity for all.

Ancient Civilization Forum - ACF

International initiative inaugurated in 2017 to promote cultural dialogue and cooperation between states with rich historical heritage. In addition to Greece, participating countries include Armenia, Bolivia, Egypt, China, Iran, Iraq, Italy, and Peru. Recently, Cyprus also joined, and Mexico participates as an observer. The first (2017) and ninth (2025) Ministerial Meeting of the ACF was held in Athens.

Biodiversity Strategy for 2030

European Union strategy document for the protection, restoration and sustainable management of biodiversity in Europe by 2030. It defines binding targets to increase natural protection areas, reduce the loss of ecosystems and species, strengthen the resilience of natural resources, and integrate biodiversity into sectors such as agriculture, forestry, and infrastructure, contributing to achieving sustainable development and climate neutrality.

Climate Hazard

Heightened threat, or the intensification of a natural phenomenon due to climate change that might adversely affect an area under study.

Conference of Parties – COPs

The highest decision-making body of the United Nations Convention on Climate Change, in which all convention member-states participate. It is responsible for monitoring the implementation of the Convention and taking decisions regarding global actions addressing climate change.

Convention on Biological Diversity – CBD

International environmental convention adopted in 1992. It is the main legal framework for the protection of natural and cultural heritage on a global scale, defining the principles and policies to be implemented by member-states for the sustainable management of biodiversity.

European Climate Law

European Union regulation that legislates legally binding targets for attaining climate neutrality by 2050, defines short-term goals of reducing emissions and institutes procedures for monitoring, reviewing and adapting the policies of the European Union addressing climate change, promoting the transition to sustainable, resilient and low-emission economies.

European Climate Risk Assessment - EUCRA

Comprehensive assessment of current and future risks associated with climate change in Europe, providing scientific documentation for the charting of adaptation policies, addressing the impacts on the environment, society, and the economy.

European Environment Agency – EEA

Independent European Union organization that provides reliable information on the environment, monitors the situation and European-wide trends, and

supports the charting of policies for the protection of the environment, adaptation to climate change, and sustainable development.

European Scientific Advisory Board on Climate Change

Independent scientific advisory body that provides the European Union with scientific knowledge, expertise and independent advice regarding climate change, its impacts, and relevant political measures, and issues documented scientific assessments and recommendations to the European Union's institutional bodies.

European Union Biodiversity Convention

International environmental agreement supported and implemented by the European Union with the goal of preserving biodiversity, sustainable use of biological resources, and the fair distribution of benefits arising from the use of genetic resources. The Convention promotes the development of national strategies and policies for the protection of ecosystems, species and genetic resources on a European-wide level.

Exposure

The presence of people, ecosystems, infrastructure, buildings, or other economic and cultural assets in areas that are potentially adversely affected by natural phenomena. (Source: IPCC, 2022).

Global Biodiversity Framework

International framework of strategic targets and commitments for the preservation, restoration and sustainable use of global biodiversity by 2030, with the aim of protecting ecosystems, sustainable management of natural resources, and strengthening the participation of communities and indigenous peoples.

Group of Friends for Culture-Based Climate Action - GFCBCA

International collaborative framework of countries set up during international negotiations on climate change with the aim of promoting the incorporation of cultural heritage – material and intangible – and cultural expression in climate actions and policies. It strengthens the dialogue and collaborations between member-states, supports best practices and policies for cultural approaches in addressing climate change, and contributes to raising awareness and cultivating a global cultural dimension in climate action.

Hazard

Natural phenomena such as extreme heat, drought, flooding, wildfires.

Intergovernmental Panel on Climate Change – IPCC

The United Nations international scientific agency tasked with evaluating and summarizing global scientific knowledge on climate change, providing validated reports to support international policymaking.

International Center for the Study of the Preservation and Restoration of Cultural Property – ICCROM

An international organization established in 1959 with headquarters in Rome. It promotes the preservation and protection of world cultural heritage and provides education, technical support, research, and consultation services for the restoration, conservation, and sustainable management of monuments and historical places.

International Council on Monuments and Sites – ICOMOS

International non-governmental organization established in 1965 for the preservation and protection of monuments and cultural heritage sites

around the world. It provides scientific documentation, consultation services, and guidelines for managing monuments, and supports the implementation of international agreements such as the UNESCO Convention on the Protection of World Cultural and Natural Heritage, promoting collaboration between states, specialists and organizations

International Council of Museums – ICOM

International non-governmental organization established in 1946 to define professional and ethical models for museums and museum professionals, promote research, and safeguard and transmit natural and cultural heritage, both material and intangible, to the public.

Internet of Things – IoT

A network of interconnected devices and objects that collect and exchange data over the internet, allowing for systems monitoring, control, and automation in various sectors.

Kyoto Protocol

International, legally binding agreement adopted in the context of the United Nations Convention on Climate Change that sets quantitative targets for reducing greenhouse gas emissions by developed nations, for the purpose of limiting climate change. It was adopted in 1997 in Kyoto, Japan, and took effect in 2005.

National Action Plan for Education for Sustainable Development

National plan that identifies the targets, priorities and actions to promote Education for Sustainable Development at all levels of education and with social participation. It aims to develop knowledge, skills, and values to reinforce the understanding and active participation of citizens in protecting the environment, promoting social cohesion, economic sustainability, and a sustainable way of life, contributing to achieving UN Sustainable Development Goals.

