

Future Directions for AHRC-DCMS Cultural Heritage and Climate Change Research

How can arts and humanities research make cultural heritage and cultural voices an essential part of climate planning for the future?



Authors

Dr. Poppy Spowage

Prof. Paul Heritage

Vitória Kramer

Fernanda Vasconcellos

Gustavo Möller

Dr. Isabel Stuart



Authors

Dr Poppy Spowage and Professor Paul Heritage
With Vitória Kramer, Fernanda Vasconcelos,
Gustavo Möller and Dr Isabel Stuart.

Illustrations

Aislan Pankararu

Design

Thais Oliveira

December 2023



Contents

Acronyms	5
Foreword by Piratá Wauja from the Xingu Indigenous Territories (Brazil)	6
Executive Summary	7
Introduction	9
Scope.....	13
Structure.....	16
Methodology.....	17
Themes, Contexts and Geographical Reach	19
Scope of Future Call(s)	20
Interdisciplinarity.....	20
Beyond Public Engagement.....	29
Geographical Reach	30
Methodologies and Approaches	32
Funding Cycles and Length.....	33
Getting money to – and supporting – international partners	34
Flexibility	34
Co-Production of Research.....	35
Indigenous Partners, Climate Justice and Traditional knowledge.....	39
Outputs and Impact	41
Moving beyond Mapping.....	42
Process over Product: Creating Space for Failure.....	43
Alignment of Aims, Objectives and Outputs.....	44
Beyond the Research: Looking to Long – Term Impact.....	47
Dissemination, Stakeholder Engagement, and Policy Impact.....	47
Where Next ..	49
Looking towards COP30.....	50
A Research Observatory: Developing the Cultural Heritage and Climate Change Cohort ...	52
Reference list	56
Annex A: Portuguese Version of the Foreword.....	59
Annex B: AHRC–DCMS Cultural Heritage and Climate Change Original Cohort List	61
Annex C: Academic Steering Group Attendees.....	63
Annex D: Interviewees	65
Annex E: Interview Guide.....	71
Annex F: Manchester Workshop Attendees	72

Acronyms

AHRC	Arts and Humanities Research Council
CIC	Creative Industries Council
CO-I	Co-Investigator
COP	Conference of the Parties of the the United Nations Framework Convention on Climate Change
DCMS	Department for Digital, Culture, Media and Sport
ECR	Early Career Researchers
ESRC	Economic and Social Research Council
GCRF	Global Challenges Research Fund
HEI	Higher Education Institutes
ICOMOS	International Council of Monuments and Sites
IFACCA	International Federation of Arts Councils and Culture Agencies
IPHAN	Brazilian National Institute of Historical and Artistic Heritage
PI	Principal Investigator
PPP	People's Palace Projects
QMUL	Queen Mary University of London
UK	United Kingdom
UKRI	United Kingdom Research and Innovation
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
V&A	Victoria and Albert Museum

Foreword by Piratá Wauja from the Xingu Indigenous Territories (Brazil)¹

How climate change affects Indigenous practices and cultural heritage²

Traditional planting is changing... Our people burn vegetation, plant crops and then harvest them. Our people are struggling to keep up with the ecological changes. Our elders follow and observe their own calendar: that calendar appears in the sky and the stars; they follow the stars. Today, it's confusing. It's unclear when to plant crops because the rainy season arrives late, and the rain ends earlier. For example, here, today, this year, it should be raining, but it's the opposite, and it's getting hotter and hotter, and the crops are burning, not growing. This affects our way of life, impacting the foods we grow and eat.

The river is drying up in this weather. The fish start to have too little space to live and so they end up dying. This is affecting our way of life within our community, our village. For a long time, according to the elders, when the fields were burned, the fires didn't get out of control. They only burned in that area, in that field itself, which was then cleared and re-farmed. Today, it's getting drier and drier, there's a lot more fuel for that fire. So, it becomes very difficult for us, for Indigenous people, to understand what's happening.

The more the weather changes, the more problems it causes. For example, when we were participating in the Kuarup ritual³ that happens every year in the Xingu, I noticed that there's a lack of fish in the ceremony. If people can't bring fish to their relatives in the camp, this demonstrates that there is a shortage of fish. Sometimes people can catch fish, but many are failing.

Fish – here in the Xingu – is the main basic food in our community. Fish and cassava, which we turn into tapioca flour. The lack of fish during this year's ritual has never happened before. Many people don't understand the ways in which the Xingu has been affected. But we, who live in the territory, we know. We feel what's happening in a way that many people around the world don't experience: we are feeling.

Destruction is encroaching more and more on our Indigenous territory, and that is not good for us. It's a great loss of biodiversity: everything we need from the forest to survive, they are destroying. In the Xingu Indigenous Territory, the law states that there must be a 5 or 10 km buffer zone between agricultural industry and the Indigenous area. But people are not respecting these laws; many have already encroached on our Indigenous land, and often the animals and spirits of the animals are reacting and spiritually attacking children, young people and elders. The spirits attack the people because they're not feeling well, because they know that humans are destroying the forest, causing disturbances in the waters and within the forest.

We continue to take care of our lands; we continue to perform rituals to communicate with the spirits who own the forest, who own the river. These rituals and ceremonies that we perform – these moments – are our way of trying to protect ourselves from the spirits of the forest and river, so that they stay happy. All this destruction is making them very angry, which ends up causing harm to the members of our people.

November 2023

¹ The Xingu Indigenous Territory (Parque Indígena do Xingu) is a vast expanse of protected land in the Brazilian Amazon, spanning approximately 26,420 square kilometers. It is home to 16 distinct Indigenous ethnicities who have inhabited the region for centuries, each with their own unique culture, language, and traditions. The territory is renowned for its rich biodiversity, encompassing diverse ecosystems.

² The Foreword was sent as an audio message via WhatsApp from Piratá Wauja to Mayra Mota on October 30, 2023. This is a transcription/translation of this audio from Portuguese to English (see Annex A).

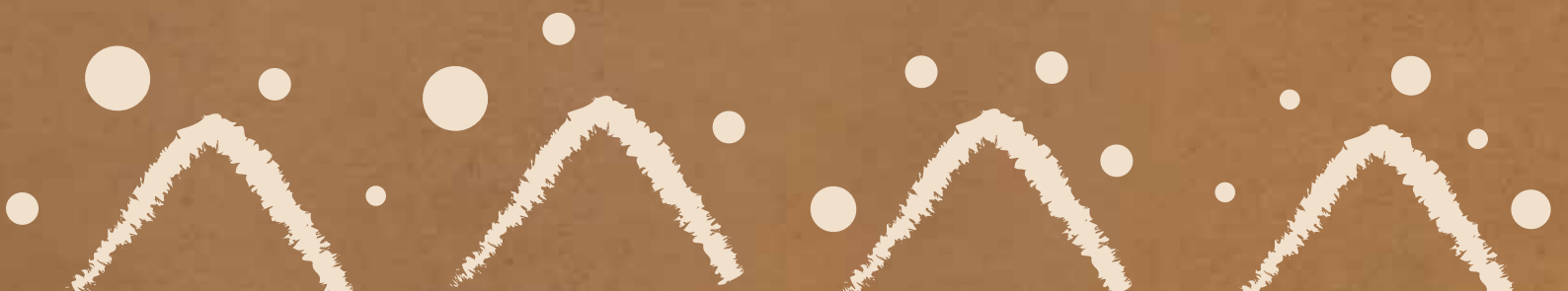
³ The Kuarup, also known as the Quarup, is a funeral ritual practiced by the Indigenous peoples of the Xingu in Brazil. It is a grand celebration of life, death, and rebirth, held approximately one year after the passing of a respected individual within the community (Vilela, 2022).

Executive Summary

In 2020 the Arts and Humanities Research Council (AHRC) and the Department for Culture, Media and Sport (DCMS) launched a funding partnership, as a part of UK Official Development Assistance (ODA), to support research on how developing countries could respond more effectively to the impact of disasters and climate change on cultural heritage. Over three years a cohort of nine projects – extended through three Follow-on phases from 2021-23 – produced work that was broad in discipline, geography and methodology. From Sri Lanka, to Nigeria, to Brazil, the research ranged in scope, focusing on disaster prevention and resilience, preparedness and emergency response, and considered the realities of living with, as well as adapting to, change, damage and loss as a result of disasters and the climate crisis.

This report marks a moment of reflection: over four months the team at People's Palace Projects (PPP) have been exploring with academics, artists, activists and cultural heritage stakeholders potential future directions for AHRC and DCMS's Cultural Heritage and Climate Change Programme. The aim of this report is to provide recommendations to AHRC and DCMS on what the next phase of the programme might focus on, through identifying emerging research areas, exploring how the portfolio can enhance the value and impact of research on cultural heritage in climate planning and advising the potential format and structure of future funding opportunities. An urgent need to align, coordinate and effectively disseminate research in this field is clear. As outlined by HE Sheik Salem bin Khalid Al Qassimi (Minister of Culture and Youth, UAE) and HE Margareth Menezes (Minister of Culture, Brazil) in a joint op-ed on Culture-based Climate Action at COP28: 'The escalating climate crisis is rapidly evolving into a cultural emergency that threatens some of the world's most valued heritage sites. But leveraging cultural diversity can also play a pivotal role in mitigating and adapting to climate change, unlocking innovative strategies, and promoting inclusivity' (Al Qassimi & Menezes, 2023).

The ambition is that the recommendations in this report will help maximise the impact of UK arts and humanities research, and ensure it supports cultural heritage and cultural voices to play an essential role in climate planning for the future.



Recommendations:

Themes, Contexts and Geographical Reach

#1: Expand scope of future call(s) to explicitly consider the ways in which tangible and intangible cultural heritage can also build resilience and contribute to climate action.

#2: Encourage interdisciplinary collaborations in all future funding calls.

#3: Encourage - and support - research that is co-designed and co-produced with the cultural heritage sector.

#4: Seek geographical diversity of cohort, but don't underestimate the challenge - and the necessary investment - of making disparate voices and places coherent.

Methodologies and Approaches: Co-creation and equitable partnerships

#5: Provide a transparent, long-term vision for UK cultural heritage and climate research to support more impactful and long-term interventions, teamed with application/project cycles that support collaboration with partners.

#6: Increase dialogue and training between funders, academics and research managers to align expectations and support effective and appropriate grant administration, particularly with international partners.

#7: Maintain the flexibility of the programme; provide a key point of contact for researchers; keep a focus on diversity and inclusivity within research teams.

#8: Reposition the centre of the research away from Higher Education Institutes (HEIs) to local commu-

nities: structure funding calls to include scoping visits, sustainability and network building, early and robust stakeholder mapping/engagement; and embedding Community Co-Investigators (Co-Is) into the programme.

#9: Recentre traditional knowledge, recognising its material value in devising post-carbon futures alongside the devastating injustices experienced by Indigenous peoples.

Outputs and Impact: Public and Policy Engagement

#10: Move beyond mapping: focus on the impact rather than the output of AHRC/DCMS funded research.

#11: Incentivise risk-taking in future calls, investing in the discovery of creative and affective ways to tackle climate issues, and valuing the process alongside potential outputs.

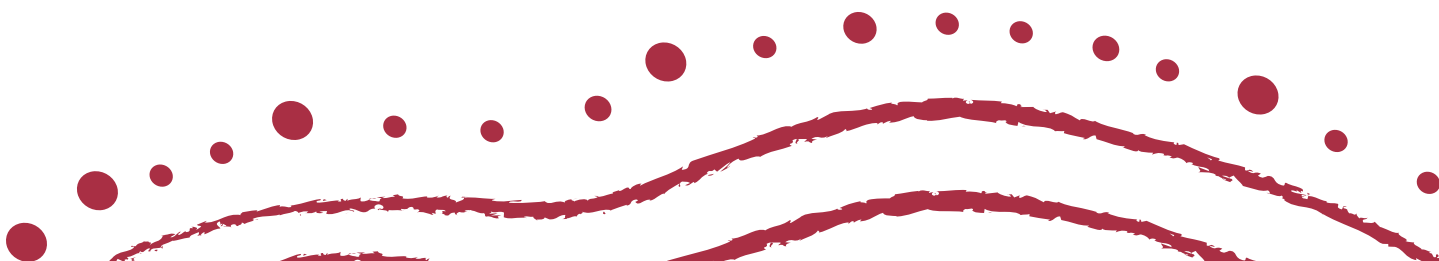
#12: Set big research questions so that the aims, objectives and outputs of research simultaneously serve academic institutions, policy makers and communities.

#13: Encourage and support projects that have a focus on long term impact from the outset.

#14: Coordinate AHRC/DCMS research in cultural heritage and climate change to support dissemination, wider stakeholder engagement and policy impact.

#15: Ensure that DCMS/AHRC research on cultural heritage and climate change has a prominent role in COP30 (2025).

#16: Continue to build on the cohort model, establishing a Research Observatory on Cultural Heritage and the Climate Crisis.



Introduction

Research produced by a cohort of nine projects awarded funding by AHRC and DCMS in 2020 – as one strand of the United Kingdom’s (UK) International Cultural Heritage Protection programme – has shown that cultural heritage needs to be at the heart of climate solutions. Selected to ‘inform future research and policy on disaster preparedness, emergency response, loss and damage, and adaptation to current and expected global environmental changes’ (Gilberto & Jackson, 2022, p. 6), each of the research projects produced by the cohort has focused on developing innovative methodologies to explore the ways in which environmental catastrophes and climate change affect cultural heritage worldwide. From mapping the climate change-driven hazards threatening Istanbul’s world heritage sites to exploring the inclusion of intangible cultural heritage within the framework of disaster risk management in order to support the recovery of communities in Zimbabwe affected by Cyclone Idai, the nine collaborative research projects have demonstrated the diverse and disparate ways in which cultural heritage – both tangible and intangible – interconnects sites, rituals, customs, communities and buildings with the natural environment. Together, these projects have shown the value of the arts as a means by which humans produce emotional, sensual and social responses within creative industries that build economies which sustain people, places and environments.

2023 is set to be the hottest year on record. Droughts, intense rains, extreme temperatures, fires and floods are symptoms of irreversible changes in temperatures and weather patterns. During the preparation of this report, the UK has seen catastrophic flooding across Scotland, Northern Ireland and England.

Team members from People’s Palace Projects (PPP)

in Rio de Janeiro, Brazil have been experiencing a record heat wave, with temperatures of 58.5 degrees Celsius (°C)⁴, and – as graphically described above by Piratá Waujá – our colleagues in the Amazon have been experiencing drought. The escalation of climate change is a consequence of increasing greenhouse gas emissions caused by the burning of fossil fuels, beginning with Europe’s industrial revolution in the mid-18th century and later spreading to the rest of the world. Countries which have contributed the least to the climate crisis – developing countries – are hit the hardest (Zee, 2022). Although the devastating loss and damage caused by climate change is long lasting and irreversible, impacts can be diminished if urgent, direct and broad action is taken, specifically in the spheres of mitigation and adaptation. Building resilience and finding ways to adapt and rapidly recover from extreme climate events – which will continue to increase in frequency and intensity in the following decades – is thus essential.

Defining Cultural Heritage

The Climate Heritage Network⁵ describes arts, culture and heritage as the missing force in climate action.

We have to ask ourselves what culture is [...] It is human expression. Every gesture, every sentiment, every thought, every moment of communication between one person and another is culture. Whether it’s in Europe or the Americas this culture originates from the land and the sea. It is by relating to the land, having to produce food, having to sow seeds and harvest, that people are brought together to develop language, make tools and celebrate in their free time – through art, music and dance. This is the process of culture. The baião [a seminal Brazilian rhythm] comes from debaixo do

⁴ At 9:15 am on Tuesday (Nov. 14), Rio de Janeiro recorded its highest apparent temperature since 2014, 58.5 degrees Celsius (°C). The measurement was taken by the municipal weather service station Alerta Rio in Guaratiba, on the city’s west side (Agência Brasil, 2023).

⁵ The Climate Heritage Network is a global network of organizations working to harness the power of cultural heritage to address climate change. They promote sustainable practices, protect cultural heritage sites, and advocate for climate justice.

barro do chão ['beneath the mud of the earth].

Gil (2022)

*Brazilian Singer-Songwriter and former Minister
of Culture of Brazil*

Culture is dynamic; constantly adapting, mutating and changing; and enmeshed in the everyday. It informs how we all act, think and relate with one another. Culture is part of our languages, histories and identities. It is in our places of worship, buildings, monuments and dress. It is our festivals, spiritual practices and rituals – our dances, artwork and songs. As the Cultural Heritage Network explains in 'The Climate Heritage Manifesto for COP27,

Culture anchors people to places and to each other. It creates cohesion in unique ways: enabling community-building and collective action, providing shared moments, feelings and commitments, inventing new symbols and new tools. Artists and cultural voices drive public awareness and action. This work is a powerful tool for climate mobilization. Through public accessibility and trust, cultural centres, institutions and organizations like museums, music venues, theatres, monuments, libraries or festivals provide platforms for listening to communities and hubs of multicultural and intergenerational exchange, capacity building, and knowledge-sharing (2022, p. 2).

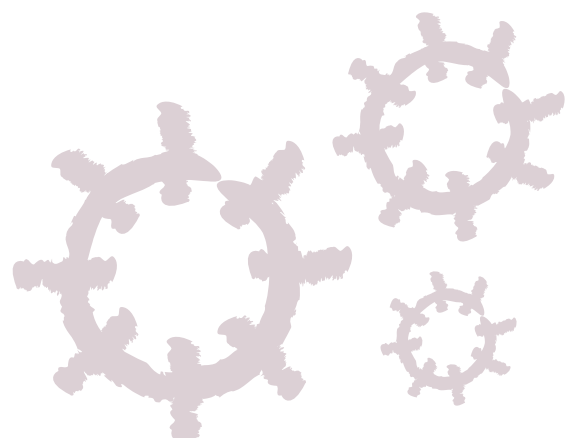
Rather than something static, heritage is also 'a living and dynamic concept, interwoven with peoples and places, an expression of cultural diversity and of different modalities of artistic creation, production, dissemination, distribution and enjoyment, whatever the means and technologies used' (UNESCO, 2005, Art. 1). The United Nations (UN) define cultural heritage as 'artefacts, monuments, a group of buildings and sites, museums which possess a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific

and social significance. It includes tangible heritage (movable, immobile and underwater), intangible cultural heritage (ICH) embedded into cultural, and natural heritage artefacts, sites or monuments' (UNESCO Institute for Statistics, 2009).

In an interview for this report, Alison Tickell – founder and CEO of Julie's Bicycle⁶ – demanded more challenging definitions of 'cultural heritage.' Looking beyond cultural artefacts, Tickell reminds us that when we discuss cultural heritage, we do the following:

... [talk] about a much broader sense of who we think we are. That's where heritage becomes an uncomfortable piece of terminology, because it's so vague. We're talking about something that makes us human beings. It's how we express our values. It's how we exercise our rights to self-determination through the food we choose and our ceremonies... When we talk about cultural heritage, often what it feels like we are talking about is injustice. We're talking about recognising structurally... that a lot of heritage has been stamped on in the name of colonialism, consumerism and its current manifestations of the new politics of imperialism

*Interview with Alison Tickell
Founder and CEO of Julie's Bicycle*



⁶ Julie's Bicycle (<https://juliesbicycle.com/>) is a pioneering non-profit organisation, mobilising the arts and culture to take action on the climate, nature and justice crisis.

What can the culture and heritage sectors do to take action on climate change?

