



POLICY BRIEF

Safeguarding Cultural Heritage
from Hydroclimatic Extremes

Integrating Water, Climate and Heritage
in Policy Action



AQUA LEGACY
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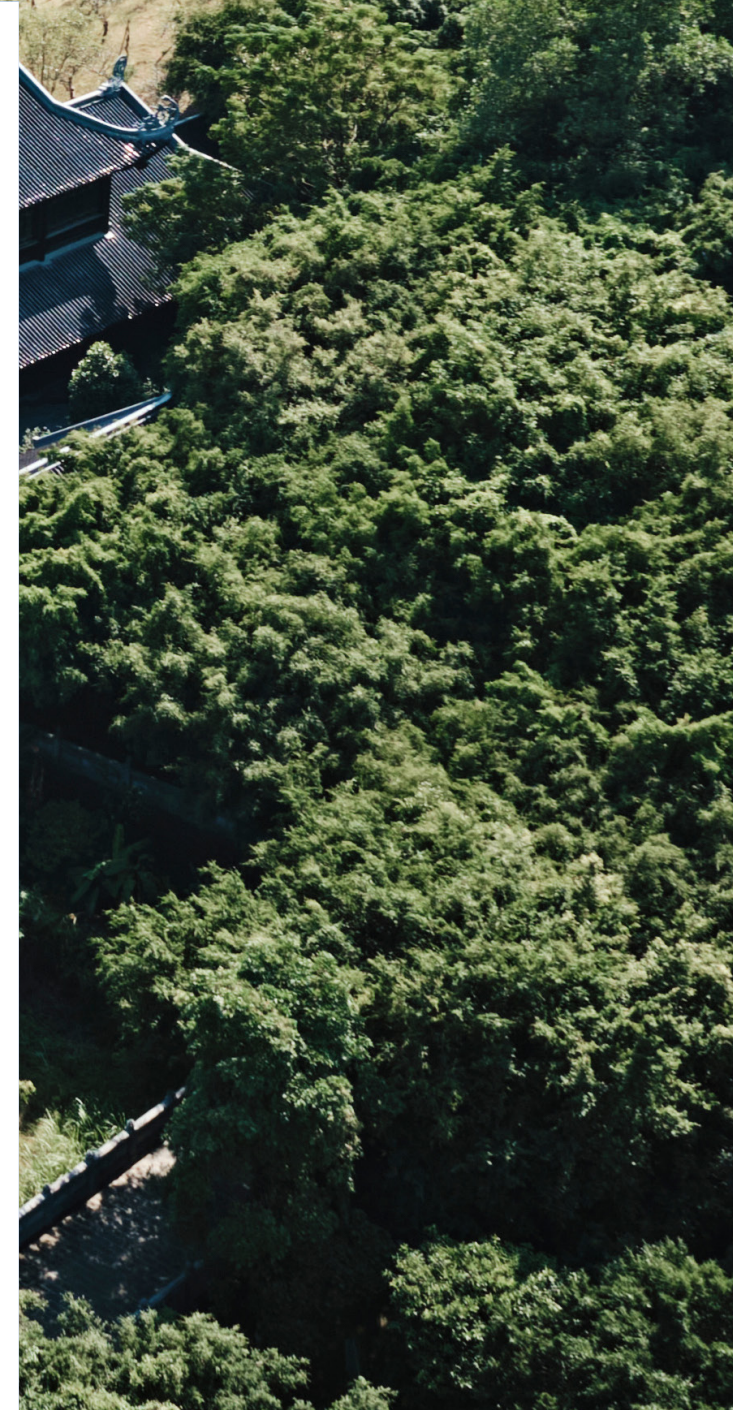
**Authors: Veronique Briquet-Laugier
and Amanda Loeffen**

The Challenge

“Cultural heritage is increasingly vulnerable to climate change”

Cultural heritage, including historic monuments, landscapes, traditions, and indigenous knowledge, is increasingly vulnerable to climate change. Extreme hydroclimatic events such as floods, droughts, and storms are accelerating the loss of cultural assets, damaging physical structures, displacing communities, and eroding traditions passed down through generations. Water-related hazards are now the leading cause of cultural heritage degradation worldwide, with prolonged droughts contributing to desertification, migration, and the disappearance of local knowledge systems.

Preserving cultural heritage is not only a matter of protecting the past – it is also essential for sustainable development. The Paris Agreement¹ and the UN Sustainable Development Goals (SDGs) emphasize culture’s role in fostering resilience and inclusive growth. Integrating heritage protection into broader climate adaptation strategies is therefore urgent, requiring innovative policies, coordinated research efforts, and stronger community engagement².



Strategic Priorities for Action

A transdisciplinary approach is needed to address these challenges. Strengthening collaboration in research and innovation will help close critical knowledge gaps about the impact of hydroclimatic extremes on cultural heritage. Coordinated efforts across the European Research Area (ERA) can pool resources from national funding bodies, with mechanisms such as Horizon Europe and Joint Programming Initiatives (JPIs) offering valuable financial and policy support³. Ensuring open access to research findings and prioritizing funding for underrepresented regions will also enhance global cooperation.