National Climate Law

Legislation that sets out the national legal framework for adaptation to climate change and the transition to climate neutrality, defining binding targets for emissions reduction, and enacting adaptation measures and procedures for strengthening the resilience of the environment, society, and the economy. Enacted in Greece in 2022 (Law 4936/2022).

National Strategy for the Adaptation to Climate Change

National strategic plan that identifies the targets and measures for the country's adaptation to the impacts of climate change, strengthening the resilience of the environment, society, and the economy and supporting the implementation of adaptation policies and actions on a national, regional, and local level.

Open Method of Coordination (OMC) group on "Strengthening cultural heritage resilience for climate change"

Group of European Union experts who identify best practices and formulate policy proposals for the protection of cultural heritage from environmental hazards. Made up of specialists from member states, it promotes sustainable solutions based on nature and the preservation of heritage under the framework of the European Green Deal.

Paris Agreement

International agreement adopted in the context of the United Nations Framework Convention on Climate Change in 2015, with the aim of keeping

the global rise in temperature to well under 2°C from pre-industrial levels, strengthening resilience to the impacts of climate change, and supporting the transition to economies with low greenhouse gas emissions.

Policy Document on Climate Action for World Heritage

International policy document by UNESCO on the impacts of climate change to monuments, adopted in November 2023 by members of the Convention on the Protection of World Cultural and Natural Heritage. It provides a framework of guidelines for integrating climate action into the management of World Heritage Monuments, with the aim of identifying and managing the hazards threatening cultural heritage from climate change, promoting the planning and implementation of adaptation and mitigation measures.

Risk

The combined estimation of impacts from a natural phenomenon and the likelihood of its occurrence, as a function of climate hazard, exposure, and vulnerability.

Sendai Framework for Disaster Risk Reduction

International framework approved in 2015 by United Nations member-states, with the aim of reducing manmade and natural disaster threats, reinforcing the resilience of societies and countries, and promoting strategies of prevention, preparedness and response to destructions for the period 2015-2030.

United Nations Climate Change Conference – UNFCCC

The annual conference of member-states of the United Nations Convention on Climate Change. All convention members participate, along with representatives of international organizations and civil society, with the aim of assessing progress, taking decisions, and formulating strategies for mitigating and adapting to the impacts of climate change.

United Nations Framework Convention on Climate Change - UNFCCC

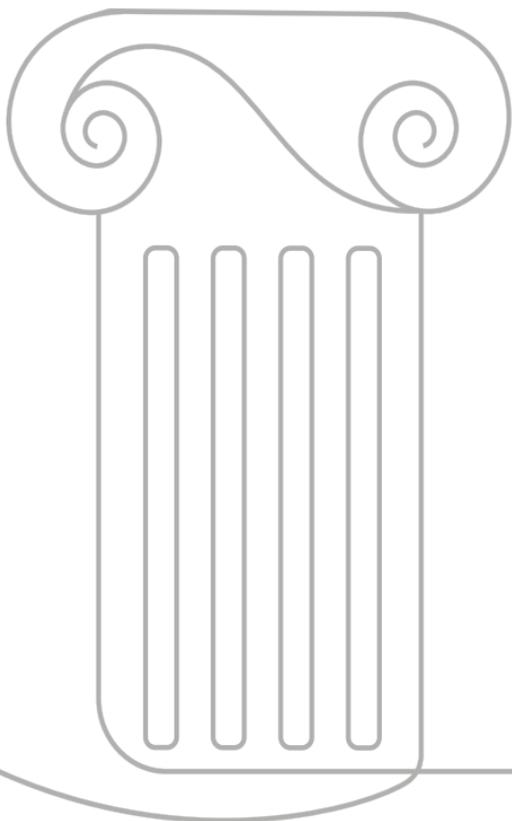
International environmental treaty adopted in 1992 (taking effect in 1994) aimed at stabilizing the concentration of greenhouse gasses so as to prevent a dangerous manmade intervention to the climate system. With 198 convention members, it is the main legal framework for global climate action.

World Meteorological Organization – WMO

International organization of the United Nations founded in 1950 to promote the cooperation of member-states for monitoring and predicting the weather, climatology, hydrology, and other geophysical atmospheric processes. It provides scientific and technical services for the prevention of natural disasters, the protection of human life and property, as well as for sustainable development.

Term	Official definition
Hazard	Natural phenomenon such as extreme heat, drought, flooding, wildfires, etc. that have the potential to adversely affect an area.
Climate Hazard	Heightened risk, or the intensification of a natural phenomenon due to climate change, that might adversely affect an area under study.
Exposure	The presence of people, ecosystems, infrastructure, buildings, or other economic and cultural assets in places that could be adversely affected by natural phenomena. (Source: IPCC, 2022)
Vulnerability	Identifying the degree of susceptibility and adaptation capabilities of a study area to respond to the threats of natural phenomena related to climate change. (Source: IPCC, 2022)
Risk	The combined estimation of the impacts of a natural phenomenon and the likelihood of its occurrence, as a function of climate hazard, exposure, and vulnerability. (Source: IPCC, 2022)

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from the impacts of climate change