The culture and heritage sectors hold significant potential to contribute to climate change action through several key avenues. The list below, which summarises the main areas in which the culture and heritage sectors can act, is drawn from a range of research documents and materials which explore the relationships between climate and culture.⁷

1. Changes of perspective: Culture is a binding force within our society which has the power to shape how we engage with our surroundings and their symbolic connotations by providing us with a shared framework of meaning and interpretation, which in turn shapes our perceptions of the world, defines what is considered significant or meaningful and informs our attitudes, behaviours, and relationships. In this sense, cultural heritage is also critical because tradition is important in connecting people to their shared identities, allowing them to reflect upon their collective practices and to drive towards positive changes of perspective.

2. Impact on sustainable consumer habits: Art, music, design and movies all strongly impact our consumer habits and influence our lifestyles and the choices we make, whilst shaping cultural narratives, aesthetic preferences and the ability to influence the adoption of sustainable practices.

3. Community cohesion through cultural identity: Cultural heritage has the power

to unite people around a common sense of community and social identity, promoting cohesion and empowering communities to act collectively towards a common good.

4. Carbon footprint tracking and action plans: For cultural organisations to understand their impact on climate change and build sustainable solutions for arts, culture and heritage, it is essential to gather robust information on our impact to create transformative action plans based on the data collected. Platforms piloted and widely used within creative sectors such as Julie's Bicycle's Creative Climate Tools offer resources which can help the wider sector track their environmental impacts and build sustainable solutions.

5. Amplification/translation of Indigenous and traditional knowledge: Cultural heritage is crucial in not only preserving Indigenous and traditional knowledge but also transmitting and integrating these wisdom systems into contemporary contexts, fostering a deeper understanding and respect for diverse ecological perspectives, whilst also recognising Indigenous knowledge as cultural heritage.

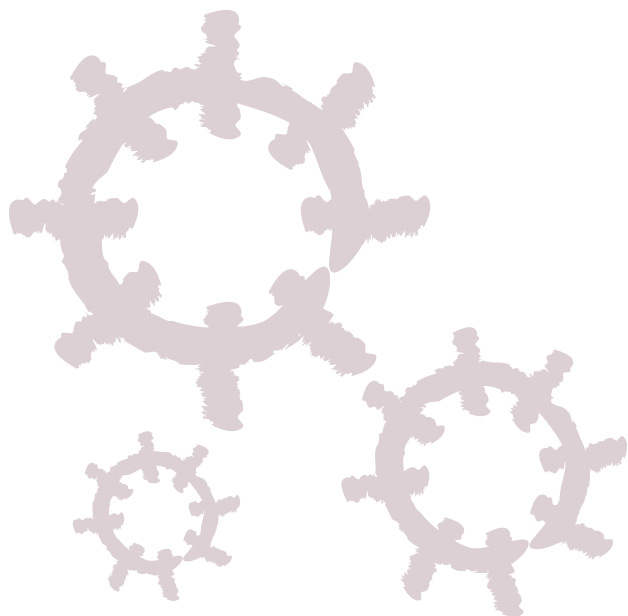
6. Innovative research methods and promotion of traditional approaches and/or non-technical perspectives: Culture can encourage interdisciplinary collaboration which incorporates Indigenous knowledge systems and values diverse perspectives and worldviews from the Global Majority that will broaden the scope of research on climate action. The recognition of cultural heritage as a transformative tool is essential to incentivise the

⁷ The materials supporting this research were published by Julie's Bicycle (Counting on culture: How to stop financing the environmental crises [Hazlewood, 2023], Environmental policy and action plans: an overview, Creative Industries and the Climate Emergency: The Path to Net Zero), the British Council (Emergencies, Emergences, Engagement: Cultural Relations and Climate Action [Figueira & Fullman, 2021], Culture: the missing link), the Climate Heritage Network (CHN Action plan [2022-24]: Empowering People to Imagine and Realise Climate Resilient Futures Through Culture – from Arts to Heritage, Heritage in Climate Planning: A Pilot Project for Understanding the Inclusion of Culture in Climate Actions [Guzman & Daly, 2021]) and UCLG (The Role of Culture in Climate Resilient Development [Potts, 2021]).

adoption of innovative research methods which transcend the preoccupations of the Global North.

7. Advocacy and political influence: The cultural sector, rooted in shared identity and values, can influence political interventions by facilitating effective communication and building public support for policies addressing environmental concerns.

In this report, we look beyond the 'tangible' and 'intangible' to approach cultural heritage as much more than specific historical sites or practices: '[H]eritage is how people invest value in places, structures, objects, practices, ideas, and sounds' (Giliberto & Jackson, 2022, p. 6). As the CRITICAL project, asserts, 'Heritage is fluid and complex, it is political in every sense. The work of heritage allows difficult conversations to take place in imaginative ways, allowing for history to be understood as being in the present' (Macdonald et.al, 2022).



Scope

The current cohort of nine research projects which are part of the AHRC–DCMS Cultural Heritage and Climate Change Programme has begun to create a community of researchers and cultural practitioners, many of whom are directly impacted by the climate and nature crisis. They have come together to produce research which will strengthen culture-led climate action. The work produced by the cohort – extended through three follow-on phases from 2021–23 – was broad in discipline, geography and methodology: spanning architecture, performance studies and development and engaging partners from Sri Lanka to Nigeria to Brazil. What united the research teams in the portfolio was the commitment to working with international research partners, practitioners and communities in ethical and productive ways to understand and strengthen the frameworks and values which underpin global movements by governments and civil society, evidenced in the 2015 Paris Agreement (on climate change mitigation, adaptation and finance) and the annual Climate Change Conference of the Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC).⁸

⁸ The COP is an annual international climate summit. During COP meetings, representatives from nearly all the world's countries gather to discuss and negotiate actions aimed at addressing climate change and its associated challenges. These discussions cover topics such as greenhouse gas emissions reduction, adaptation to climate impacts, financial support for developing nations and more. COP meetings are pivotal in shaping global climate policy and fostering cooperation to combat the pressing issue of climate change.

AHRC-DCMS Cultural Heritage and Climate Change Cohort Projects 2020-23:

Developing a novel Climate change Risk Assessment Framework for cultural heritage in Turkey - CRAFT:

This research involved susceptibility mapping of cultural heritage to climate change-driven hazards, with a particular focus on the flood and landslide hazards on Istanbul's world heritage sites. The mapping, based on a risk assessment framework, was used to develop a response policy which could be used by government agencies in planning risk management and conservation policies.

Bridging the knowledge gap through documenting Indigenous early warning indicators in areas prone to climate-induced natural disasters in Zimbabwe:

This research provided approaches for including intangible cultural heritage within the framework of disaster risk management which was being used in recovering and rebuilding communities affected by Cyclone Idai in the Manicaland province. The research found that several Indigenous early warning indicators had been ignored, and it has helped strengthen the country's capacity to research, document and safeguard intangible cultural heritage, in a way which is fundamental for the sustainable resilience, re-construction and relocation of the affected communities.

CRITICAL Food heritage as a tool for adaptation: Climate change resilience through hybrid Indigenous knowledge systems:

This programme worked with communities from South Africa, Indonesia and Sri Lanka to develop methods for inclusive risk assessment and research-based capacity development. The

project worked in partnership with low- and middle-income countries (LMIC) researchers, heritage/cultural organisations and local policy-makers, and the follow-on phase supported communities in better understanding food heritage and preservation, not as a vulnerable or static asset to be preserved but as a tool for adaptive capacity in the face of climate change.

Applicability and scalability of a sustainable re-construction framework for seismic-prone heritage areas of Gujarat, India:

This programme built future resilience through developing local capacity in seismic-prone heritage areas of India, offering a digital platform to enable the design of mitigation and reconstruction plans and damage and technical assessments, in a way which focused on the re-use and repair of housing and the virtual preservation of culture. The project culminated by developing a disaster risk management plan and designing post-earthquake actions with local authorities

Mitigating climate change effects through traditional land management practices:

This programme mapped and updated information about traditional systems on the Soqotra Archipelago, assessing how much traditional knowledge has already been lost, which climate adaptation practices are no longer in use and which could be revived to cope with extreme and unpredictable weather as a result of climate change. Through connecting traditional knowledge to climate management, the research made a set of recommendations for adapting to climate change in the future.

Fragile heritage ecologies: Vernacular cultures and the at-risk landscapes of the Hindu-Kush-Himalaya Mountain region:

This programme used visual storytelling as a method of narrating the 'great glacial melt' to

engage the public and policy-makers in the realities of, and to instigate action on, climate change within Pakistan and South Asia. The project focused on how heritage is conceptualised by the community, heritage's role in the changing landscape and how the local community can employ cultural heritage practices to prepare for and respond to future disasters.

Conservation of climate change-endangered cultural furniture industry heritage in Damietta, Egypt:

This research examined, quantitatively mapped and promoted the cultural and economic resilience of Damietta, which is under threat from climate change and contemporary political decision-making insensitive to its socio-cultural heritage. The research documented and highlighted Indigenous knowledge and the tangible cultural heritage of this craft industry and its social networks.

Values-based climate change risk assessment: Piloting the Climate Vulnerability Index for cultural heritage in Africa:

This research centred on training heritage professionals in Nigeria and Tanzania through piloting a new, prototype heritage management methodology known as the Climate Vulnerability Index, which provides a high-level assessment of the ecological and economic, as well as social and cultural consequences, of climate change for heritage sites and the associated community.

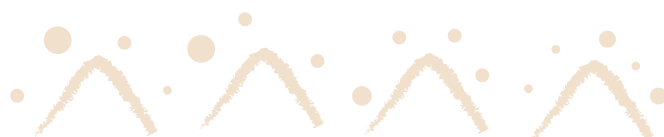
Build Back Better and Roots of Resilience: Enhancing engagement with cultural heritage and climate change research in the Iron Quadrangle region in Minas Gerais, Brazil:

This community-based collaborative research project assessed the cultural and environmental impacts of mining in Brazil's Quadrilátero Ferri-

fero (Iron Quadrangle), the site of Brazil's largest iron ore reserves. Working with five local cultural heritage organisations, the research created a comprehensive assessment of the heritage value and cultural resources in the region. Five local artists then proposed different interventions to highlight the importance of cultural heritage to their territories and contributed to 'Vale?' an award-winning documentary film highlighting the measurable social, cultural and economic benefits of cultural assets and the role they can play in future climate and disaster planning.



Over the last 3 years, the cohort's nine projects have explored how arts, culture and heritage can protect and preserve diverse histories, whilst also building resilient futures and contributing to climate action. This report is not an evaluation of these rich and complex projects; rather, our aim is to draw out and share the knowledge gained from the individual projects, explore how the portfolio can enhance the value and impact of research on cultural heritage in climate planning in the future and advise on the potential format and structure of future funding opportunities. The ideas, opinions and recommendations in this report have been drawn from discussions with members of the original AHRC-DCMS cohort (see Annex B), discussions with an Academic Advisory Board (see Annex C) and interviews with cultural heritage stakeholders (see Annex D).



Structure

The Report is organised into three sections:

- (1) Themes, Contexts and Geographical Reach*
- (2) Methodologies and Approaches*
- (3) Outputs and Impacts*

The final section focuses on potential future directions for the strategic funding programme. We suggest how the AHRC and DCMS could commission, coordinate and disseminate research in this field to maximise impact and strengthen the cultural heritage sector's contribution to climate action alongside the frameworks, values and measures which underpin global movements by multilateral institutions, governments and civil society.



Methodology

The research is rooted in learning from researchers across the cohort, who came together in person for the first time for a two-day workshop held on 27–28 September 2023 in Manchester. The two days were facilitated by the team at PPP⁹ in partnership with the AHRC, and representatives from eight of the nine projects attended (see Annex F). The group explored how their research could further intersect with various ‘wicked’ challenges (Ramalingan, 2023),¹⁰ the remit of other research councils/disciplines and a broader range of stakeholders from the heritage sector. The reflections were diverse and wide reaching and have been integrated throughout this report: discussions spanned the challenges of working with Indigenous communities, the need for a focus on gender, the key role of international Principal Investigators (PI), artificial intelligence and technology, food systems and sustainable urban development, as well as the pivotal role cultural heritage occupies in building resilience in the face of conflict and disasters. A clear consensus existed that the research across the cohort shows cultural heritage as not merely susceptible to loss and damage but also vital in climate mitigation and adaptation. In its diverse forms, both tangible and intangible, cultural heritage offers solutions and innovative approaches to navigating the world.

Alongside the cultural heritage and climate change cohort meeting, the PPP consultan-

cy team spoke with other academics working in connected fields as well as practitioners in the cultural heritage sector. We assembled the Academic Steering Group composed of 12 academics from the three Faculties at Queen Mary University of London (QMUL): Humanities and Social Sciences, Science and Engineering, and Medicine and Dentistry.

These meetings have allowed us to explore how research on cultural heritage and climate change is conducted across disciplines, as well as see evidence of existing interdisciplinary collaborations. They also allowed us to test some of the emerging findings and recommendations as we prepared them for this report.¹¹

We conducted 16 interviews with a range of individuals working at the intersection between cultural heritage and climate action (see Annex E). Focusing on where research could interact and further support the sector (and vice versa), interview questions explored emerging themes, research gaps and potential exchanges at the crossings between the arts, culture, heritage and climate. We sought ideas about the ways research could carve out new directions and strengthen existing climate-focused initiatives in the cultural heritage sector. The conversations explored future opportunities for interdisciplinary collaboration and pioneering partnerships, as well as potential areas for further cooperation. In addition, the interviews

⁹ This report was prepared by a team from PPP, an arts and research centre based at QMUL, whose tender was selected after a call for proposals by AHRC. Directed by Professor Paul Heritage, PPP brings together artists, activists, academics and audiences to challenge social and climate injustices through the power of the arts in the UK, Brazil and beyond. PPP’s research project Build Back Better/Roots of Resilience, which focused on understanding the value of cultural heritage in the face of climate change and disaster in Brazil’s Iron Quadrangle, was part of the original AHRC–DCMS portfolio, which included a series of webinars in which we began to debate how learning from these diverse research projects could be taken forward.

¹⁰ Wicked problems are difficult or impossible to solve because of incomplete, contradictory, and changing requirements. These are often difficult to recognise. Moreover, interdependencies mean that the effort to solve one aspect of a wicked or complex problem may reveal or create other problems.

¹¹ Both meetings were conducted and recorded on MS Teams, lasted 60 minutes and were transcribed with the software Good Tape, edited/corrected manually and analysed in a non-systematic thematic. Whilst the research has now concluded, we are exploring ways of continuing the steering group via other QMUL structures, as it offered such a rich forum for unpacking challenges and future connections/opportunities in this area.

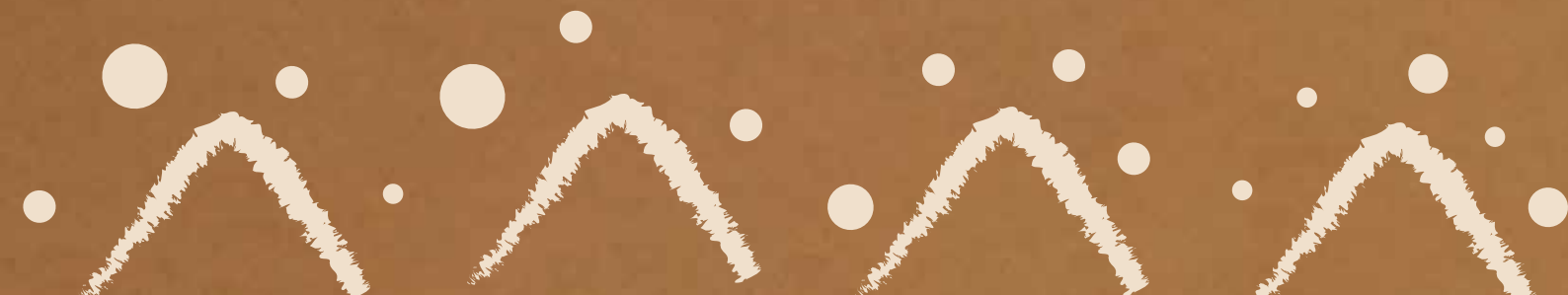
examined opportunities for cultural heritage and climate action research's intersections with broader global challenges, such as mental health and poverty.¹² In addition to the workshop, steering group and interviews, we further augmented our research through an examination of reports provided by various stakeholders within the field, along with a thorough review of pertinent and up-to-date scientific publications.¹³



¹² All interviews were conducted and recorded on Zoom, and were between 30-60 minutes long, and the transcriptions were done with the assistance of “Good Tape” software and edited/corrected manually, and analysed in a non-systematic thematic by the team.

¹³ Other relevant publications, which can be found in references: include Potts (2021); Guzman & Daly (2021); Gilberto; Jackson, (2022); Dalglish (2023) and Brennet et al (2023).

Themes, Contexts and Geographical Reach



Scope of Future Call(s)

Recommendation #1: Expand scope of future call(s) to explicitly consider the ways in which tangible and intangible cultural heritage can also build resilience and contribute to climate action

The thematic cohort of nine projects funded from 2020–23 by the strategic AHRC–DCMS programme is only a small part of AHRC’s overall portfolio of research on cultural heritage and climate change, estimated at 119 projects in total. The scope of arts and humanities research on climate change is much wider in its focus than the loss of, threats to, or damage to cultural heritage. Since the inclusion of cultural heritage under the ‘Loss and Damage’ agenda/protocol in the Sharm-el Sheikh Agreement in 2022, culture is increasingly being recognised as a key tool for adaptation (UNFCCC, 2022).

Cultural practice is, fundamentally, adaptive practice, human responses to environments constantly changing, sense-making, adjusting and communicating the environment. This essential tool that is culture is far too poorly understood in Adaptation. The human dimensions of climate change have focused, rightly, on the devastating impacts climate change is wreaking upon communities and landscapes. What has been neglected is that cultural integrity – the capacity for cultural values and traditions to protect and steward people and places – is of immense value. Often subsumed into ‘soft’ metrics such as well-being, inclusion, arts and so on, culture has been profoundly under-estimated as a protector, knowledge-holder, and driver of change.

*Statement of Support for the nomination of the Climate Heritage Network.
From Alison Tickell
Founder and CEO of Julie’s Bicycle.*

Research must continue to deepen our understanding of the threats and impacts of climate change on cultural heritage, but it is also important to understand the variety of ways in which cultural heritage can build resilience and contribute positively to climate action. The research being funded by AHRC–DCMS abundantly shows that proactive management and mitigation of the risks of climate events and disasters is possible, with cultural heritage informing earthquake planning in Gujarat (India), traditional knowledge being harnessed in climate management in Soqotra (Yemen), and community resilience being promoted in Minas Gerais (Brazil) and Manicaland province (Zimbabwe).

Interdisciplinarity

Recommendation #2: Encourage interdisciplinary collaborations in all future funding calls

There’s a vast field of research here that very few people are taking up because when we think of climate change and heritage, we immediately focus on tangible heritage. How will rainfall impact tangible heritage? How will droughts and storms affect tangible heritage? That’s the most logical and obvious path to take, and it leads to more obvious solutions. However, using traditional knowledge to protect the same heritage is the real challenge, and it could set us apart from other climate change-related work, such as city preservation.

*Interview with Luana Campos
Executive Secretary at the International Council of Monuments and Sites (ICOMOS), Brazil*

The stakeholders, artists and activists we consulted were clear that research in this field requires a deep-dive, intersectional approach which can be encouraged through highlight notices or

joint calls with other councils which clearly articulate how cultural heritage can drive forward change. This could be supported by an advocacy piece outlining the disciplinary intersections of heritage research.