Heritage protection must be integrated into climate adaptation policies, ensuring that it becomes a key consideration in frameworks like the EU Green Deal and Adaptation Strategy. Standardized risk assessment tools should be developed to evaluate vulnerabilities, while investments in adaptive technologies – such as flood-resistant materials and AI-driven monitoring systems – can help mitigate threats⁴.

To accelerate practical solutions, the establishment of living labs can provide more sustainable results⁵. These real-world testing environments bring together researchers, policymakers, and communities to co-develop strategies that protect heritage from climate risks. Organizations such as AQUA Legacy offer expertise in designing inclusive, community-led initiatives, ensuring that solutions reflect local needs and are responsive to on-the-ground realities.

Empowering local communities and heritage professionals is central to effective cultural preservation⁵. Providing training and resources will enhance their ability to manage and protect heritage sites in the face of climate change. Policymakers must engage directly with scientists and local stakeholders to ensure decision-making is informed by both scientific expertise and traditional knowledge.

Adopting a Human Rights-Based Approach (HRBA) is also a crucial mechanism for protecting the rights of vulnerable and marginalised communities that are facing climate-induced displacement⁶. Through the recognition of cultural heritage and indigenous identities, and the





participation of these communities in climate solutions, water resource management solutions are geared to be more sustainable for all members of society.

Capacity building can be strengthened by equipping professionals with skills in climate science, hydrology, risk assessment, and conservation. Training programs should emphasize the integration of traditional knowledge with modern research, fostering a network of skilled experts who can apply transdisciplinary approaches to safeguard cultural assets. In addition, knowledge exchange platforms and collaborative projects can enhance the transfer of expertise across sectors.

“Empowering local communities and heritage professionals is central to effective cultural preservation “

Existing EU frameworks and funding mechanisms should be fully leveraged to support these efforts. Increased investment in research and innovation can drive the development of climate adaptation technologies tailored to cultural heritage protection. Startups and SMEs working in this space should be encouraged, while the coordination of transnational projects will ensure that best practices are shared across borders⁽⁷⁾.

Key Recommendations for Policymakers

1. Funding policies: To strengthen resilience, policymakers should increase funding for research and innovation, ensuring that heritage protection is prioritized in climate adaptation policies. Establishing a European Heritage Resilience Fund would provide dedicated resources for research, restoration, and community-led initiatives. Integrating cultural heritage considerations into national and international adaptation plans will ensure these efforts are aligned with broader climate strategies.

2. Interdisciplinary Collaboration: Encouraging interdisciplinary collaboration is also critical. Experts in climate science, hydrology, archaeology, and conservation must work together to develop comprehensive, evidence-based strategies. Policymakers should promote participatory research approaches, ensuring that local communities and indigenous groups have a voice in decision-making.

3. Public awareness: Raising public awareness would highlight the growing threats to cultural heritage from climate change. Capacity-building programs should be expanded to train heritage professionals and local communities in climate adaptation strategies. Additionally, EU-wide monitoring systems should be developed to track the loss of cultural heritage and measure progress in adaptation efforts.



Expected Impacts

By implementing these measures, transnational collaboration in research and innovation will be strengthened, reducing fragmentation and increasing the impact of scientific findings. Policy frameworks will better integrate cultural heritage into climate adaptation strategies, ensuring that national and international decision-making reflects the importance of heritage preservation. Communities will be empowered to take an active role in safeguarding their cultural assets, preserving indigenous knowledge, and strengthening social cohesion.

At an economic level, investment in heritage-friendly adaptation technologies will create new markets, supporting sustainable tourism and circular economy models. Finally, broader public awareness will reinforce the recognition of cultural heritage as a valuable resource for sustainable development, securing its protection for future generations



Conclusion: A Call for Unified Action

Protecting cultural heritage from hydroclimatic extremes requires urgent and coordinated action. Research, policy, and community engagement must align to ensure that heritage is not only preserved but also positioned as a pillar of climate resilience. By leveraging EU funding, fostering interdisciplinary collaboration, and empowering local stakeholders, policymakers can build a more sustainable future where cultural heritage is safeguarded against the growing challenges of climate change. The time to act is now — our shared past and future depend on it.

References

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- (5) Hossain M., Leminen S., and Westerlund M., A systematic review of living lab literature, *Journal of Cleaner Production*, 2019, 213:976-988,
- (6) <https://humanright2water.org/> This NGO's vision is a world where all people have access to safe and sustainable water and sanitation.
- (7) Joint International Cooperation Strategy report from the European Water Joint Programming Initiative, Esther Diez Cebollero and Véronique Briquet-Laugier
- (8) Example of empowerment of local communities: <https://ch4igrowth.iccrom.org/case-studies/luk-laan-muang-phrae-community-led-heritage-preservation-phrae>



AQUA Legacy is an international team of experts dedicated to preserving and restoring people's culture, whether it is their architecture, way of life, or natural environment.

<https://aqualegacy.eu/>