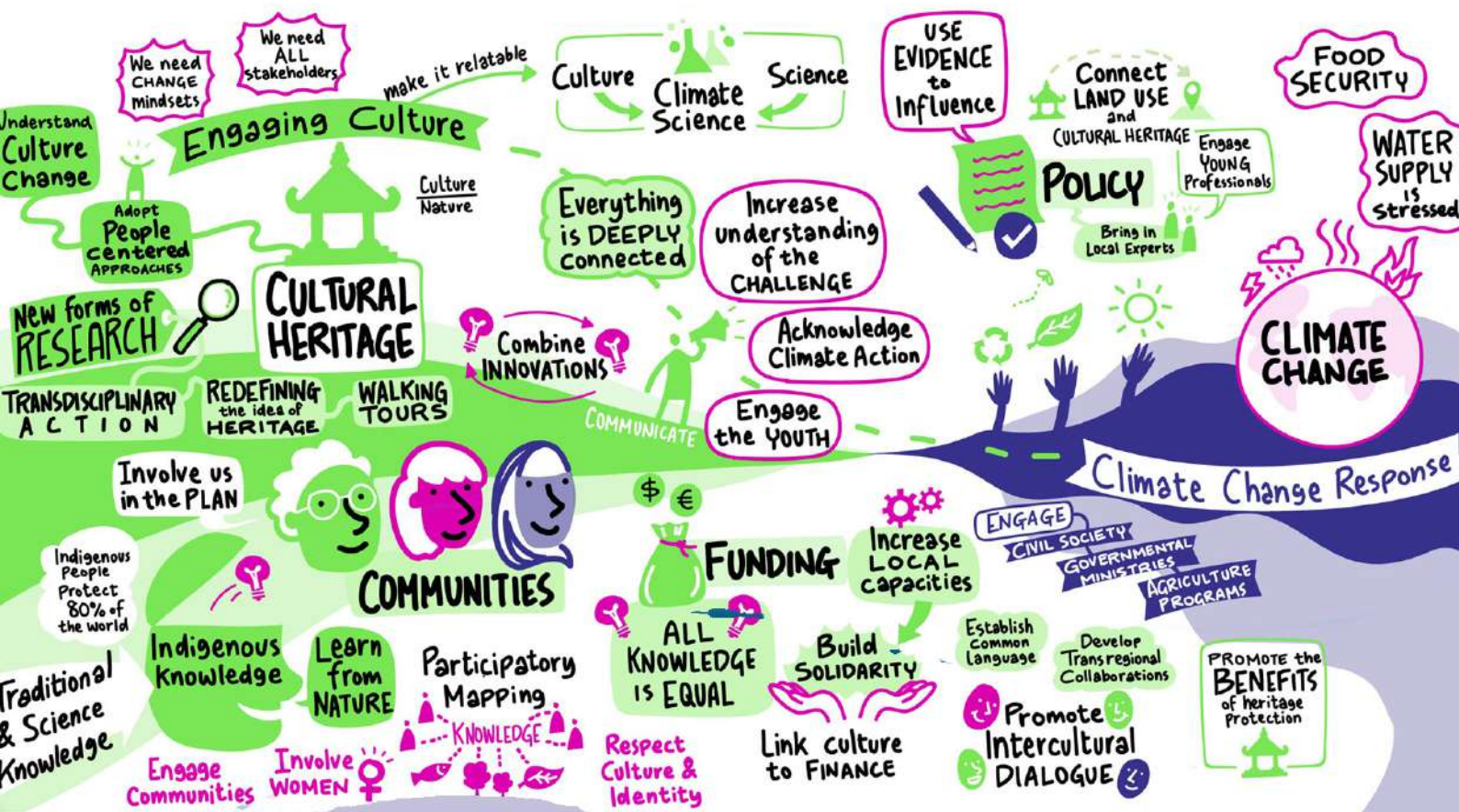




# Climate Culture Peace

## Conference Report

FAR - First Aid and Resilience for Cultural Heritage in Times of Crisis Programme





This report showcases the rich array of knowledge and diverse perspectives brought together by the *Climate.Culture.Peace* Conference, a project conceived by FAR - First Aid and Resilience for Cultural Heritage in Times of Crisis Programme, a flagship capacity development programme of ICCROM.