Studies on climate and cultural heritage – both tangible and intangible – are embedded in and intersect with many academic disciplines, as well as with actions and initiatives from civil society, non-governmental, governmental and intergovernmental agencies. Amongst the people consulted for this research are a myriad of connections, new directions and potential collaborations which could generate new knowledge about the relationship between climate and cultural heritage. For example, the use of new technologies in the re-materialisation of cultural heritage under threat in Nigeria (see Photo 1) connects directly to Tuvalu’s explorations of the metaverse as a tool to preserve its history and culture:

Islands like this one won't survive rapid temperature increases, rising sea levels and drought, so we'll recreate them virtually. As our land disappears, we have no choice but to become the world's first digital nation.

*Simon Kofe (2022)
Foreign Minister of Tuvalu*



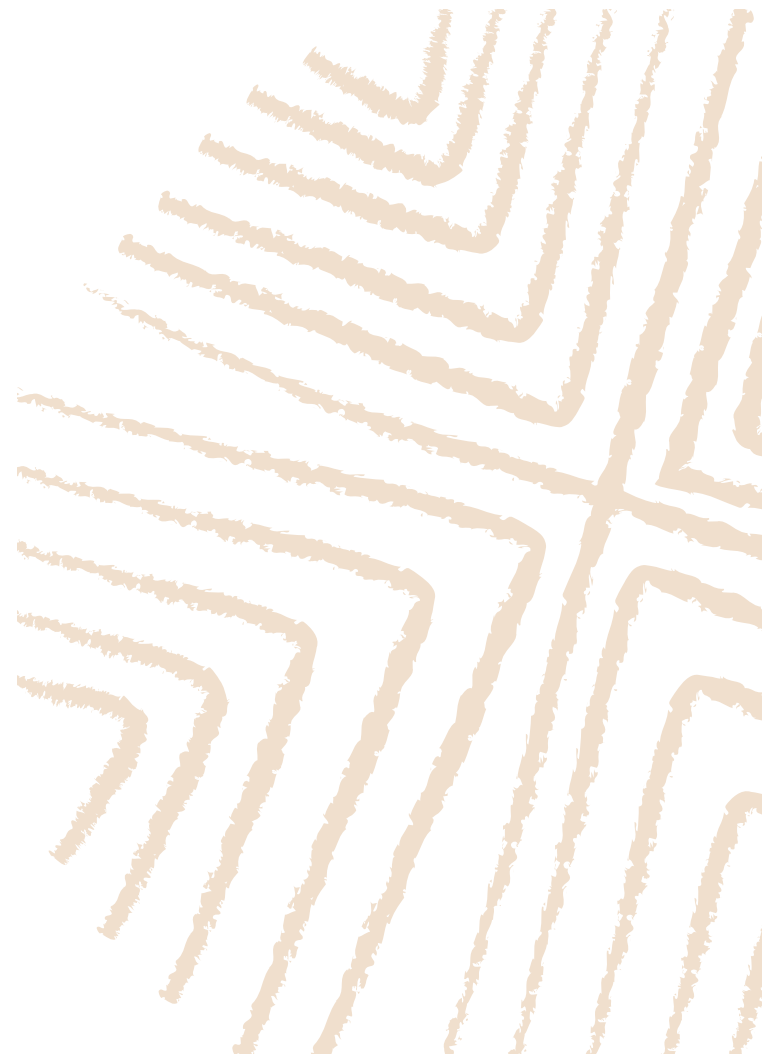
Figure 1

Tuvalu Foreign Minister Kofe gives a COP26 statement whilst standing in the ocean in Funafuti in November 2021 (Fainu, 2023)



Figure 2

CNC-milling the Ntitogo monolith on a seven-axis robot (Taylor-Smith, 2022)



The research projects we examined recognise cultural heritage as integral to their sphere of concern and action and harness it in various ways: to improve public health outcomes where climate change is changing kinship and reproductive norms; to explore the benefits of community gardening; to interrogate what coasts will look like in the future (particularly urgent in geographical locations which might cease to exist) to enhance understanding of the economic and policy impact of renewable energy projects which involve the displacement of communities; to frame dialogue around the theft of cultural objects; to recognise that agricultural, forestry and slavery plantation are at the roots of climate change; and to explore cultural heritage's links to projects of imperialism, war and industrialisation, and the ways in which many places around the world are still facing the consequences; of monocultures, land degradation and lack of investment. In wide-ranging ways, cultural heritage and climate intersect with research occurring across faculties and academic disciplines.

As outlined by the UN, '[A]lthough culture does not have a dedicated SDG, it contributes to all 17 SDGs – from poverty alleviation to quality education, employment, social justice and environmental protection – and is explicitly reflected in several targets' ('Crosscutting Directions'). The British Council, in partnership with the Missing Foundation, recently published the report 'Culture's Place Within and Beyond the UN Sustainable Development Goals' (Oct 2023), which explored how the intersectional nature of cultural heritage is a double-edged sword. They argued,

Despite the recognition of the integral role that culture and heritage play in the SDGs, authors argue that culture continues to be underrepresented and undervalued in sustainable development discourses (see Labadi et al., 2021). The European Commission, for example, has highlighted that

an implicit hierarchy exists in the SDGs and that culture-related issues are at the bottom of that hierarchy (Brennert et al., 2023, p. 11).

Recent work makes clear that despite the instrumental role of culture and heritage in sustainable development, the connections are often not made, and their potential not understood or supported in practice. Dr Heather McMullen (see Annex C), whose research focuses on climate change and reproductive health, explained that like many academics, she spends 'most of [her] time in the climate and health space and then a niche space within that' to make connections with research on culture and heritage. McMullen feels that 'we still need an articulation of what the intersections are' and how a heritage perspective could be applied to work across disciplines. Our consultation process highlighted the need for a clear articulation of current areas of fruitful intersection.

...we need to shift understandings of culture, so that cultural heritage is not only the main focus of research – which is important and is being done in an incredible way – but also a lens to research other subjects, such as development, such as resilience and human rights, such as biology and sustainability, all of which might be understood in new ways with a cultural mindset.

*Interview with Pedro Ferreira
Research and Programme Consultant at the United Nations Educational, Scientific and Cultural Organisation (UNESCO)*



I think [at Paul Hamlyn Foundation] we are increasingly aware that these issues all intersect in really, really deep ways, that a lot of public conversation and debate doesn't always illustrate. Migration and climate, for example, are intrinsically linked. Migration is going to be one of the biggest outcomes of climate change. So to work with cultural organisations who are not working with that level of intersectionality in their approach kind of feels short-sighted.

*Interview with Shoubhik Bandopadhyay
Head of Programme – Arts at Paul Hamlyn Foundation*

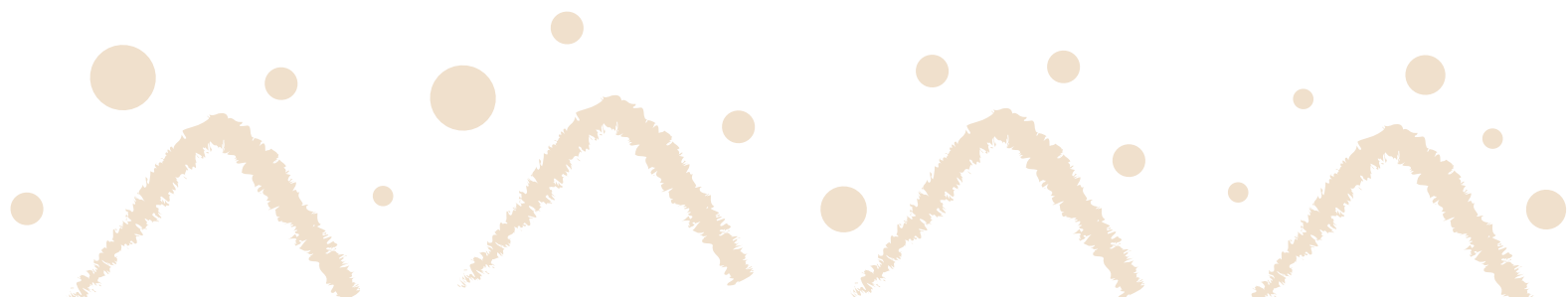
We saw amongst the cohort's research how mental health outcomes and sustainable livelihoods, for example, are intrinsically linked to cultural heritage and climate. This collaboration with DCMS presents an opportunity for arts and humanities research to inform and inspire international thought-leaders and interrogate some of the biggest questions of our time.

...How can we learn? How can we continue to be curious about these big questions and where creative solutions might lie?... how can curiosity and creativity unlock different ways of thinking about how we need to be in the world? How can it help us to shift habits that have got us into this place? How can it question big political, economic, structural issues in the world and the way that it forces us to live? And how can it also get individuals to rethink behaviours and assumptions?

*Interview with Kate McGrath
Director and CEO at Fuel*

Interdisciplinary calls – potentially in collaboration with other research councils – are seen as a strong driver for research in this field. Several interviewees, such as with Nigerian-born poet and playwright Inua Ellams (see Annex D), also discussed how the cultural sector and climate

action in the UK are often seen as a White, middle- or upper-class concern. Can research also help us understand the intersections between heritage, climate, social justice and diversity agendas? As outlined by the World Economic Forum (2023, para. 1), '[B]ased on current projections, it will take 131 years to reach full gender parity. Climate change, if not properly addressed, threatens to fatally undermine that pursuit, delaying it even further.' This is a direct relationship between climate change and structural inequality around the world. Alongside interdisciplinarity, a focus on an intersectional approach in funding calls will drive United Kingdom Research and Innovation's (UKRI) commitment to diversity, connectivity, resilience and engagement. Cultural heritage and climate research clearly connects with work across all research councils and their current strategic themes, and UKRI's key principles for funding research are also the ones which will produce the most effective, real-world and impactful studies on cultural heritage climate change: **diversity, connectivity, resilience and engagement.**



The original cohort projects provided ample examples of their interconnections with UKRI's four declared principles:

Diversity: CRITICAL food heritage as a tool for adaptation: Climate change resilience through hybrid Indigenous knowledge systems

The research explored heritage impacts from disasters and climate change and aimed at assisting in 'building resilient places and communities... through co-developed communicative tools and locally-led actions' (CHA, 2023). A community-based approach is an important aspect of the research, as it guarantees that Indigenous knowledge systems are integrated as an essential part of the methodology adopted by researchers. Indigenous-based approaches ensure that diverse cultural heritages are considered by risk assessment methodologies, thus allowing the 'diversity of heritage types that support the most vulnerable communities in the world,' with a special focus on the Global South (Crowley et al., 2022).

Connectivity: Conservation of climate change-endangered cultural furniture industry heritage in Damietta, Egypt

This project aimed to examine, quantitatively map and promote the cultural and economic resilience of Damietta to document and highlight Indigenous knowledge and the tangible cultural heritage of the city's craft industry and its social networks. As a result of the research, an online interactive platform was built so that the furniture industry community could connect and engage with the debate on climate change and how it will impact Damietta and its cultural heritage. In

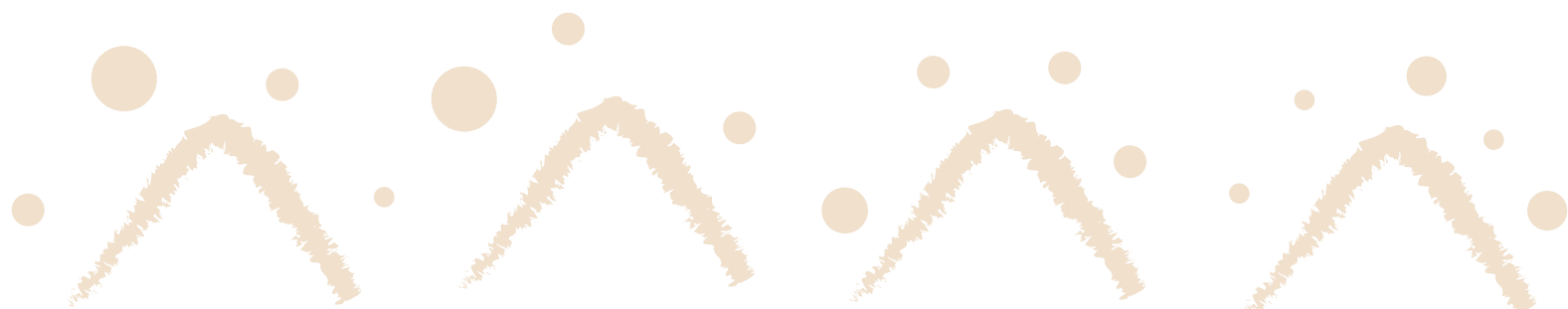
this sense, connectivity is a key principle of the research: it allows members from the traditional furniture industry to access a shared space 'to maintain and grow the social capital network in Damietta using a digital solution as part of the integration of new technologies into the traditional industry patterns' (UKRI, 2022).

Resilience: Bridging the knowledge gap through documenting Indigenous early warning indicators in areas prone to climate-induced natural disasters in Zimbabwe

This project provided evidence-based information on approaches for including intangible cultural heritage within the framework of disaster risk management being used in recovering and rebuilding communities affected by Cyclone Idai. The research not only focused on immediate response but also emphasised sustainable resilience, examining ways to rebuild communities affected by climate-induced natural disasters and help them recover in a manner which is sustainable in the long term. This involves not just reconstructing physical infrastructure but also integrating cultural heritage into the recovery process, ensuring that resilience measures are enduring and deeply rooted in the community's identity (UKRI, 2021).

Engagement: Roots of Resilience: Enhancing engagement with cultural heritage and climate change research

This project worked with a community-based, collaborative approach aimed at understanding the impacts of recent natural and human disasters on communities from Brazil's Iron Quadrangle, as well as the region's diverse cultural heritage. By involving representatives from lo-



cal arts and cultural organisations, the project ensured that the communities themselves actively participated in the research process, thus allowing a participatory approach enhancing engagement by valuing local knowledge and expertise. Also, whilst recognising that arts and culture are an important tool for building resilience for communities affected by climate change, the project created an innovative approach for resilience building which increases engagement within these communities (People's Palace Projects, 2023).

The original cohort projects also strongly aligned with the AHRC's strategic delivery plan, contributing to all objectives, whilst echoing AHRC's Strategic Objectives and Theory of Change¹⁴ and demonstrating the unique position of and how vital arts and humanities research is for government, business and society in tackling today's challenges:

Objective 1: World-class people and careers

1.1: Bringing breadth, diversity and visibility to research careers;

1.2: Making connections between people, sectors and capabilities:

All nine projects connected people from diverse sectors with a range of capabilities ensuring that the research reflected a more comprehensive, global view of our research and innovation system. For example, research in Gujarat, India, created a digital platform and disaster risk management plan that could be harnessed by communities, local authorities and other research teams post-earthquake.

Objective 2: World-class places

2.1: Transforming infrastructure to enable the best research;

2.2: Working at the heart of thriving communities:

Through mobilising communities and harnessing local, traditional and technological infrastructure, the projects built connections that have ensured the legacy and sustainability of innovative research processes and outputs. For example, in their follow-on project CRITICAL supported communities in better understanding food heritage and preservation, not as a vulnerable or static asset to be preserved but as a tool for adaptive capacity in the face of climate

¹⁴ AHRC's Strategic Objectives and Theory of Change sets out a vision for leveraging world-leading research across the arts and humanities to promote societal well-being, cultural understanding, and economic prosperity. Empowering diverse voices, stimulating innovation, and fostering global connections are envisioned outcomes for the research and innovation landscape (AHRC, 2022; 2023).

change, the use of which continues today.

Objective 3: World-class ideas

3.1: Being open and supporting the arts and humanities to thrive;

3.2: Taking global perspectives and equitable approaches;

For example, 'Values-based Climate Change Risk Assessment: Piloting the Climate Vulnerability Index for Cultural Heritage in Africa' worked and shared trainings with heritage professionals in Nigeria and Tanzania, and through the translation of outputs into Swahili (amongst other languages) – and its circulation at global initiatives such as COP – ensured the ongoing impact and applicability of arts and humanities research.

Objective 4: World-class innovation

4.1: Strengthening the Creative Industries;

4.2: Boosting innovation through design research;

4.3: Growing our investment in knowledge exchange and commercialisation.

A few of the original cohort projects focused on research questions that responded to challenges and would strengthen the creative industries in the future, offering opportunities for knowledge exchange. Such as 'Conservation of climate change endangered cultural furniture industry heritage in Damietta, Egypt,' which examined, quantitatively mapped and promoted the cultural and economic resilience of Damietta, that – like many industries in the UK and around the world – is under threat from climate change and contemporary political decision-making that is insensitive to its socio-cultural heritage.

Objective 5: World-class impacts

5.1: Leading interdisciplinary responses to national priorities;

5.2: Building partnerships for a healthier, fairer

society and more prosperous economies:

Through working with global arts organisations and cultural activists, several of the projects made discoveries, and developed partnerships that addressed national priorities, built local resilience and simultaneously translated research into world-class outputs. For example, 'Build Back Better and Roots of Resilience: Enhancing Engagement with Cultural Heritage and Climate Change Research at the Iron Quadrangle region in Minas Gerais, Brazil' harnessed local – creative – methodologies in the research, and outputs including a seminar series, a viral hip-hop track and an award-winning documentary that connected and mobilised diverse communities around the world to build a healthier, fairer and more prosperous economy in the Iron Quadrangle.

Objective 6: A world-class organization

6.1: Learning, to improve how we work and to empower people;

6.2: Positive action on equality, diversity and inclusion in our funded portfolio;

6.3: Promote the highest standards of transparency, openness and efficiency;

As noted below the cohort research teams were diverse with a good gender balance and opportunities for Early Career Researchers (ECR), as well as one project 'Bridging the knowledge gap through documenting Indigenous early warning indicators in areas prone to climate-induced natural disasters in Zimbabwe' which was based at Marondera University of Agri Sci & Tech led by international PI Professor Nomalanga Hamadziripi. It is important to mention that all attendees of the Manchester workshop also commented on how refreshing it was to be consulted in preparation for the next phases of the programme and have the opportunity to reflect on what worked and what didn't before the next call.

Throughout the research, a range of exciting interconnections between cultural heritage research and other disciplines arose. Whilst not exhaustive, the below list provides examples of how these research areas align with UKRI's five declared themes:

#1 Building a Green Future

Sustainable Cities: This theme involves research to understand the impact of climate change on migration and urbanisation, with a special focus on cultural traditions, historical sites and heritage. An exploration of the relationship between urban environments and cultural heritage is needed to understand how culture shapes cities and can help build stronger connections between people and their communities, creating the conditions for the preservation of urban cultural heritages, whether tangible or intangible.

Industry and Consumption: This theme also involves research focusing on transitioning to post-carbon futures to combat climate change. An interrogation of the implications of the transition to a green economy – including displacement because of solar farms, for example – on culture and heritage is crucial, as is an analysis of how culture can be used to prepare communities for the changes derived from systemic shifting.

AI and Technology: Finally, this theme involves continuing to explore AI and technology's potential role in preserving, restoring, documenting, analysing, promoting and managing both tangible and intangible cultural heritage. Further exploring the ways in which AI and technology could help in monitoring and analysing changes to cultural heritage caused by climate change, disasters and armed conflict would thereby aid in their preservation.

#2 Building a Secure and Resilient World

Humanitarian Crises and Disasters: This theme involves considering the broader impacts of crises, including environmental disasters, on security, employment and political vulnerability, as well as understanding the implications of humanitarian crises on the safeguarding of communal traditions, cultural heritage, and the shared practices and identities of communities directly affected by disasters (e.g., wars, forced displacement and extreme events such as floods and droughts).

Conflict and Resilience: This theme also involves exploring the relationship between conflict, resilience and the ability to build a secure world in relation to culture and heritage preservation, as well as addressing the importance of safeguarding people and their cultural heritage – both tangible (e.g., historical sites) and intangible (e.g., communal practices and traditions) – offering support and creating the conditions so communities can rebuild themselves after conflicts.

#3 Creating Opportunities, Improving Outcomes

Women, Girls, and Gender: This theme involves understanding the gendered realities of cultural heritage and recognising the potential spikes in vulnerability during shift, as well as exploring gendered biases in cultural heritage research practice and more inclusive approaches, such as by interrogating the role of women in safeguarding cultural traditions.

Education: This theme also involves exploring the ways in which cultural heritage can help build connections between educators, students and their communities and thus

serve as a tool for building resilience, preserving heritage and creating arts and culture-oriented solutions for the challenges posed by global issues such as climate change.

Food Systems: Finally, this theme involves examining the differences between modern industrial food systems (e.g., fast food chains) and traditional and ecological practices (e.g., organic farming, agroecology and other traditions derived from cultural heritage practices and rituals) for creating opportunities and improving outcomes for more sustainable food systems.

#4 Securing Better Health, Ageing and Well-Being

Health and Wellbeing: This theme involves focusing on traditional medicine, reproductive rights and their impact on overall health and well-being, including their impact on mental health, as well as how cultural heritage (e.g., traditions and rituals) can help create healthier lifestyles whilst supporting social bonds crucial for building stronger connections within communities, improving their overall health and well-being.

#5 Tackling Infections and Pandemics

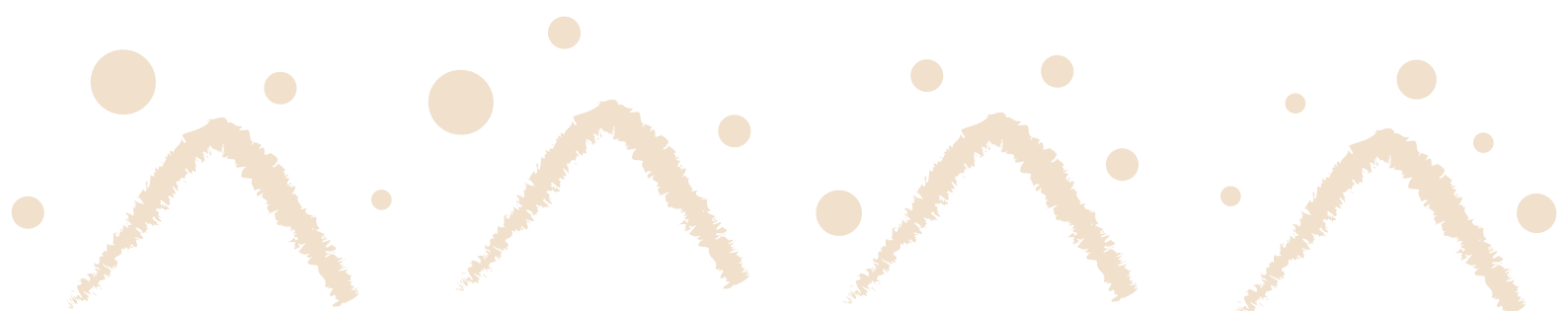
Preparing for and responding to public health crises: This theme involves exploring strategies to address global health challenges, including infectious diseases and pandemics, understanding their relationship with climate change and exploring the ways in which cultural heritage informs responses to health crises and can be affected by them, as well as how heritage can serve as a tool to tackle social challenges stemming from health crises.

Beyond Public Engagement

Recommendation #3: Encourage – and support – research that is co-designed and co-produced with the cultural heritage sector

Across the AHRC–DCMS Cultural Heritage and Climate portfolio, it is apparent that the depth and diversity of the public sector, civil society and creative partnerships ensured strong public engagement with the research and its outcomes. Culture, heritage and climate stakeholders were engaged innovatively in the research process, from gathering data through to shaping the outcomes. Their active participation ensured that the research could address the practical challenges faced by communities, stakeholders and partners. Most projects were built on long-standing relationships and – with the support of a flexible programme and the top-up grants made available – the research teams were able to be responsive to their partners' needs. The cultural heritage stakeholders we consulted beyond the cohort emphasised that they value joining research teams and are seeking additional opportunities for collaborations responding to needs in the sector.

Many people we consulted understood the critical role culture and heritage organisations can play in engaging communities in climate research and action, in telling stories that foster transformative conversations and addressing the climate crisis holistically, interconnecting issues of identity and encouraging collective action for a sustainable future. They also emphasised how research can support the cultural and heritage sectors in tackling challenges within day-to-day practice.



I would strongly urge the research councils, if they're thinking of developing programmes, to talk to actual people on the ground, as exemplars of good practice [who] demonstrate decarbonisation and green action and so on. And secondly, of how they [academic researchers] might engage positively and actively with the climate and biodiversity crises.

*Interview with Nick Merriman
Director of the Horniman Museum and Gardens*

Stronger consultation with communities and partners from the outset could open opportunities for research to support cultural heritage practice and strengthen the sector's contribution to the climate crisis. Merriman expressed how they don't see much linkage that's useful in heritage practice with higher education research: 'a lot of [research] seems to be quite nice to do, of interest around the edges, but it doesn't speak to our core purpose.' The argument is that research could support the cultural heritage sector in understanding how they could manage their buildings and environments more effectively and start exploring de-growth as an idea: '[Since the] 1950s, [museum practice] has been about growing – growing audiences, growing budgets, growing buildings. And that's clearly unsustainable. What does a sustainable museum look like? What are the reward systems for getting smaller?'

Several interviewees mentioned the Theatre Green Book,¹⁵ which sets standards for staging productions more sustainably, making theatre buildings sustainable and improving operations such as catering and front of house.

Making touring more environmentally and economically sustainable is a key concern for Kate McGrath (see Annex D). Fuel Theatre, an inde-

pendent producing company based in London, are keen to formalise their network of 'international collaborations which are experimenting with different ways of touring without touring.' Shoubhik Bandopadhyay at the Paul Hamlyn Foundation (see Annex D) agreed that arts, culture and heritage organisations are concerned with financial sustainability: their business models 'are being challenged for all kinds of reasons. And climate is one of those reasons.' Can the AHRC-DCMS cultural heritage and climate portfolio support the cultural and heritage sectors in tackling some of these concerns in their practice?



¹⁵ The Theatre Green Book is a comprehensive resource for theatre-makers who want to create sustainable and environmentally conscious productions.

Geographical Reach

Recommendation #4: Seek geographical diversity of cohort, but don't underestimate the challenge - and the necessary investment - of making disparate voices and places coherent

From Soqotra to Sri Lanka to Brazil and back to the UK, the research produced by the original cohort has had global reach. All work has been undertaken with international partners from the Global Majority,¹⁶ and whilst this was seen as a strength of the portfolio over the last 3 years, many key considerations have emerged regarding the dynamics between collaborators from different contexts. It is critical that the portfolio continue to focus on promoting climate justice, collaboration and mutual learning amongst researchers from very different geographies, especially when the research is being commissioned from the UK in partnership with countries who have had a much smaller hand in bringing about the climate crisis but are being hit the hardest.¹⁷ Research in this field must remain acutely aware of how funding structures and power imbalances often silence the voices which most need to be heard.

Rural communities are experiencing issues like climate change very differently to how they are experienced in the city. The impetus [from grant makers] to move funding outside of London or other major cities is not just about economic justice, but also recognising that these communities have something different to say about issues such as climate change and we need to hear from them.

*Interview with Shoubhik Bandopadhyay
Head of Programme - Arts at Paul Hamlyn Foundation*

The geographies engaged by the portfolio were wide reaching: partners working with natural heritage, historical sites and customs and rituals, as well as research projects and communities based in both urban and rural contexts, which experience climate change, climate justice and climate action differently. This diversity is critical, and the challenge is coordinating – or making coherent – the connections between research undertaken in such different places.

It would be impossible and unnecessary to take a systematic approach to geographical representation within a strategic research programme of this type, but to maximise the reach and impact of future research in this field, it is critical to find ways to connect those who undertake the research within an extended portfolio: both to each other and to wider stakeholders. The closing section of this report outlines an approach which would create structural opportunities for research teams to connect with each other, as well as global networks and stakeholders, to elevate research outcomes.

In the context of climate change and heritage, it's crucial that we work in a network, connected.

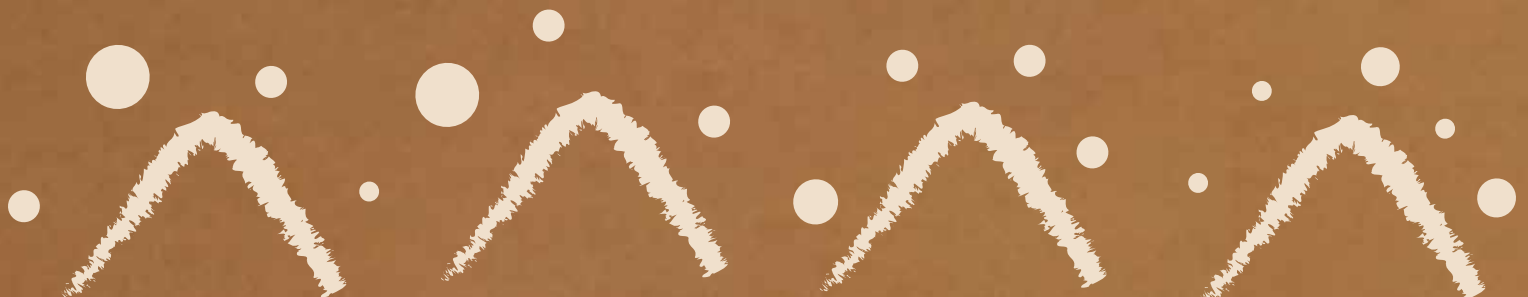
*Interview with Luana Campos
Executive Secretary at ICOMOS (Brazil)*

¹⁶ To move from a discussion of the Global North and the Global South to one that is more inclusive of the "Global Majority," we need to shift our focus from the traditional binary between developed and developing countries to a more nuanced understanding of the world's interconnectedness. This means recognizing that the Global North is not a monolithic entity, and that there are significant disparities within both the Global North and the Global South. It also means acknowledging that the Global South is not a passive recipient of aid, but rather an active participant in global affairs. It's also fundamental to acknowledge the diversity within both the Global North and the Global South (Escobar, 2015; Rinaldi, 2021).

¹⁷ This was stated by Dr. Francesca Gilberto at the Manchester Workshop, in September, 2023.

Methodologies and Approaches

Principles for how academics and research councils can build more ethical and robust research partnerships are clear: culturally sensitive knowledge exchange, equitable co-creation, and community and stakeholder mobilisation for meaningful impact. Whilst also relevant to other UKRI research programmes which engage international and community partners, this section draws out specific recommendations which have emerged in relation to this proposed programme.



Funding Cycles and Length

Recommendation #5: Provide a transparent, long-term vision for UK cultural heritage and climate research to support more impactful and long-term interventions, teamed with application/project cycles that support collaboration with partners

I know they [UKRI] can't commit for 10 years because government budgets and public sector funding doesn't work like that, but there could be a longer-term plan for the programme, understanding that there are explicit breakpoints if the budget doesn't exist.

*Interview with Bryony Butland
Director Research and Innovation at QMUL*

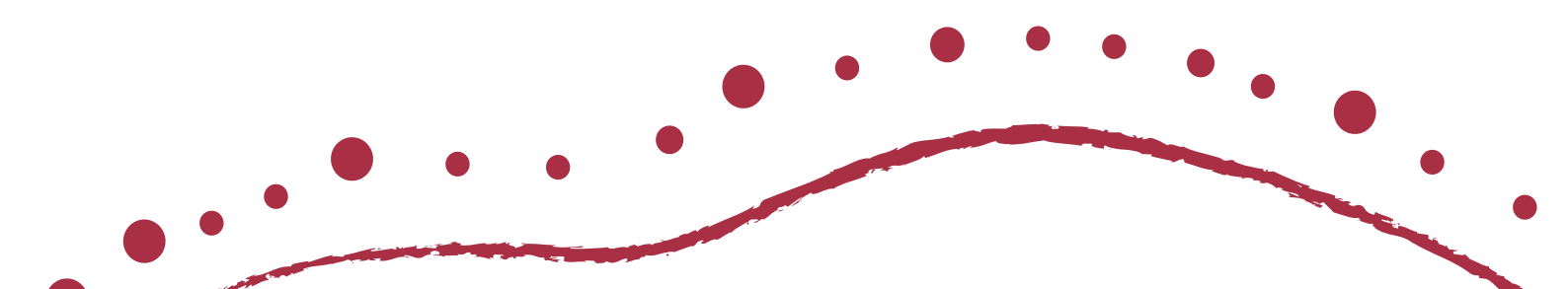
An AHRC-DCMS research portfolio for cultural heritage and climate change must be explicit about its ambition to enable research teams to take a longer-term approach to their work. Whilst acknowledging that government and research budgets work in shorter cycles and that the next round of funding will conclude in 2025, the research will be best served if a vision and commitment for continuing to support research in this area exists. For example, many people in the cohort commented on how the top-up and follow-on grants worked well, enabling teams to start with a smaller project and scale up through the additional programmes which built on their learning. As biodiversity scientist Alan Forrest (see Annex D) explained, the research must focus on impacts not just within the programme but 5 or 10 years into the future. What about impacts which fall outside of the short-term funding cycles? Consultees highlighted that regular funding structures may have enabled the heritage sector to be further ahead in considering long-term impact than the approach taken by

the research councils. Non-academic partners and communities want to know what is next.

Lessons can be learned from the application process used by AHRC-DCMS to fund the cohort projects. Rather than applying via the UKRI's Je-S system, applicants were required to submit a Google Form with attachments, and the turnaround time was much quicker than normal. Many in the cohort felt this was easier and supported their communications with non-academic partners who find it challenging to wait for 9 or 12 months to learn whether a project can proceed. However, the quick turnaround times required teams to be agile in their applications, and some in the cohort questioned felt that they would have designed the original research differently had they been aware that there might be more resources available in the future. The length of time for project delivery – particularly for the top-up grants – was extremely tight and did not allow for necessary relationship building or the institutional bureaucracy necessary to begin a research programme. For example, it is not unusual for it to take a minimum of 3 months to go through university ethics and 6 months to undertake the due diligence necessary with partners to establish them in the university systems. The top-up grants had to be completed within 4 months from receiving the go ahead.

My experience of the kind of grant application world is that, yeah, a) things move very slowly and b) the institutional setup for the lots of these projects means that by the time the money is supposed to reach the places where it should have an impact, it's been whittled down to a lot less.

*Interview with Ferdinand Saumarez
Project Developer and Curator at Factum Foundation*



Getting Money to - and Supporting - International Partners

Recommendation #6: Increase dialogue and training between funders, academics and research managers to align expectations and support effective and appropriate grant administration, particularly with international partners

As argued by Holly Ryan (see Annex C), a Euro-centric and Anglo-American bias exists in artistic activism scholarship. New research initiatives must amplify the voices of scholars worldwide. One way of doing this would be expanding funding to support the mobility of scholars from the Global Majority. During the COVID-19 pandemic, it was more difficult for UK academics to spend extensive time on international fieldwork; more reliance was thus placed on non-UK based team members, who often led research on the ground. Many in the original cohort commented on how this helped shift dynamics within collaborations in the right direction, with more power and autonomy being afforded to international Co-I's and community partners. Whilst this was a positive step, university research offices must support these changes and ensure partners have the time and resources necessary to conduct the research. How do we build in the set-up time for a project? How do we ensure that community and relationship building is supported within the lifetime of a grant? How do we ensure that institutional set-up supports resource getting to collaborators rather than creating hoops which are impossible to jump through?

Research management teams within universities want to better understand the specific mechanisms of each grant and the nature of any non-HEI partnerships so they can better provide more effective administration. The realities on

the ground often differ significantly from a UK university context: there are no salaries for work outside of the grant, there is often no money for overheads/in-country administration, and due diligence procedures can at times be paralysing. As Bryony Butland (see Annex D) explained, research offices often ask questions of a volunteer or community representative which they do not understand. Regardless of the intentions of the grant – or the UK-based academic – if the systems and structures are not supporting ethical and equitable research partnerships, the situation will not change for the better.

Flexibility

Recommendation #7: Maintain the flexibility of the programme; provide a key point of contact for researchers; keep a focus on diversity and inclusivity within research teams

For many of the researchers, this was the first time they had been part of a cohort and – despite competing for funds – most felt they had come together as a team. One participant explained that 'the support, dialogue and flexibility of the programme has been critical to its success.' Having a personal point of contact and coordination at UKRI has made a significant difference, especially as all projects had to navigate huge challenges including Global Challenges Research Fund (GCRF) cuts in 2021 and ongoing lockdowns throughout the COVID-19 pandemic, which led to many changes in methodologies, approaches and timelines. Having someone to discuss adaptations with, being part of a wider community and being part of the evaluation of the programme itself – looking forward together – is unusual and appreciated. At the Manchester workshop, a strong sense arose that not only should this strand of research evol-

ve but the cohort as well. It was also noted how unusual it was to have such diverse research teams, with a good gender balance and opportunities for ECRs. Structural flexibility had been created to allow one of the nine original projects to be led by an international PI.¹⁸ Is there a way to build on this going forward so that collaboration with international PIs or Co-PIs becomes a strategy to critically address power dynamics and recognise/reward in-country knowledge?

Co-Production of Research

Recommendation #8: Reposition the centre of the research away from HEIs to local communities: structure funding calls to include scoping visits, sustainability and network building, early and robust stakeholder mapping/engagement; and embedding Community Co-Is into the programme

We need local, place-based and people-centred solutions.

*William P. Megarry
Senior Lecturer in Geographical Information
Science and Archaeology*

Community partnerships are at the core of the current portfolio and must be integral to its development. The challenge of co-production with communities is determining how to improve our methodologies and approaches as researchers. Everyone consulted agreed that investing in relationship building, involving community partners from the inception of a research project and making the administrative processes easier were all critical to improving relationships and power dynamics and to centring those the research impacts.

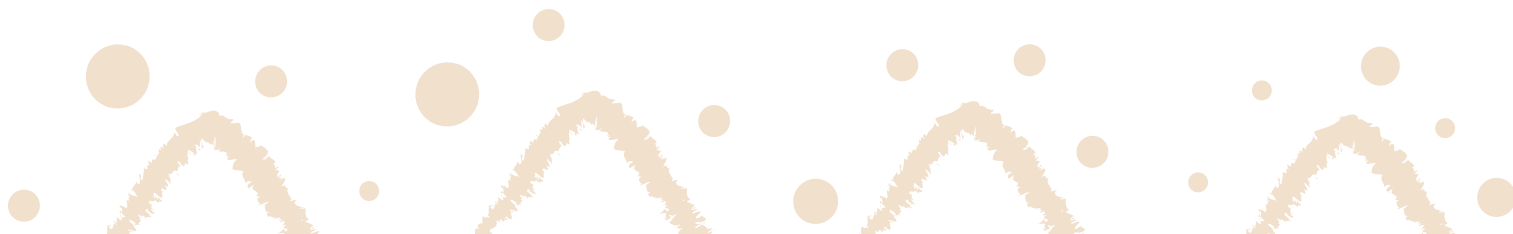
I would really push the idea of partnership as early as possible, in a facilitated co-design setting bringing other voices in as early as possible [so that research is undertaken] with, rather than done to, communities, right? Which is different from the prodding, the extraction we were talking about.

*Interview with Richard Couldrey
Programme Manager at Transition Network*

Building meaningful and trusting relationships with collaborators and communities around the world takes time and resources, but these are the essential building blocks for undertaking ethically robust and co-created impactful research in this field. Without these foundations, research proposals will be led by UK academics in consultation rather than in collaboration with partners. Increased opportunities are needed to support scoping visits and relationship building in the development of proposals. Support for partner staff time, travel, meeting and/or translation expenses must be taken seriously, since often, partners – and researchers – are not supported by institutions, or in full time employment, which give them the flexibility to engage meaningfully in the preparation of a research application.