A playlist of all presentations made during the conference has been referred to in the findings section ([See Annexe 2 - Conference Playlist](#)). When referencing a specific speaker, a code is used following this format (S-01-Surname), with the number referring to the session. Please use the link to view recordings of the relevant sessions.

All the recordings featured in the playlist along with abstracts of the presentations, as well as case studies will be made available on the *Climate.Culture.Peace* knowledge portal at [www.climateculturepeace.org/iccrom](http://www.climateculturepeace.org/iccrom)

We extend our sincere thanks to the British Council's Cultural Protection Fund (CPF) and the Department for Digital, Culture, Media and Sport (DCMS) for generously supporting this initiative. We are grateful to our [55 partners](#), the *Climate.Culture.Peace* [scientific committee](#) and the [advisory group](#) for their invaluable contributions that ensured the successful implementation of this initiative.

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The information presented in the report is based on the presentations made during the Conference. Therefore, ICCROM and its partners are not liable for the omissions or errors in the content. Furthermore, designations employed and the presentation of material throughout this publication do not imply the expression of any opinion whatsoever on the part of ICCROM concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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# Executive Summary

Effects of global climate variability and change – sea level rise, floods, storms, and droughts – are disrupting the lives, livelihoods, and cultures of millions of people, driving forced migrations, giving rise to new tensions, and aggravating existing conflicts. For some regions, climate change is causing drastic changes, while for others, the pace of change is more gradual.

*Climate.Culture.Peace* was a virtual Conference (24-28 January 2022) designed to better understand climate risks to culture and heritage, and how in turn, culture and heritage may reduce emissions, as well as help with adaptation to climate change. It was rooted in the idea that every place has a climate story. These stories are held in the history and knowledge of places, which in turn have been shaped by dwelling environment and generations of human-earth interactions.

This report summarises the proceedings and findings of the Conference and analyses understandings growing out of the conversations held. It outlines actions that can help lay a strong foundation for **engaging culture and heritage in climate action, reducing disaster risk and building sustainable peace**.

Nearly 160 contributors from multiple cultures and backgrounds shared valuable insights through their presentations; they all emphasised the crucial role culture and heritage play in adapting and responding to climate change.

The Conference findings underscore the urgency of **promoting shifts in the ways we perceive culture, heritage and climate change** and take actions.

These shifts are needed to gather place-specific Indigenous and traditional knowledge, along with practices that could be critical in restoring fragile ecosystems, reducing inequity, as well as addressing the vulnerabilities of people and heritage to climate extremes.

Specific cases from Africa and Asia, regions that are most impacted by climate variability and change, highlight **climate risks to heritage located in coastal, arid and semi-arid areas**.

Presentations made during the Conference note that sea-level rise, frequent flooding, uneven and intense rainfall and prolonged droughts are **threatening the living heritage of agrarian, pastoralists and fishing communities**, as well as increasing their exposure to conflicts and disasters.

The **issue of frequent flooding** in urban and rural heritage settlements was raised through several presentations. They underscore that **cultural heritage is often left out of city or area-level flood risk management plans**. Similar concerns were raised for cultural heritage sites that are at risk of wildfires due to temperature extremes and proximity of vegetative fuel.

Recent research shared through the Conference pointed to the need for **specific assessment tools for recording climate risks to different types of heritage** and understanding their likely consequences. The use of technology such as Geographic Information System (GIS) and satellite imagery can certainly help in obtaining a macro-level understanding of threats. Nonetheless, site-specific evaluations of vulnerabilities, along with the record of past experiences of weather-related hazard events, would help in developing comprehensive risk scenarios for endangered heritage. Our findings indicate that in many countries, social structures that could have ensured continuity

of traditional knowledge, resolved disputes, and given agency to local populations have been dismantled, further increasing suffering for the communities who rely on natural resources for their subsistence. Conference contributors have suggested that these systems could be part of the people-centred process of reassessing heritage.

Cases from Syria, Palestine, Uganda and Nigeria explained some of the direct and indirect connections between conflict, climate change and heritage. Although more in-depth transdisciplinary research will be needed to map all possible causal linkages, it was noted that when heritage interventions are not people-centric and/or eco-sensitive, they can escalate tensions, increase injustice and inequality, as well as contribute to environmental degradation.

In parallel, experiences in Sudan, Syria, and Palestine illustrated the value of **traditional social structures and intercommunal ties** in fostering peace and dialogue. By engaging with local communities, heritage institutions can revitalise such ties and contribute to peacebuilding.