Full-stage applications should explicitly illustrate how an application was co-designed. Small pots of resources for the development of partnerships/networks, with a light touch and quick turnaround application, would strengthen full-stage applications and the overall impact of the research and its outcomes. McGrath noted that Fuel has now dedicated 2% of all their project budgets to resourcing their sustainability actions, whether through time spent on trains

¹⁸ Bridging the knowledge gap through documenting Indigenous early warning indicators in areas prone to climate-induced natural disasters in Zimbabwe was based at Marondera University of Agri Sci & Tech and led by an international PI Professor Nomalanga Hamadziripi, with two international Co-Is – Lesley Macheka and Promise Machingo Hlungwani.



rather than flights, using recycled materials rather than buying things off the shelf, or using electric rather than diesel vans for transport. Such an innovation could be introduced across UKRI research grants (not just those related to climate change), so that applicants are asked to outline their approach to sustainability in a short statement and ring-fence part of the budget to be explicitly used to support research teams in making better choices. Similar commitments could be made to ring-fencing resources for access costs and public engagement. Making such commitments explicit in research budgets could not only address environmental concerns but also hold the potential to strengthen relationships by demonstrating a commitment to the well-being of local communities and fostering a culture of responsibility and collaboration within the research community.

We are not talking about a huge level of resources [...] for example, five to ten thousand pounds could be massively meaningful for a project on the ground in the community. [...] I'd say give away as much power as you dare. Take risks [...] Risk taking is part of artistic creation. So [...] if you talk about policy changes, strategies, the idea of piloting with community partners, trialling ideas, doing it out in the open - [Battersea Arts Centre's] Scratch style performance¹⁹ - I would love to see that. Let's try this out, let's hold a conversation. Let's keep off Twitter. And let's take those risks together. For me... That's it.

*Interview with Richard Couldrey
Programme Manager at Transition Network*

As outlined above, COVID-19 helped shift power dynamics between academics and community partners: unable to travel, international research

teams had to rely on local community partners to adapt work plans appropriately and to undertake much more of the data collection and delivery of in-country work. This cohort was forced to change course and take many risks, which ultimately paid off. Many of the nine projects produced toolkits focusing on distributing knowledge and placing resources into the hands of those who are on the frontlines. The scalability and adaptivity of toolkits also contribute to a shift in power from researchers to the communities who can use and deploy resources. The question now is how we continue to 'give away as much power as [we] dare,' enable and empower community partners to take the lead in part and co-produce research. Is it possible to make requirements for community-based Co-Is for future calls? Can non-UK academic or non-academic Co-Is be paid directly at 100% full Economic Costing (fEC)? Critical to these developments is the recognition that not all community-based Co-Is will be associated with an organisation or have the capacity to undertake institutional due diligence or manage the budget themselves: a support structure may need to be provided by another partner or the lead institution in managing the in-country expenditure at 100% fEC.

One of the big things that I feel that is ubiquitous across academia is once you're in the academy it's very difficult to look outside it and not to filter information through an academic systems viewpoint. As such, the relationships between academia and communities, between academia and enterprises, between academia and non-profits, often don't work well because academia can't look outwards. What are you going to do to support it? How does academia serve? How

¹⁹ 'Scratch' is a design methodology for theatre and wider creative processes, developed at Battersea Arts Centre (BAC) under the leadership of Tom Morris and then David Jubb from a concept by performance artist Kazuko Hohki. In Scratch, artists and creatives share early work-in-progress versions of their ideas and receive feedback from audiences and participants that can inform the next stage of development of the work. Critically, the process is iterative rather than a linear progression, allowing ideas to be tried out as many times as appropriate with small audiences in a low-resource environment, and avoiding exposing underdeveloped work to large audiences. At its best, Scratch can introduce co-design into creative and artistic processes and reduce risks for artists, audience members and production investors.

does it serve rather than serving itself? How does it serve the world in a broader sense?

*Interview with Alison Tickell
Founder and CEO of Julie's Bicycle*

Who is the research serving, and what are the trade-offs? Academia has a reputation of being extractive. Richard Couldrey (see Annex D) explained how the Transition Network had been 'poked and prodded' by academic research, but a disconnect remained between research impact and a sense of impact on the ground. One method for combating the extractive tendencies of traditional academic research is to reposition where the 'centre' of the research lies. For example, rather than starting with an academic partner, how would the research benefit if the first partner identified was the community partner? How would centring the needs of the community partner and local stakeholders transform how the research project was conceptualised? Reframing where the research begins implements a decolonial methodology by encouraging an unlearning of whose needs and outcomes are most important in the research. Researchers sharing power in this way requires an extension of trust that the research will not be wholly instrumentalised – just as collaborating requires the non-academic partner's trust that the process will not be extractive.

Critical to repositioning the centre of the research is understanding the variety of stakeholders involved: from the outset of an application, a clear articulation of who the stakeholders involved are – and their needs – is critical. An outline of how that stakeholder map was developed is important: community stakeholders, government and policy-makers, academic and research institutions, industry partners and NGOs will all have very different ideas of who the important stakeholders are. For example, a village chief may be overlooked by an industry partner who has an

existing relationship with the local government. It is also critical to remember that just because everyone is in the room – or application – together, it does not mean everyone is equally heard or feels able to speak. For example, how does UNESCO's presence at a consultation meeting or round-table shift the dynamic and conversation? All collaborative work and research include difficult decisions and trade-offs. Understanding the stakeholders – their needs and positions – will lead to more thoughtful decisions about what is at stake for UK universities, the cultural heritage involved at a site and the people who live there. In addition, it will strengthen research outcomes and lead to (1) tailored research design which addresses the specific needs and concerns of stakeholders, ensuring its relevance and usefulness; (2) more time to understand the different knowledge systems in play and implement alternative methodologies from the outset; and (3) early engagement with possible ethical concerns relating to specific communities.

Okay, so we are studying, and we are working with people from the Global South. The premise of this is wrong: we should not work with them but learn from them and use the visibility and use the communication tools that we have in order to promote visibility for these people. They already have the voice, we're not giving anybody a voice, we're just using this tool that we have in our reach to expand the concept of intellectuality and knowledge.

*Interview with Pedro Ferreira
Research and Programme Consultant at
UNESCO*

Illustration
Aislan Pankararu



Indigenous Partners, Climate Justice and Traditional knowledge

Recommendation #9: Recentre traditional knowledge, recognising its material value in devising post-carbon futures alongside the devastating injustices experienced by Indigenous peoples

Between 2019–2021, PPP worked with the AHRC and Economic and Social Research Council (ESRC) on the Indigenous Research Methods Programme investigating collaborations between UK and Indigenous researchers.²⁰ A series of events brought together Indigenous and non-Indigenous partners to explore how research partnerships could better promote culturally sensitive knowledge exchange, equitable co-creation and mobilisation for meaningful impact. This research has informed work with Indigenous partners across UKRI and is already reflected in many of the recommendations above.

It is worth revisiting some of the learning from the consultation on Indigenous Research Methods in preparation for the next stage of the Cultural Heritage and Climate Change Programme, with many of the current cohort of projects involving Indigenous communities, who globally, whilst less than 5% of the world's population, protect 80% of remaining global biodiversity. Indigenous cultural heritage, traditions and practices are being severely impacted by climate change as outlined in the foreword of this report, but those traditional cultural practices also protect and steward places from climate change and the destructive impacts of human activities. It is fundamental that the significance and complexity of this relationship between climate change, Indigenous peoples and knowledge systems be

recognised.

Climate injustice is a reality and must be acknowledged and addressed in research going forward: although climate change is a global crisis, its effects are not experienced equally around the world. This is the case for the Global Majority and Indigenous communities who, faced with a range of intersecting systematic inequalities, feel the effects in their daily life much more acutely.

So when you then think about something like climate, I think that really what we're looking for is reaching for an understanding of climate justice, not simply raising awareness that climate change is happening [...] but that migration and climate, for example, are intrinsically linked.

*Interview with Shoubhik Bandopadhyay
Head of Programme - Arts at Paul Hamlyn Foundation*

One way of addressing some of these dynamics would be through centring Indigenous knowledge practices in research, rather than prioritising knowledge systems which have emerged from hyper-capitalist, extractive and industrial economies.

I'm also talking about traditional knowledge, those who use a certain wood to make a viola in the Pantanal, or who use clay in Espírito Santo to make a pot that has a certain cooking condition. Materials that are sought out in nature, used with ancient knowledge and passed down from generation to generation, and that respect their dependent relationship with the surrounding environment. This is speaking more generally, but you can have more serious cases, such as major

²⁰ In this period, PPP facilitated a series of events focused on Indigenous engagement in research partnerships and knowledge mobilisation. The project had five phases, including an international seminar, a webinar and a documentary. The events aimed to explore culturally sensitive knowledge exchange, equitable co-creation and mobilisation for meaningful impact.

land alterations, which is the case with mining. With even more impact.

*Interview with Jurema Machado
Consultant in heritage and cultural policies and
former president of the Brazilian National Institute
of Historical and Artistic Heritage*

In their manifesto, the Climate Heritage Network draw attention to the value of traditional and Indigenous knowledge:

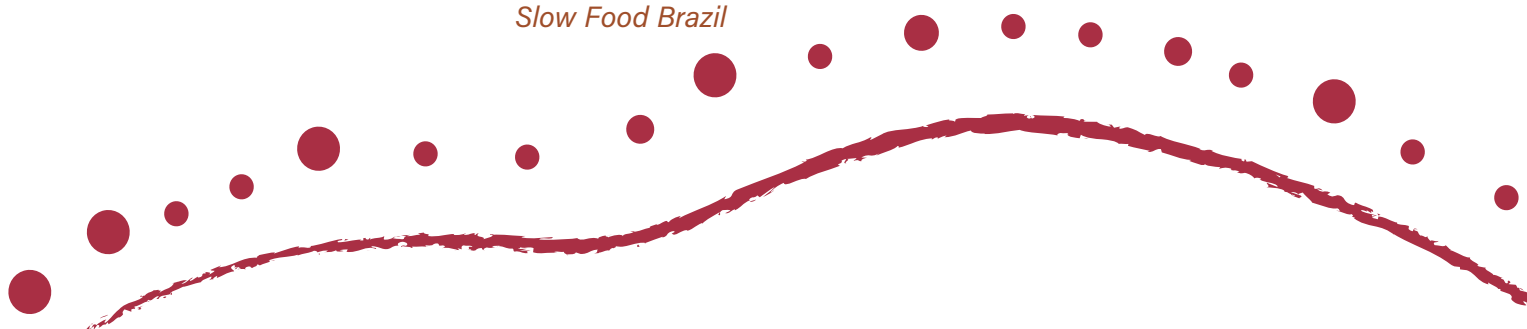
Traditional knowledge and heritage buildings and landscapes that pre-date (or work independently of) the fossil fuel era point the way to post-carbon living. The cosmovisions and values held by Indigenous Peoples and local communities never co-opted by modern take-make-waste approaches offer counterpoints to unsustainable paradigms of 'progress.' Artistic, creative, and imaginative tools hold transformative potential by challenging the values that condition life choices, including economic and consumption models and by supporting transformative reinterpretation of today's carbonscapes and their accompanying mindsets (Climate Heritage Network, 2022c, p. 3).


Indigenous knowledge and practices have a material value for communities all around the world and can support us in envisioning and building alternative ways of living in – and with – the world. For example, as Murilo Yudjá (see Annex D) explained,

Here, we [Slow Food] make an effort to unite the indigenous youth of the Xingu, so that there is an understanding of what causes climate change, what we need to do to adapt. (...) We also try to bring the youth closer to our culture, because if we don't, we will have leaders like the current ones in the future.

*Interview with Murilo Yudjá
Juruna Indigenous community and Member of
Slow Food Brazil*

Considering this context, one question emerged in the research: what is the role of the UK academic research and institutions? This question is not easy, but it must be asked and can help us truly shift the power dynamics at play in research programmes. How are we learning from, or using, 'the communication tools that we have in order to promote visibility... in order to expand the concept of intellectuality and knowledge?'





Outputs and Impact

We met Rev. Lennox Yearood Jr. of the Hip Hop Caucus at COP27. He said something that really stuck with me: 'Climate scientists have done their bit. The case for an oncoming climate emergency is conclusive. It is now time for the storytellers to step up to the mark and find a way of having these difficult conversations that are not just about climate, but about migration and about identity and about our very place in the ecology of this earth. It is now up to us, the storytellers, to find a way of doing that.'

Interview with Tim Bell
Senior Producer at Complicité

Moving beyond Mapping

Recommendation #10: Move beyond mapping: focus on the impact rather than the output of AHRC/DCMS funded research

Following Timothy Morton's framing of climate change as a 'hyperobject' (2013), we know the science, scale and impact of the climate crisis is so vast that it defeats traditional ideas of intervention and paralyse people, preventing them from taking action. In relation to cultural heritage, the original cohort's research projects demonstrate how disasters and climate change are causing displacement and estrangement from cultural sites, posing risk to economic and social practices as well as traditional knowledge systems, and having an undeniable effect on mental health. They also demonstrated how cultural heritage has an adaptive capacity; with the support of the arts, technologies and development tools can help build resilience and support communities in making necessary changes to their daily lives. The value of arts and humanities research is to find alternative, creative and effective ways to tackle these issues which scientists have proved to us are there..

What impacts and outcomes should AHRC-DCMS funded research in cultural heritage and climate change be aiming to achieve? Amongst the heritage sector stakeholders consulted, a clear emphasis emerged on moving beyond mapping and focusing on the tangible impact research initiatives can have on practice.

The research questions that people are asking at the moment are quite basic and often revert to mapping. I think we need to go beyond mapping. Actually, there's been quite a lot of mapping done recently, I think we need to get a move on and think seriously about net zero pathways. Not reaching net zero in 2050, that's too late. But what does it mean this year? Next year? The year after

and the year after that? What does that actually mean to organisations, to clusters, to places, to communities, where does climate justice actually fit into this?

*Interview with Alison Tickell
Founder and CEO of Julie's Bicycle*

How can arts and humanities research help us understand the impacts of the interventions occurring in the sector and ensure they continue to build on learning and evolve? For example, can research help us understand better the ways that the arts can galvanise community engagement, shifting attention away from facts to affect, conjuring empathy from audiences, attendees and participants to the realities facing future generations and therefore mobilising community climate interventions? Heritage institutions need robust metrics to understand the impact of – and learn from – their programmes. As Merriman expressed, often they rely on quantitative measures, but a shift to qualitative assessments is needed to look at impacts rather than outputs:

Climate outreach or resources that [provide] evidence about what works in terms of engaging people in climate action I think that's really valuable.

*Interview with Ed McGovern
Programme Lead - Climate at Calouste Gulbenkian Foundation*



Process over Product: Creating Space for Failure

Recommendation #11: Incentivise risk-taking in future calls, investing in the discovery of creative and affective ways to tackle climate issues, and valuing the process alongside potential outputs

Going forward it is critical that future programmes invest in and value the process of research as much as the outcome. If key academic outputs are concerned with benefitting research cultures in the UK, the process itself must be beneficial to and serve the communities we work with. As well as attending to ethical considerations and ensuring that the integrity of the research is maintained throughout, amongst the cohort some of the most significant findings, next steps and opportunities which emerged – and were supported in the top-up and follow-on grants – were unforeseen at the outset of the research. Knowledge generation does not simply occur in predictable outputs but emerges, grows and changes as a result of the communities which are generated through research processes.

This emergent quality should set research funding apart from investment in the wider arts, culture and heritage sector. As Tim Bell (see Annex D) explained,

The funding system doesn't allow you to fail. It's numbers and outcome based: when you fill out an Arts Council [England] form, you're asked, what's your piece about? Who's it going to reach? How is it going to reach them? How many people are you going to engage? In Complicité, we try to truly start and not know where we're going. And that means that the piece has a chance to develop [...] The piece has a chance to ferment.

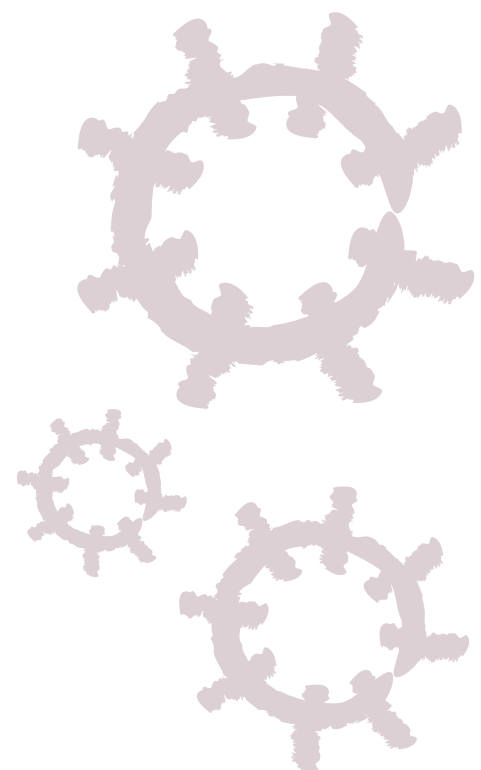
*Interview with Tim Bell
Senior Producer at Complicité*

Bell explained that their approach is only enabled through the financial reserves and reputation Complicité has built up over many years.

This phrase, 'research and development' has become really trendy. Everyone does an R&D week. What I don't see is anybody truly researching and developing. Too often I see another rehearsal week [where] all decisions are made beforehand [...] And then, 15 very important people have been invited to come and watch a twenty-minute show on Friday. This is not an R&D process. We need to support non-outcome-driven research that is a springboard for artists' creativity, not something that limits people.

*Interview with Tim Bell
Senior Producer at Complicité*

Given the obligation of UK research to serve the public which supports it through tax revenue, it is important to focus on demonstrable outputs, but there are other ways that research processes generate impact and engagement and value for the public even if the research hypothesis fails. We must see investment in the process of research, as well as its potential outputs.



Alignment of Aims, Objectives and Outputs

Recommendation #12: Set big research questions so that the aims, objectives and outputs of research simultaneously serve academic institutions, policy makers and communities

Setting policy, but crucially setting an agenda for research questions, big research questions with big funding bodies.

*Interview with Alison Tickell
Founder and CEO Julie's Bicycle*

This report demonstrates the diversity of aims, objectives and outputs being generated in cultural heritage and climate research. Setting a research agenda which everyone is working towards would help align and focus what often seem disparate projects, ensuring they are all contributing to a common goal and increasing their collective impact. One example of how this has been done is the work being undertaken by the Creative Industries Council,²¹ which has been developing a manifesto to establish an overarching research agenda for the UK's creative industries to achieve better alignment across its activities.

DCMS's Areas of Research Interest (ARIs) offer clear opportunities for alignment with Cultural Heritage and Climate Change research that can feed back into areas that government and industry are interested in investigating. For example: what are the most appropriate methodologies and indicators to measure the environmental and economic benefits of deploying and maintaining repair and maintenance systems when protecting cultural assets? What are the benefits of this? How can standard methodo-

logies on measuring greenhouse gas emissions be applied to Arts, Heritage and Tourism (AHT) sectors? What kinds of new sustainability techniques and measures need to be developed specifically for AHT sectors? What is the risk to AHT assets from climate change and how can these risks be mitigated? How can creative businesses support behaviour change of citizens (and their audiences) to meet net zero targets? What types of information and delivery maximise positive behaviour change? Could AHRC research directly support development of ARIs? Whilst DCMS are leading, other departments also have ARIs relating to this field. For example, the Department for Levelling Up, Housing and Communities, the Department for Transport and the department of Environment and Food & Rural Affairs are all asking questions relevant to arts and humanities research: 'How can we better monitor and evaluate the impacts of road schemes, and other large-scale infrastructure projects, on the local environment and those who use and live in that that environment e.g., on cultural heritage sites in the area; on local residents, in terms of well-being and on local biodiversity?' 'What is the evidence that culture-led regeneration is effective? Show us that arts and culture are not merely a peripheral concern but a crucial lens for comprehending and addressing climate action.' Harnessing the relationship between DCMS-AHRC in this programme of work and integrating pertinent questions into future calls could help research better simultaneously serve academic institutions, policy-makers and communities (UKRI, 2023).

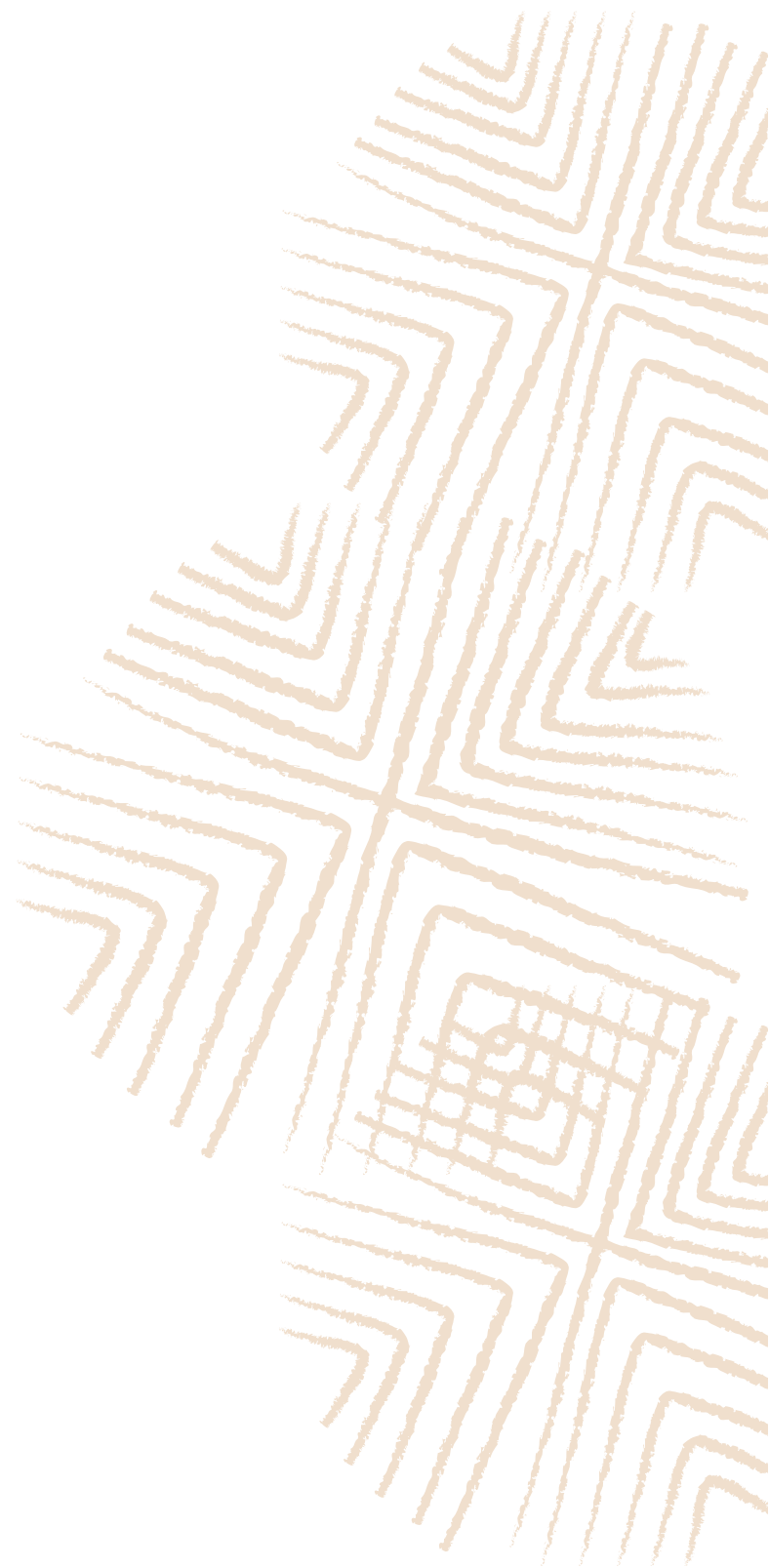
In terms of output and impact, how do we balance the need for academic or research-based outputs that are critical for our institutions, for the AHRC, alongside the needs of the community?

²¹ The Creative Industries Council is an independent body which advises the UK government on the creative industries. It comprises 30 members, appointed by DCMS, from the creative industries, government and academia (United Kingdom Government, 2023).

Journal articles, REF submissions, publications aren't necessarily important for our collaborators. How can we better align these? Publishing a paper has zero impact on the ground.

*Alan Forrest
Biodiversity Scientist*

A sense of alignment between academic and non-academic research outputs is also needed. For example, what is the use value of academic publications for Indigenous communities in Soqotra or public policy making in the Himalayas? DCMS made it clear to us in Manchester that the operational reports from projects were often more useful to them in compiling strategic policy briefings and recommendations drawn from the programme than the final outputs. How can we ensure the non-academic research outputs (from educational videos to food-growing processes to policy briefs) which are important to policy-makers and communities and acquire value in UK research institutions and their reward processes such as REF? Moving forward, can this portfolio support more of these types of interventions? For example, for Megarry, publishing research findings in Swahili,²² so they could be implemented/scaled by local partners, as well as translating a short version for policy-makers into four languages and circulating it at COP27 in Glasgow, was one of the highlights of his career. It is important looking forward that these types of outputs, which offer meaning and value beyond the academy are encouraged and supported by the programme.



²² Swahili is a Bantu language spoken along the Swahili coast of East Africa and across the region, but predominantly in Kenya, Tanzania and the Democratic Republic of the Congo.

Illustration
Aislan Pankararu



Beyond the Research: Looking to Long-Term Impact

Recommendation #13: Encourage and support projects that have a focus on long term impact from the outset

Museums have a kind of special locus in the climate and biodiversity emergency because they're amongst some of the few institutions that are mandated to take a long-term view. Many museums have collections relating to the five previous mass extinctions on Earth through their geological collections and paleontological collections. And of course, museums are there, as well as to engage people in the present.

*Interview with Nick Merriman
Director of the Horniman Museum and Gardens*

How can cultural heritage research – like the sector – also take a longer-term view? What is the legacy for the community partners and how can the research have ongoing influence on climate interventions? Forrest, whose research is undertaken in partnership with communities in Soqotra, explains that long-term impacts of research always fall outside of funding cycles. We must understand the impact of our research 5 or 10 years from now to understand its value and make adjustments which increases its effectiveness. An evaluatory video shared by Forrest during the Manchester Workshops explored the lasting impact for young people who participated in a theatre-based research programme 3 years before. Three years on, the lasting sense of self-determination, self-confidence and independence generated by evolving the performance was clear and the legacy of the project was continuing to catalyse conversations, spark

interest and pride in rediscovering local cultural heritage.

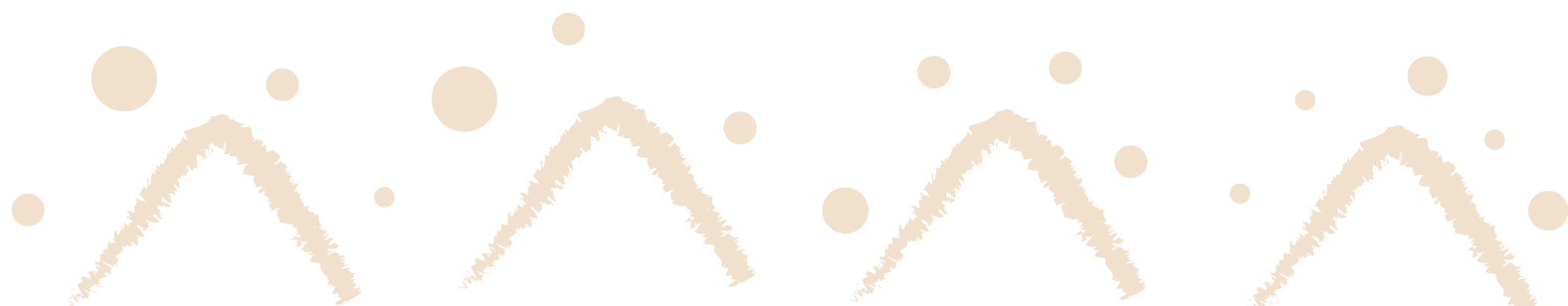
We need new models and methods of evaluation that are not just about numbers. That are about the qualitative stuff as well. A 10-year evaluation, not, just one that's undertaken at the close of a project. I believe this exists in other places, but regarding theatre, it needs to be completely redefined.

*Interview with Tim Bell
Senior Producer at Complicitè*

Dissemination, Stakeholder Engagement, and Policy Impact

Recommendation #14: Coordinate AHRC/DCMS research in cultural heritage and climate change to support dissemination, wider stakeholder engagement and policy impact

Currently, no public platform – online or otherwise – exists where the research being produced by this cohort is being brought together. Therefore, finding research outputs, spotting connections and getting in touch with different research teams is impossible. Looking forward, the collective impact of this work – and its ability to connect with other interventions and research initiatives in the UK and globally – will only be felt if we start telling the story publicly. This research scheme is only one strand of DCMS's International Cultural Protection Programme, which includes the Cultural Protection Fund, run in partnership with the British Council to foster, safeguard and promote cultural heritage, particularly in regions affected by conflict. They also support programmes being run in collaboration with the Victoria and Albert Museum (V&A) and the British Museum.



I think everyone is at it [research on cultural heritage and climate change], and we need it. But is there a format for joining it all up is probably pretty key.

*Interview with Louisa Hrabowy
Programme Lead - Arts at Calouste Gulbenkian
Foundation*

Many different stakeholders are undertaking work in this field at the moment, but as Louisa Hrabowy (see Annex D) expressed, we must ensure that it is getting joined up, that we are complementing rather than duplicating each other's endeavours. For example, during the preparation of this report, a series of events around cultural heritage were produced by the British Council in the UK and online, including the launch and publication of a report.²³ How do we ensure that DCMS–AHRC funded research is engaging with these initiatives? Also, partners such as the British Council offer many opportunities for collaboration in the dissemination of research in the UK but also internationally via country offices, which would potentially help increase the policy impact of this research. A range of other international research initiatives also exist, with much opportunity for fruitful connection and cross-over with work in this field.²⁴

As indicated above, UK Government Areas of Research Interest²⁵ mirror many of the recommendations outlined in this report. The ARIs also underscore a paradigm shift in methodology, urging a departure from established hierarchies and embracing a comprehensive, pluralistic approach. Prioritising effective communication, targeted messaging and international collaboration, these Areas of Research Interest advo-

cate for a more inclusive and globally informed perspective. Emphasis on community engagement, sustainable research practices and the recognition of diversity further characterise these recommendations. Advocacy for cultural heritage takes precedence, urging active engagement with national ministries and international bodies such as the UNFCCC to ensure the integration of cultural heritage into broader climate plans. Additionally, realism in project planning is emphasised, with a focus on setting practical expectations for project duration, given the complexity of the climate change field and the interdisciplinary nature of the required approaches (Giliberto & Jackson, 2022; Taboroff & Couté, 2021). As part of this alignment, it is felt that identifying what we mean by policy impact, different formats and a coordinated approach could help maximise the potential of this area. Continuing to build a public profile, make connections and platform AHRC–DCMS research will centre communities and evidence-based interventions in policies looking forward.

We're a bit tired of public policies created solely by intellectuals. We need to involve the broader population for these policies to be effective.

*Interview with Luana Campos
Executive Secretary at ICOMOS (Brazil)*

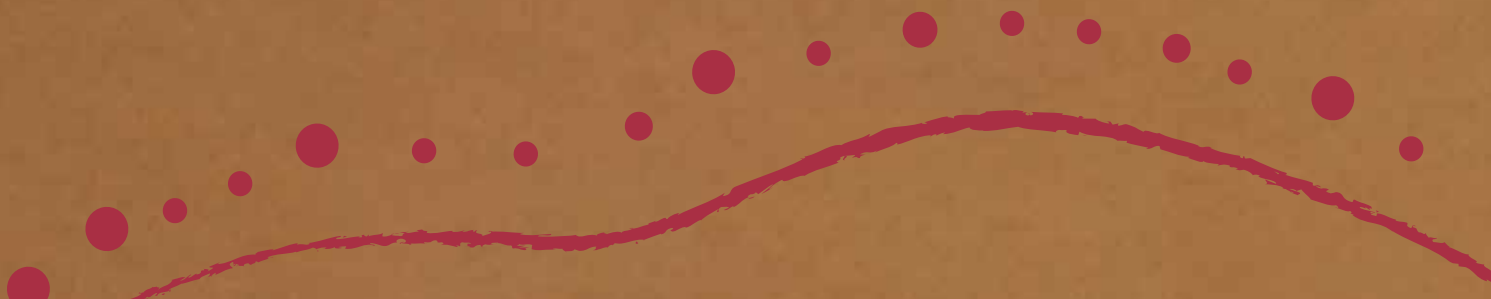
²³ See: Brennert et al. (2023).

²⁴ To foster wider collaboration and amplify the impact of our work, we could seek opportunities to coordinate dissemination and profile efforts with prominent initiatives such as Humanities for Environment (HFE, 2023), RICH RI (RICH2020, 2023) and ICOMOS (ICOMOS, 2023).

²⁵ The UK Government Areas of Research Interest are a) Arts, Culture and Media; b) Conflict, War and Peace; c) Crime, Law and Justice; d) Disaster, Accident and Emergency Incident; e) Economy, Business and Finance; f) Education; g) Environment; h) Health; i) Labour; j) Lifestyle and Leisure; k) Politics; l) Religion; m) Science and Technology; n) Society; o) Sport; and p) Weather (UKRI, 2023).

Where Next...

In this report, we have developed a series of recommendations to inform and strengthen future funding calls. We organised these recommendations into three key areas: (1) Themes, Contexts and Geographies; (2) Methodologies and Approaches; and (3) Outputs and Impacts. The recommendations are wide reaching and intended to be applicable to a range of grant formats and scales. As outlined, significant potential exists for the development of this field through scoping/networking opportunities, interdisciplinary and cross-council calls, impact and engagement grants, research fellowships and ECR opportunities, as well as more traditional research interventions in collaboration with community-based partners. Rather than attaching recommendations to a specific level of award, the intention is that they can be applied to different scales of grant and relevant for the funding available until 2025, as well as looking forward, should this area of work continue to be developed by AHRC-DCMS.



Looking towards COP30

Recommendation #15: Ensure that AHRC-DCMS research on cultural heritage and climate change has a prominent role in COP30 (2025)

COP30 will be hosted in Belém, the capital city of Pará, a state in Northern Brazil, which lies in the Amazon, the world's largest tropical rainforest and, arguably, one of the ecosystems most threatened by the escalating effects of climate change (FAO, 2020; Lovejoy & Nobre, 2019). 2025 and COP30 mark the 10th anniversary of the Paris Agreement, making this a landmark moment. The Amazon rainforest is crucial in global climate regulation and biodiversity conservation, and human actions in the forest are one of the drivers of climate change. By convening COP in the heart of the Amazon, the event will shed light on the unique environmental challenges faced by the region and emphasise the need for international cooperation to protect this vital ecosystem. It is hoped that COP30 will mark the launch of the recommendations to UNFCCC for culture-based climate action, which is dependent on the approval of a Joint Work Decision at COP29 (2024) in Baku (Azerbaijan) that will trigger consultation with bodies on culture and climate. Additionally, COP30 provides an opportunity to showcase the rich cultural heritage of the Amazonian people, emphasising the importance of their inclusion in sustainable development discussions, something this consultation has highlighted as fundamental. The Amazon's role in the global climate agenda is not only ecological but also cultural and social, making the choice of its location for COP30 significant in fostering a comprehensive and inclusive approach to addressing climate change whilst also discussing the importance of Indigenous communities, traditional knowledge and cultural heritage.

I still think that if we had put culture at the heart of climate negotiations, both internationally and nationally, we would be somewhere else because it's a shorthand for dealing with inclusion and self-determination and respect and care.

*Interview with Alison Tickell
Founder and CEO Julie's Bicycle*

This year, under the leadership of the Climate Heritage Network, Julie's Bicycle spearheaded the 'Global Call to Put Cultural Heritage, Arts and Creative Sectors at the Heart of Climate Action' (2023). Within one month of launching the campaign, the group had reached over 1,500 signatories. The request was for national governments who are parties to the UNFCCC and its Paris Agreement to adopt a 'Joint Work on Culture and Climate Action'²⁶ decision at the COP29 in 2024. This decision would reflect a commitment from the UNFCCC to begin a consultative process to understand the full contribution of culture to the future work of the Convention leading to a historic, first-ever UNFCCC work plan on culture at COP30 in 2025 in Brazil.

In response to the Global Call, COP28 in Dubai saw the establishment of Group of Friends of Culture-Based Climate Action during the first High Level Ministerial Meeting on this topic at COPs, which was convened and chaired by the Ministers of Culture of the UAE and Brazil. The meeting was attended by more than thirty governments, as well as key intergovernmental organisations, including: UNESCO, ALECSO; ICESCO and the European Union represented by the European Commission. The participants unanimously adopted the Emirates Declaration on Culture-Based Climate Action that paves the way for the adoption of a Joint Work

²⁶ The Joint Work Decision (JWD) on Culture and Climate Action demands a shift within the UNFCCC, echoing a global call to embrace the power of arts, heritage, and creativity in tackling the defining challenge of our time. The JWD is a reminder that while the data and technology are vital, our fight against climate change is ultimately a human story. It's about our connection to the planet, our shared responsibility for its future, and the creativity that allows us to imagine and build a better world. So let the cultural drums beat, the paintbrushes dance, and the stories inspire, for in the tapestry of human expression lies the power to change the world (Climate Heritage Network, 2023).

Decision on Culture-Based Climate Action²⁷ at COP29 in Baku, and subsequently to a related action plan ahead of COP30 in Belém.

This is an absolutely pivotal step towards the full integration of culture and heritage in the climate agenda to achieve transformative and meaningful action and realise a just, equitable, inclusive and diverse climate resilient future. A Research Observatory: Developing the Cultural Heritage and Climate Change Cohort

*HRH Princess Dana Firas of Jordan
Climate Heritage Network Special Envoy*

Strong references to cultural heritage and traditional knowledge are outlined in the newly-adopted Global Goal on Adaptation Framework²⁸ as one of seven targets by 2030: 'protecting cultural heritage from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient infrastructure, guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems' (UNFCCC, 2023a, p.3). How do we ensure that AHRC-DCMS funded research looking forward is visible in these growing debates?

Throughout the conversations and interviews undertaken as part of this research, a degree of scepticism around COP arose. The arts, heritage and creative industries have not yet been recognised in climate policy, so it is more important than ever that cultural heritage research impacts on how climate policy is made. We need policy instruments which can recognise,

support, strengthen and build on the cultural work occurring everywhere to address issues of climate change. Such initiatives are often led by local artists, activists and grassroots organisations, and Indigenous communities, who are driving the change locally through activism, artistic practice, storytelling, design, heritage, traditional knowledge systems, innovation, sustainable practices and so on.

Over the last 2 years, thanks to initiatives such as the Climate Heritage Network and Julie's Bicycle, the presence of cultural voices at COP has grown, but little to no formal representation of culture exists. Among the side events held at COP28, only one cited culture directly: 'Financing, educational & cultural responses to climate change-climate literacy & adaptation for heritage.' The event, organised by the British Council, Earth Day Network, International National Trusts Organisation and UK National Trust, explores the potential of culture and education in addressing threats posed by climate change – especially in the context of protecting heritages. This shows that a gap exists in terms of discussing the importance of building resilience for cultural heritages, whilst exploring the intersections between climate change and increasing risks for both material and immaterial heritage. One intervention at COP28 has begun to bring AHRC funded research to the forefront of debates. PPP were session co-hosts at this year's Resilience Hub²⁹ in the blue zone on Saturday 9th December. In the session entitled 'How Creativity Can Build Resilient Communities,' we presented our

²⁷ The Emirates Declaration on Culture-Based Climate Action, launched by the United Arab Emirates and Brazil at COP28 in Dubai, is a significant landmark in recognizing the role of culture and the arts in tackling climate change. As it has been endorsed by over 80 countries and organizations, it's a powerful call to action for the UNFCCC and the global community to embrace the creativity and wisdom of diverse cultures in addressing this complex challenge. This Declaration has the potential to shape future climate policies and initiatives around the world, by integrating cultural considerations into mainstream climate action, building a more inclusive and effective response (United Arab Emirates & Brazil, 2023).

²⁸ The Global Goal on Adaptation Framework is a work in progress aiming to guide collective efforts towards enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change (UNFCCC, 2023a).

²⁹ The Resilience Hub serves as a global gathering point for individuals from diverse backgrounds, fostering the exchange of knowledge, collaborative problem-solving and the activation of initiatives. Functioning as the primary hub for climate resilience and adaptation discussions at COP, its primary mission is to shape the discourse and priorities concerning resilience. It places a strong emphasis on locally tailored, fair resilience solutions for both people and the environment within the COP's overarching agenda. Moreover, it is committed to amplifying the voices of those most susceptible to climate impacts by incorporating Regional Hubs into the planning and execution of the Resilience Hub's programmes.

ongoing research with Indigenous activists from the Xingu and Minas Gerais. To forge meaningful connections and points of collaboration with a global platform such as COP takes time and resource. Following the appointment of a Director of COP at UKRI, we believe establishing a research observatory on cultural heritage and the climate crisis is an essential way for DCMS–AHRC to ensure research on cultural heritage and climate action has a profile at COP30.

We are not just facing an environmental, financial, and scientific challenge, but a cultural one as well.

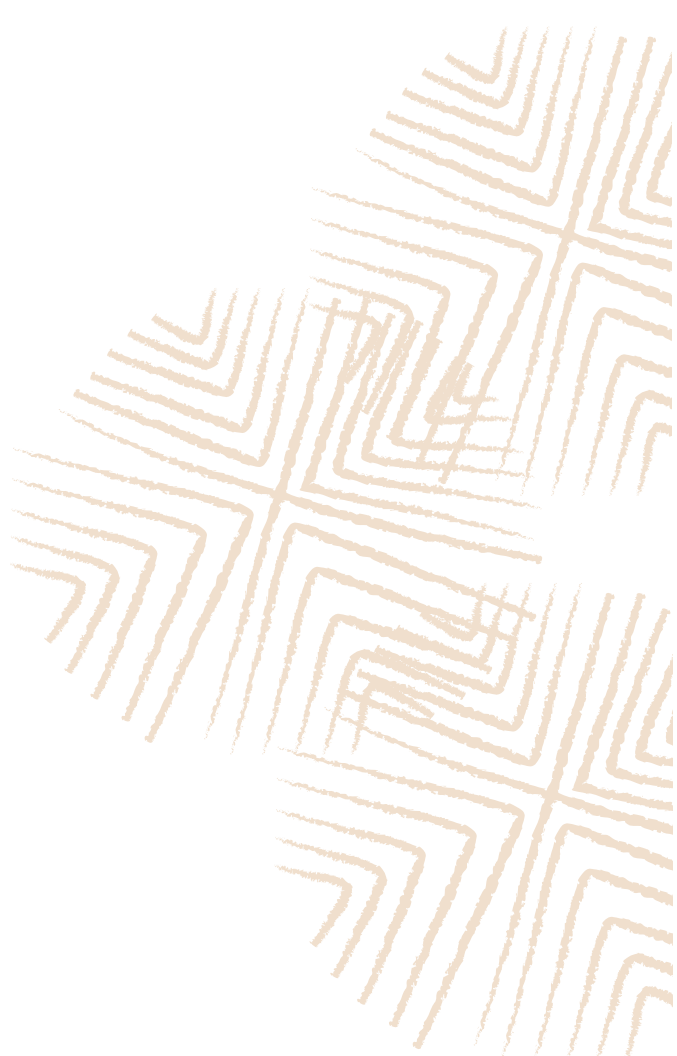
Sheikh Salem bin Khalid Al Qassimi (Minister of Culture, UA)

*Margareth Menezes (Minister of Culture, Brazil)
Joint op-ed on Culture-based Climate Action, 3rd
December 2023*

A Research Observatory: Developing the Cultural Heritage and Climate Change Cohort

Recommendation #16: Continue to build on the cohort model, establishing a Research Observatory on Cultural Heritage and the Climate Crisis

Many of the original AHRC–DCMS cohort are part of strategic groups and meetings convened by the wider heritage sector but nonetheless commented on how it has been incredibly valuable to have a dedicated research-led space for reflection. Being part of a cohort has been exceptionally valuable: for many, it was the first time they had been involved in a programme bringing representatives from different research initiatives together. Despite competing for funding, the consensus was that being part of a cohort made everyone feel like a team, was an opportunity and is something that should continue. Coming together – in person – was also critical: whilst it was felt this would have been enhanced further through the inclusion of international research representatives and community partners, coming together in person rather than just online enabled researchers to build deeper connections and explore synergies between their projects, which on the face of it are very bespoke and context specific. The read-across has been rich and sometimes surprising, enabling the cohort to learn from each other, share insights and make new connections. It was also felt that the Manchester workshop was an unusual and unique opportunity, as an invitation into a strategic conversation with funders and having an opportunity to reflect and evaluate not just the individual projects but how effective the programme itself has been, what it might look like in the future and how it might be expanded to meet urgent global challenges. Teamed with a point of contact to coordinate meetings, galvanise connections and drive forward



external connections, as well as providing personalised support to individual research teams as their projects evolve and change, the consensus is to continue developing and expanding the cohort going forward.

How do we work with other partners to be more than the sum of our parts? Also, how do we disseminate the work that we're doing and share what we're learning? So that it's scalable, not necessarily just by us, but that could be helpful to a wider movement.

*Interview with Kate McGrath
Director and CEO at Fuel*

As part of this research, the team at PPP has been exploring what structures could help support AHRC–DCMS research in achieving greater impact. Research observatories have become increasingly popular over the last decade. In the realm of environmental stewardship, the Humanities for Environment Observatories stand as shining beacons of interdisciplinary collaboration. These global networks of research hubs bring together humanities scholars, scientists and policy-makers to delve into the profound connections between human culture and the natural world. Their efforts yield innovative solutions to environmental challenges, shaping a more harmonious relationship between humanity and our planet. The RICH Observatory on Cultural Heritage further exemplifies this transformative approach. This online platform serves as a repository of knowledge, resources and tools for researchers and practitioners navigating the ethical, social and legal implications of cultural heritage research. Furthermore, nestled within the Museum of Tomorrow in Brazil, the Observatório do Amanhã (Observatory of Tomorrow) has established itself as a visionary force. Its mission is to harness the power of science, art and technology to envision and

shape a more sustainable and equitable future for humanity and our planet.

Although a consensus on the definition of research observatories has not yet been reached in the literature, there is an implicit understanding of the term as an interdisciplinary space which allows for the research and monitoring of a variety of national and international challenges. Different types of observatories exist: thematic, sectoral; some promoted by administrations, others by social organisations or companies; with national, regional, or local coverage. However, with academics and scientists from different disciplines coming together to interrogate and generate data on the same question from multiple sites and positions, the ambition is to create coherent and robust information from a variety of perspectives and provide useful evidence for decision-making in a particular area. Rather than just being about astronomical, meteorological or other natural phenomena observations, research observatories are being used to monitor the evolution of a variety of phenomena, often of a social nature. Research observatories can be based at HEIs and/or civil society organisations; they exist around the world and offer a mode of encouraging equitable research relations in different contexts. The observatory model allows different teams to work in varied locations, combining the use of shared methods and unique approaches to answer common questions and address agreed goals. Research observatories can vary in size, scale and capacity; enable the integration of academic and non-academic researchers; and strengthen and build on local resources and be public facing, bringing disparate local, national and international threads together to contribute in a coordinated way to global platforms such as COP.

Another example of a research observatory is

Brazil's Observatório do Clima, which is a prominent organisation dedicated to climate advocacy and environmental conservation. Their work encompasses a wide range of activities – in multiple sites – aimed at addressing climate change and its impacts in the country. Harnessing decentralised knowledge, it relies on a network of contributors including experts, enthusiasts, and the public, who can contribute their knowledge, data, and insights, ensuring a broader and more inclusive pool of information. Over the past 3 years, they have actively participated in the COP meetings as a partner organisation of Brazil Climate Hub, an initiative aimed at giving visibility to the work of third-sector organisations in the fight against climate change, where they have advocated for robust climate policies and commitments – especially in the context of the weak targets and empty speeches which characterised Brazil's commitment to the issue during the Bolsonaro government (2018–22). *Observatório do Clima* has been a crucial voice in holding Brazil accountable for its role in global climate action and has consistently urged the country to play a more significant role in combating climate change.

Following this research, we believe that an AHRC-DCMS research observatory for cultural heritage and climate change could support coordination, coherency and strengthen the impact of UK-led research in this field and the delivery of these recommendations. A research observatory would provide a structure which, in the future, could support independence, alternative funding streams and partnerships. As explained by Prof. Leandro Valiati (see An-

nex D), who established the Creative Economy Observatory at the Federal University of Rio Grande do Sul state in Porto Alegre (Brazil),

The observatory acts as a repository and liaison point, which will observe, register, and disseminate what people are doing in terms of research in this area today, and what has been achieved over the last few years. There is a lot happening, but in a very fragmented way in terms of research and policy [a research observatory in this field would be an opportunity] to observe, to understand what's happening and interrogate how arts and culture can intervene efficiently in a more structured way in this field.

*Interview with Leandro Valiati
Senior Lecturer and Programme Director in Creative and Cultural Industries, University of Manchester*

All members of the original cohort are developing and testing very different contextual theories and approaches, which will contribute to furthering our understanding of the role of cultural heritage in building resilience and sustainable adaptation in the face of climate change, as well as learning how to adapt and respond to the loss of tangible and intangible cultural heritage. We believe an AHRC-DCMS Cultural Heritage and Climate Research Observatory could provide a much-needed structure to coordinate UK research activity contributing to a common and shared goal – but from multiple perspectives and in diverse locations. In an interview for this report, Butland also spoke to the potential power of research organisations to provide a neutral space for conversation when discussing sensitive subjects, which may be more of a struggle for an industry partner or a government partner. As many

interviewees observed, we must set an agenda for big research questions with government and funding bodies to coordinate meaningful and impactful research. The concept of a research observatory also strongly echoes recommendations from Julie's Bicycle and the International Federation of Arts Councils and Culture Agencies,³⁰ whose report included a range of recommendations for enhancing the level of inclusion of environmental sustainability in cultural policy making and action (Moore & Tickell, 2014).

An observatory model 'was exactly what we recommended in 2014 [...] run through universities because of the resource that universities have but also their capacity to network [...] we suggested that regional hubs of culture and climate could be nested in universities but run independently, so they weren't locked into either academic timescales or structures' but were able to gather data locally and extract research 'insights that were relevant to all of us, we need that sort of superstructure.

*Interview with Alison Tickell
Founder and CEO Julie's Bicycle*

Not only could an AHRC-DCMS cultural heritage and climate change research observatory coordinate UK-led research in this field in regard to the diverse subjects, contexts and geographies, as well as the variety of approaches and methodologies researchers employ, it also offers an opportunity to coordinate the outputs, impact and dissemination of research connect UK research with other stakeholders/groups in the heri

tage sector whose work ours can support – and vice versa – and ensure cutting edge AHRC-DCMS research plays a prominent role in COP30

and shaping climate policy looking forward. Cultural heritage should no longer be relegated to a crosscutting theme in climate discussions but should instead occupy a seat at the decision-making table, given the potential solutions the sector can offer. The intertwined challenges of climate change and cultural heritage demand a paradigm shift, from siloed approaches to collaborative networks. Fostering interdisciplinary research bringing together experts from diverse fields and engaging with communities from varied backgrounds and realities is paramount to forging effective solutions. In this endeavour, the establishment of an observatory can serve as a catalyst for cultivating an interdisciplinary network and fostering a synergistic exchange of knowledge, ultimately promoting adaptive and resilient responses to the climate crisis.

³⁰ The International Federation of Arts Councils and Culture Agencies (IFACCA) is a global network of arts councils, ministries of culture and government agencies that support and promote arts and culture around the world (IFACCA, 2023).



Reference list

- Agência Brasil. (2023, November 23). Rio Records 58.5°C Real-Feel Temperature in the Morning. Agência Brasil. [<https://agenciabrasil.ebc.com.br/en/geral/noticia/2023-11/rio-records-585degc-real-feel-temperature-morning>].
- Al Qassimi, S. B. K., & Menezes, M. (2023, December 15). The climate crisis is a cultural emergency. Project Syndicate. <https://www.project-syndicate.org/commentary/climate-crisis-is-cultural-emergency-by-salem-bin-khalid-al-qassimi-and-margareth-menezes-2023-12>.
- Arts and Humanities Research Council (AHRC). (2023). AHRC's Theory of Change: Investing in research and innovation for a thriving and inclusive society. <https://www.ukri.org/wp-content/uploads/2023/01/AHRC-170123-TheoryofChange.pdf>.
- Arts and Humanities Research Council (AHRC). (2022). AHRC Strategic Delivery Plan 2022–2025. <https://www.ukri.org/wp-content/uploads/2022/09/AHRC-010922-StrategicDeliveryPlan2022.pdf>
- Brennert, K., Gesuri, D.I., Giliberto, F., Hodgkinson, K., & Ivo Franco, P.A. (2023). The Missing Foundation: Culture's Place Within and Beyond the UN Sustainable Development Goals. British Council.
- Cha, Y. (2023, February 13). Introducing the CRITICAL Phase 2 projects. Climate Culture, The University of Edinburgh. https://blogs.ed.ac.uk/climate_culture/2023/02/13/introducing-the-critical-phase-2-projects/: https://blogs.ed.ac.uk/climate_culture/2023/02/13/introducing-the-critical-phase-2-projects/.
- Climate Heritage Network. (2022a). Climate Heritage Network 2022–24 Action Plan. <https://static1.squarespace.com/static/62fbf293c4912c5514ac3b2a/t/633099003c9dec7d5f34db5c/1664129289161/CHN+Action+Plan+Final.pdf>
- Climate Heritage Network. (2022b). Empowering People to Imagine and Realise Climate Resilient Futures Through Culture – from Arts to Heritage. The Climate Heritage Network 2022-24 Action Plan. <https://static1.squarespace.com/static/62fbf293c4912c5514ac3b2a/t/633099003c9dec7d5f34db5c/1664129289161/CHN%2BAction%2BPlan%2BFinal.pdf>
- Climate Heritage Network. (2022c). Imagining and Realising Climate Resilient Futures: The Power of Arts, Culture and Heritage to Accelerate Climate Action: The Climate Heritage Manifesto for COP27. <https://www.climateheritage.org/manifesto>
- Climate Heritage Network. (2023, October 26). Joint Work Decision on Culture and Climate Action. <https://www.climateheritage.org/jwd>
- Conference of the Parties. (2022). Sharm el-Sheikh Implementation Plan. Decision -/CP.27. United Nations Framework Convention on Climate Change. UNFCCC.
- Crowley, K., Jackson, R., O'Connell, S., Karunarthna, D., Anantasari, E., Retnowati, A., & Niemand, D. (2022). Cultural heritage and risk assessments: Gaps, challenges, and future research directions for the inclusion of heritage within climate change adaptation and disaster management. *Climate Resilience and Sustainability*, 6(1), 31-48
- Dalglis, C. (2023). Cultural Heritage and Human Development. British Council. <https://doi.org/10.57884/7wxh-hv33>
- Escobar, A. (2015). Degrowth, post development, and transitions: A preliminary conversation. *Sustainability Science*, 10, 451–462.
- Fainu, K. (2023, June 27). Tuvalu under threat: A digital clone of the climate-stricken island nation. *The Guardian*. <https://www.theguardian.com/world/2023/jun/27/tuvalu-climate-crisis-rising-sea-levels-pacific-island-nation-country-digital-clone>
- FAO. (2020). The State of the World's Forests. <http://www.fao.org/state-of-forests/en/https://doi.org/10.4060/CA8642EN>
- Figueira, C., & Fullman, A. (2021). Emergencies, Emergences, Engagement: Cultural Relations and Climate Action. Cultural Relations Collection. Academia.edu. https://www.academia.edu/56658584/Emergencies_Emergences_Engagement_Cultural_

Relations_and_Climate_Action

Gil, G. (2022, May 24). Roda Viva | Gilberto Gil | 23/05/2022 [Video]. Youtube. <https://www.youtube.com/watch?v=6cmRKAWh0M>.

Giliberto F., & Jackson, R. (Eds.). (2022). Cultural Heritage in the Context of Disasters and Climate Change. Insights from the DCMS-AHRC Cultural Heritage and Climate Change Cohort. University of Leeds and University of Edinburgh.

Global Call to Put Cultural Heritage, Arts and Creative Sectors at the Heart of Climate Action. (2023). <https://static1.squarespace.com/static/62fbf293c4912c5514ac3b2a/t/654d150531c765799805615c/1699550469786/Global+Call+Key+Messages+FAQs+2023.08.11.pdf>

Guzman, P., & Daly, C. (2021). Cultural Heritage in Climate Planning; The HiCLIP Pilot Project for Understanding the Integration of Culture into Climate Action. A report on the Climate Heritage Network WG4 HiCLIP project. ICOMOS.

Hazlewood, B. (2023). Counting on Culture: How to stop financing the environmental crises. Julie's Bicycle.

Heritage, P., Smith, C., Livingston, A., Kuikuro, T., London, G., Fassetta, G., Imperiale, M., Garreth, J., Sar, L., Riमित, K., & Jesus, T. (Eds.). (2021). Indigenous Research Methods: Partnerships, Engagement and Knowledge Mobilisation. People's Palace Projects. https://peoplespalaceprojects.org.uk/wp-content/uploads/2021/10/PPP_seminario-indigena_arte-high.pdf

HFE Observatories. (2023, December). Humanities for Environment Observatories. Retrieved from <https://hfe-observatories.org/>.

ICOMOS. (2023). International Council on Monuments and Sites. <https://www.icomos.org/>

International Federation of Arts Councils and Culture Agencies (2023, December). IFACCA - International Federation of Arts Councils and Culture Agencies. ifacca.org.

Julie's Bicycle. (2021). Culture: The missing link. Julie's Bicycle & British Council.

Julie's Bicycle. (2022). Environmental policy and action plans: an overview. Julie's Bicycle.

Julie's Bicycle, & BOP Consulting. (2022). Creative Industries and the Climate Emergency: The Path to Net Zero. Julie's Bicycle

Kofe, S. (2022, November 15). Discourse of Simon Kofe, Minister of Foreign Affairs, Tuvalu at COP27 [Video]. <https://www.tuvalu.tv>

Lovejoy, T. E., & Nobre, C. (2019). Amazon tipping point: Last chance for action. *Science Advances*, 5, eaba2949.

Macdonald, L., Davidson, J., O'Connell, D., & Young, C. (2022, June 23). Critical policy brief: Climate change adaptation and cultural heritage. *Climate Culture*, The University of Edinburgh. https://blogs.ed.ac.uk/climate_culture/2022/06/23/critical-policy-brief/

Moore, S., & Tickell, A. (2014). The arts and environmental sustainability: An international overview. *D'Art Topics in Arts Policy*, No. 34b. Julie's Bicycle and the International Federation of Arts Councils and Culture Agencies. https://ifacca.org/media/filer_public/ae/39/ae3972ff-4e7c-43a5-a02d-33c08df8dd43/ifacca_dart_report_34b_final.pdf

Morton, T. (2013). *Hyperobjects: Philosophy and Ecology after the End of the World*. University of Minnesota Press.

People's Palace Projects. (2023). Roots of Resilience: Mining Threats to Cultural Heritage and Climate. <https://peoplespalaceprojects.org.uk/en/projects/roots-of-resilience/>

Potts, A. (2021). The Role of Culture in Climate Resilient Development. *Culture21*. https://agenda21culture.net/sites/default/files/files/documents/en/report_10_-_culture_and_climate_resilient_development_-_en_2.pdf

Ramalingam, B. (2023). Navigating Wicked Problems in Development. Overseas Development Institute. <https://odi.org/en/insights/navigating-wicked-problems-in-development/>

- RICH2020 Observatory. (n.d.). RICH2020 Observatory. Retrieved from <http://observatory.rich2020.eu/rich/>
- Rinaldi, P. N. (2022). The Age of Transition: Post development and North-South Synergies. *Latin American Perspectives*, 49(1), 237-256.
- Taylor-Smith, O. (2022). The Bakor Monoliths: Preserving ancestral stones in south-eastern Nigeria. Factum Foundation. https://www.factum-arte.com/resources/files/ff/publications_PDF/22p0001_web_bakor_book.pdf
- Tickell, A. (2023, March 17). Statement of Support for the nomination of the Climate Heritage Network for its outstanding contribution to climate action. Gulbenkian Prize for Humanity 2023.
- United Arab Emirates and Brazil. (2023, November/December). Emirates Declaration on Culture-Based Climate Action.
- United Nations Framework Convention on Climate Change (UNFCCC). (2023, November 14). Advance unedited version of draft conclusions proposed by the Chair of the Subsidiary Body for Implementation for the work of the session. https://unfccc.int/sites/default/files/resource/cma2023_L18_adv.pdf
- United Nations Framework Convention on Climate Change. (2023b, December 19). [Side Events and Exhibits Online Registration System (SEORS)]. [https://seors.unfccc.int/applications/seors/reports/events_list.html?session_id=COP%2028]
- United Nations Framework Convention on Climate Change. (2022, November 20). COP27 Reaches Breakthrough Agreement on New Loss and Damage Fund for Vulnerable Countries. <https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries>
- UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics. https://uis.unesco.org/sites/default/files/documents/unesco-framework-for-cultural-statistics-2009-en_0.pdf
- United Nations Educational, Scientific and Cultural Organization. (2005). Convention on the Protection and Promotion of the Diversity of Cultural Expressions. UNESCO.
- UKRI. (2023). Areas of Research Interest. [Website]. <https://ari.org.uk/aris>. Accessed December 5th, 2023. ARIs Questions Database.
- UKRI. (2022). Conservation of Climate Change Endangered Cultural Furniture Industry Heritage in Damietta, Egypt. UKRI gateway to publicly funded research and innovation. <https://gtr.ukri.org/projects?ref=AH%2FV006479%2F1#/tabOverview>
- UKRI. (2021). Inventorying Intangible Cultural Heritage Assets Affected by Cyclone Idai in Chimanimani, Chipinge and Buhera districts in Zimbabwe. UKRI gateway to publicly funded research and innovation. <https://gtr.ukri.org/projects?ref=AH%2FV006436%2F1>
- United Kingdom Government. (2023, December). Creative Industries Council. Retrieved from <https://www.gov.uk/government/groups/creative-industries-council>
- World Economic Forum. (2023, July 5). How intersectionality can mitigate the impacts of climate change. <https://www.weforum.org/agenda/2023/07/intersectionality-climate-change-women/>
- Zee, J. Z. (2022). *Continent in Dust: Experiments in a Chinese Weather System*. University of California Press.

Annex A: Portuguese version of the foreword

Afeta a plantação tradicional. O nosso povo faz a queimada, plantio e colheita da roça. É isso que as pessoas não estão conseguindo acompanhar. Porque o tempo que nossos tradicionais estão seguindo, eles veem o calendário deles; o calendário aparece no céu, e as estrelas; eles seguem as estrelas. E hoje tá confuso, e o tempo das plantações fica confuso, porque termina a chuva mais cedo e o tempo de chuva não fica no tempo certo. Então, exemplo: aqui hoje, nesse ano, o tempo poderia estar chovendo, mas não, foi o contrário, e cada vez mais tá ficando quente e as plantações também estão queimando e não crescem. Isso afeta nosso modo de viver, atingindo nossa alimentação.

O rio está secando bastante com esse tempo e os peixes começam a não ter um grande espaço pra ele viver, então acaba morrendo. Isso tá afetando nosso modo de viver dentro da nossa comunidade, da nossa aldeia. E há muito tempo, segundo os anciãos, que, quando se queimava a roça, as queimadas não fugiam do controle e só queimava daquele entorno, daquela roça mesmo, só queima a roça que foi derrubada. E hoje não, tá ficando cada vez mais seco, com muito combustível para esse fogo aí. Então fica muito difícil pra nós, indígenas, entender o que tá acontecendo, né?

Então, quanto mais acontece esse tempo que tá acontecendo, né, vai causando mais problemas. E ultimamente, quando a gente tava fazendo, participando do ritual Kuarup que acontece todo ano aqui no Xingu, eu vejo que está faltando peixe no ritual. Então, quando acontece o ritual, está faltando peixe; as pessoas não levam peixe pra seus parentes no acampamento. Às vezes consegue pescar, mas muitos não estão conseguindo. O peixe, aqui no Xingu, é a maior alimentação básica que existe na nossa comunidade. Peixe e a mandioca, né, que a gente transforma em polvilho. Nesse tempo do ritual tá faltando peixe; isso nunca tinha acontecido antes. Então as pessoas ficam com muita dificuldade de pescar pros seus parentes, por causa da mudança climática que tá afetando muito o nosso povo. Muitas vezes as pessoas que não sabem o que está acontecendo, muitas pessoas não sabem que o Xingu foi afetado, ninguém sabe. Mas a gente, nós que vivemos aqui no território, a gente sabe e a gente sente o que está acontecendo, e muitas pessoas não estão sentindo o que causou e a gente está sentindo.

Cada vez mais a destruição tá avançando no nosso território indígena, e isso não é bom pra nós. É uma grande perda da biodiversidade, de tudo que a gente precisa da floresta pra gente viver, estão destruindo. Na área indígena do Xingu, a lei garante que tem que ter 5 ou 10 km de zona de amortecimento ou mais, dependendo, pra não chegar perto da área indígena. Mas não estão respeitando essas leis, muitos já avançaram até nossa terra indígena, e muitas vezes os animais e espíritos dos animais estão reagindo e estão atacando a criança, o jovem e o ancião espiritualmente. Ele ataca a pessoa porque ele não está se sentindo bem, porque sabe que o ser humano está destruindo a floresta, causando febre nas águas, causando alguma coisa ruim no [inaudível] dentro da floresta. Mas a gente cuida, a gente faz o ritual pra gente comunicar com os espíritos dos donos das florestas, donos do rio, né. Então, esse ritual, cerimônia que a gente faz, esses momentos, é uma forma de tentar se proteger dos espíritos dos donos das florestas e dos rios, pra que eles fiquem felizes. Porque o que tá deixando com muita raiva é a destruição, e acaba fazendo mal com as pessoas do nosso povo, achando que nós mesmos estamos fazendo isso.

Piratá Wauja

Xingu, November 2023.

Annex B: AHRC/DCMS Cultural Heritage and Climate Change Original Cohort List

The following table outlines the nine research projects comprising the AHRC-DCMS Cultural Heritage Original Cohort (2020–23).

GRANT HOLDER	RESEARCH ORGANISATION	CO-INVESTIGATOR ORGANISATIONS	PROJECT TITLE
William Megarry	Queen's University of Belfast	Historic Environment Scotland, Univ of the Highlands & Islands; African World Heritage Fund	Values-based climate change risk assessment: Piloting the climate Vulnerability Index for cultural heritage in Africa
Michael Crang	Durham University	Laajverd	Fragile heritage ecologies: vernacular cultures and the at-risk landscapes of the Hindu-Kush-Himalaya mountain region
Alan Forrest	Royal Botanic Garden Edinburgh	University of Edinburgh	Mitigating climate change effects through traditional land management practices

GRANT HOLDER	RESEARCH ORGANISATION	CO-INVESTIGATOR ORGANISATIONS	PROJECT TITLE
Bernadette Devilat	Nottingham Trent University	Centre for Environmental Planning and Technology University; ICCROM	A sustainable re-construction method for seismic-prone heritage areas of India based on advanced recording technologies
Hisham Elkadi	University of Salford	Lancaster University; Centre for Environment and Development for the Arab Region and Europe	Conservation of Climate Change Endangered Cultural Furniture Industry Heritage in Damietta, Egypt
Nomalanga Hamadziripi	Marondera University	Chinhoyi University of Technology; Ruzivo Trust; Abertay University	Inventorying Intangible Cultural Heritage Assets Affected by Cyclone Idai in Chimanimani, Chipinge and Buhera districts in Zimbabwe
Ashraf Osman	Durham University	Middle East Technical University; Yildiz Technical University	Developing a novel Climate change Risk Assessment Framework for cultural heritage in Turkey (CRAFT)
Katherine Crowley	University of Edinburgh	Gadjah Mada University; University of Cape Town; University of Peradeniya	CRITICAL: Cultural Heritage Risk and Impact Tools for Integrated and Collaborative Learning (Highlight)
Paul Heritage	Queen Mary University of London (QMUL)	People's Palace Projects (PPP)	Build Back Better: a participatory approach to mapping, measuring and mobilising cultural heritage in Brazil's Iron Quadrangle

Annex C: Academic Steering Group Attendees

The following table outlines the participants of the Academic Steering Group we established to engage academics working in a diverse range of disciplines.

Andy Russell	Senior Lecturer in Environmental Science (School of Geography)
Aoife Monks	Reader in Drama, Theatre and Performance Studies (School of English and Drama); Director of Research in Department of Drama and Director of the Queen Mary Centre for Creative Collaboration
David White	Professor of Climate Justice in Law and Director of the Centre for Climate Crime and Climate Justice
Fernando Barrio	Reader in Sustainable Business Law and Policy at the School of Business and Management

Gioia Mosler	Head of Global Health Group at the Blizard Institute of Cell and Molecular Science, Faculty of Medicine and Dentistry
Giulia Carabelli	Senior Lecturer in Social Theory (School of Politics and International Relations) and Director of the Environmental Future Research Programme
Heather McMullen	Senior Lecturer in Global Health in the Wolfson Institute of Population Health in the Faculty of Medicine and Dentistry
Holly Ryan	Director of Research for the School of Politics and International Relations and Co-Director of the Centre for Research on Latin America and the Caribbean
Mark Sander	Chair of Signal Processing, School of Electronic Engineering and Computer Science, Director of the Centre for Digital Music
Paul Heritage	Professor of Drama and Performance (School of English and Drama) and Director of People's Palace Projects
Poppy Spowage	Research and Development Associate at People's Palace Projects
Rosie Hunter	Executive Director at People's Palace Projects
Thiago Jesus	Senior Project Manager at People's Palace Projects - Indigenous Exchange and Climate Action

Annex D: Interviewees

A variety of people from different fields and organisations were interviewed as part of the research, here is an outline of their names and organisations:

INTERVIEWEE	ORGANISATION	INFORMATION
Alison Tickell	Founder and CEO of Julie's Bicycle	Julie's Bicycle is a pioneering non-profit organisation, mobilising the arts and culture to take action on the climate, nature and justice crisis. For more information, see: https://juliesbicycle.com/
Bryony Butland	Director Research and Innovation at QMUL	QMUL is a public research university located in London, England. It is a member of the Russell Group, a group of the most research-intensive universities in the United Kingdom (UK). For more information, see: https://www.qmul.ac.uk/
Ed McGovern	Programme Lead – Climate at Calouste Gulbenkian Foundation	The Calouste Gulbenkian Foundation is an international private foundation based in Lisbon, Portugal. The Foundation's mission is to improve the quality of life for all people through the arts, education, science and social welfare. For more information, see: https://gulbenkian.pt/en/

INTERVIEWEE	ORGANISATION	INFORMATION
Ferdinand Saumarez	Project Developer and Curator at Factum Foundation	The Factum Foundation for Digital Technology in Preservation is a non-profit organisation founded in 2009 in Madrid by Adam Lowe. The foundation's mission is to promote the use of high-resolution recording, digital restoration and creative re-materialisation to document, monitor, study and disseminate the world's cultural heritage. For more information, see: https://factumfoundation.org/
Inua Ellams	Nigerian-born British poet, playwright and performer	Ellams is known for his innovative and interdisciplinary work which blends poetry, theatre, performance art and spoken word. Ellams' work often explores themes of identity, migration and social justice.
Jurema Machado	Consultant in heritage and cultural policies and former president of the Brazilian National Institute of Historical and Artistic Heritage	The Instituto do Patrimônio Histórico e Artístico Nacional, English for 'National Institute of Historic and Artistic Heritage', is a Brazilian federal agency under the Ministry of Culture. It is responsible for the preservation, identification and protection of Brazil's historical, cultural and artistic heritage. For more information, see: http://portal.iphan.gov.br/

INTERVIEWEE	ORGANISATION	INFORMATION
Kate McGrath	Director and CEO at Fuel Theatre	Fuel Theatre is an independent producing company based in London, UK. Founded in 2004, Fuel is known for its commitment to producing innovative and challenging new theatre, often in collaboration with emerging artists and companies. For more information, see: https://fueltheatre.com/
Leandro Valiati	Senior Lecturer and Programme Director in Creative and Cultural Industries at the University of Manchester	The University of Manchester is a public research university in Manchester, England. The university is a member of the Russell Group of research-intensive universities in the UK. For more information, see: https://www.manchester.ac.uk/
Louisa Hrabowy	Programme Lead - Culture at Calouste Gulbenkian Foundation	The Calouste Gulbenkian Foundation is an international private foundation based in Lisbon, Portugal. The Foundation's mission is to improve the quality of life for all people through the arts, education, science and social welfare. For more information, see: https://gulbenkian.pt/en/
Luana Campos	Executive Secretary at International Council of Monuments and Sites (ICOMOS), (Brazil)	ICOMOS is a non-governmental international organization dedicated to the conservation of the world's monuments and sites. Founded in 1965, ICOMOS is

INTERVIEWEE	ORGANISATION	INFORMATION
Murilo Yudjá (Juruna Indigenous community)	Member of Slow Food Brazil	<p>the only global non-government organization of this kind, and it is dedicated to promoting the application of theory, methodology, and scientific principles to the conservation and enhancement of cultural heritage. For more information, see: https://www.icomos.org/en</p> <p>Slow Food is an international grassroots movement that promotes local food culture and traditional cooking. It was founded in Italy in 1986 as a reaction to the fast-food industry and the standardization of food. Slow Food advocates for a slower, more sustainable approach to food production and consumption. It believes that food should be produced in a way that is good for the environment, the people who produce it, and the people who eat it. For more information, see: https://www.slowfood.com/</p>
Nick Merriman	Director of the Horniman Museum and Gardens	<p>The Horniman Museum and Gardens is a museum and garden in Forest Hill, London, England. The museum's galleries tell the story of human cultures and the natural world, and its objects are used to explore a wide range of themes, such as identity,</p>

INTERVIEWEE	ORGANISATION	INFORMATION
Pedro Ferreira	Research and Programme Consultant at United Nations Educational, Scientific and Cultural Organization (UNESCO)	<p>migration, and sustainability. For more information, see: https://www.horniman.ac.uk/</p> <p>UNESCO is a specialized agency of the United Nations (UN) that is dedicated to promoting international cooperation in education, science, and culture. It was founded in 1945 to build the foundations for lasting peace and to foster human development. For more information, see: https://www.unesco.org/en</p>
Richard Couldrey	Programme Manager at Transition Network	<p>Transition Network is a global network of communities and individuals that are working to create a more resilient and sustainable future. Founded in 2006, the network is inspired by the Transition Town Totnes project in the UK. For more information, see: https://transitionnetwork.org/</p>
Shoubhik Bandopadhyay	Head of Programme - Arts at Paul Hamlyn Foundation	<p>The Paul Hamlyn Foundation is a British charitable trust that was established in 1987 by Paul Hamlyn. The foundation's mission is to "help people to achieve their potential and contribute to a better society." Its work has helped to improve access to the arts and culture, promote excellence in education, and</p>

INTERVIEWEE	ORGANISATION	INFORMATION
Tim Bell	Senior Producer at Complicitè	address social inequality. For more information, see: https://www.phf.org.uk/ Complicité Théâtre was founded in 1983 by Simon McBurney, Annabel Arden, Marcello Magni, and Fiona Gordon. The company is based in London and is known for its innovative physical theatre productions. For more information, see: https://www.complicite.org/

Annex E: Interview Guide

The questions presented here were used to guide the interviews conducted:

Your organisation's approach: How do you see the arts, culture and heritage contributing to climate action? What types of initiatives is your organisation focusing on supporting/amplifying in this area?

From your understanding, what emerging topics or research gaps exist in the relationship between arts, culture, heritage and climate? How could cultural heritage research better support climate action?

What are some of the opportunities for interdisciplinary collaboration you see emerging in this field? Where have you seen innovative interdisciplinary partnerships in the field, and where might there be more opportunity for collaboration to strengthen work in the sector?

How do – and could – arts, culture and climate action research connect with global challenges such as the mental health crisis or poverty? What partnerships could be pursued to strengthen these connections?

Annex F: Manchester Workshop Attendees

Researchers from the Cultural Heritage and Climate Change cohort gathered for a two-day workshop in Manchester to discuss the program's progress, explore future directions, and identify opportunities for collaboration with other research councils, disciplines, and stakeholders.

Professor Ashraf Osman	Durham University
Dr Kate Donovan (Crowley)	University of Edinburgh
Dr Bernadette Devilat	University of Nottingham
Dr Alan Forrest	Royal Botanic Garden Edinburgh
Professor Michael Crang	Durham University
Dr William Megarry	Queen's University of Belfast
Rosie Hunter	PPP
Dr Poppy Spowage	PPP
Dr Francesca Gilliberto	University of Leeds
Professor Jane Downes	University of the Highlands and Islands
Dr Nourhan Heysham	University of Manchester
Dr Lesley Macheka	Marondera University of Agriculture Sciences and Technology
Gemma Orleans-Thompson	Workshop Facilitator
Pedro Ferreira	UNESCO
Dr Joanne McCafferty	DCMS
Dr Kristine Zaidi	AHRC
Charlotte Hanson	DCMS