The youth leaders and Indigenous knowledge bearers who participated in the Conference, stressed the need for intergenerational knowledge exchange to prevent the ongoing **loss of biodiversity**. Cases from Australia, Chad, Seychelles and Vanuatu, showcased heritage projects that were focused on conservation of some of the surviving biospheres, where community-led frameworks for governance are being put in place. These initiatives advocate for the use of responsible and accountable methods for extraction, production and manufacturing, while reducing underlying vulnerabilities and giving greater agency to those communities who are at the frontlines of the climate emergency.

A common theme at the conference was that **knowledge embedded in heritage, if combined with science and technology, could help the global community mitigate and adapt to climate change**. The [Culture-Based Mitigation, Adaptation and Renewal](#) section of the findings offers some of the possible solutions, which include: using culture and heritage for equitable resource governance; enhancing capacities for coping with climate extremes; using stories, performances and oral histories from the past for climate education; utilizing knowledge embedded in traditional and vernacular architecture for climate change adaptation and developing sustainable cities; reviving traditional social structures for dispute resolution; as well as reducing carbon emissions and preventing environmental degradation caused by heritage industries.

We conclude this report on a hopeful note by outlining actions that grew out of conversations held during the conference. If implemented collectively, these actions could bring transformative change, capturing the potential of culture and heritage for creating a liveable future.



# Introduction



# Introduction

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“ Our Tuvaluan Culture is increasingly threatened by the impacts of climate change. As sea levels rise around our island home, scientists predict our low-lying land territory could be completely submerged before the next century. What would happen to our Tuvaluan culture and values then? Are we expected to watch them disappear along with our land? Of course, my answer is a resounding no, and my government has adopted a values-based approach to fight the very impacts of climate change threatening our cultural heritage. ”

*-Honourable Minister Mr. Simon Kofe, Minister for Justice, Communication & Foreign Affairs, Tuvalu*

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As the climate crisis deepens, scientists project that climate change and variability impacts could make large parts of our planet unliveable – wet areas are likely to become wetter and those that are dry would become hotter and drier. An unprecedented rise in sea levels would threaten most coastal settlements, some more than others. Ancient cities like Alexandria and Venice could disappear forever, while deserts would expand, resulting in the destruction of habitats, widespread food insecurity and extreme scarcity of freshwater resources. Combined, such environmental stresses could irrevocably deplete the biodiversity of our planet, leading to the extinction of many plant and animal species.

Focusing on the lives, livelihoods, and cultures of communities that are already experiencing the impacts of the climate crisis, the *Climate.Culture.Peace* Conference and its associated knowledge network aimed to foster an intergenerational exchange of ideas, lived experiences and perspectives to identify the diverse interconnections between culture, heritage, climate, conflict, disaster risk reduction, peace and sustainable development.

The virtual Conference was held from 24th to 28th January 2022 and engaged diverse professionals, scientists, thought leaders, policy advisors, academics, community and youth organizers, as well as heritage custodians. Over 1400 attendees from at least 113 countries joined the Conference live through the Conference knowledge portal and official media platforms. For all those unable to attend the Conference live, recordings of all sessions were made available on the [Climate.Culture.Peace knowledge portal](#) and [ICCROM's official YouTube channel](#).

*Climate.Culture.Peace* was planned and designed by FAR - First Aid and Resilience for Cultural Heritage in Times of Crisis, a flagship programme of ICCROM. This initiative was supported by the British Council's Cultural Protection Fund (CPF) in partnership with the Department for Digital, Culture, Media and Sport (DCMS). A consortium of 55 partner institutions representing six sectors and spanning 33 countries further strengthened the outreach of this project.

(For a full list of partners, visit the [website](#))

About 160 contributors from 58 countries shared knowledge, research and practice-based presentations exploring links between climate, culture and peace. These included examples from small island states such as Vanuatu, Guinea Bissau and Seychelles, which are facing an existential threat, as well as countries such as Yemen and Syria, where protracted conflicts are intersecting with climate extremes. The Conference sought answers to the following key questions:

- What role could culture, and heritage play in understanding human history, as well as the root causes of the climate crisis?
- What are the effects of climate change and its variability on people and their heritage? What role does climate change play in driving risk?
- To what extent can processes of heritage making and safeguarding support climate action, reduce disaster risk, as well as promote peace and development?



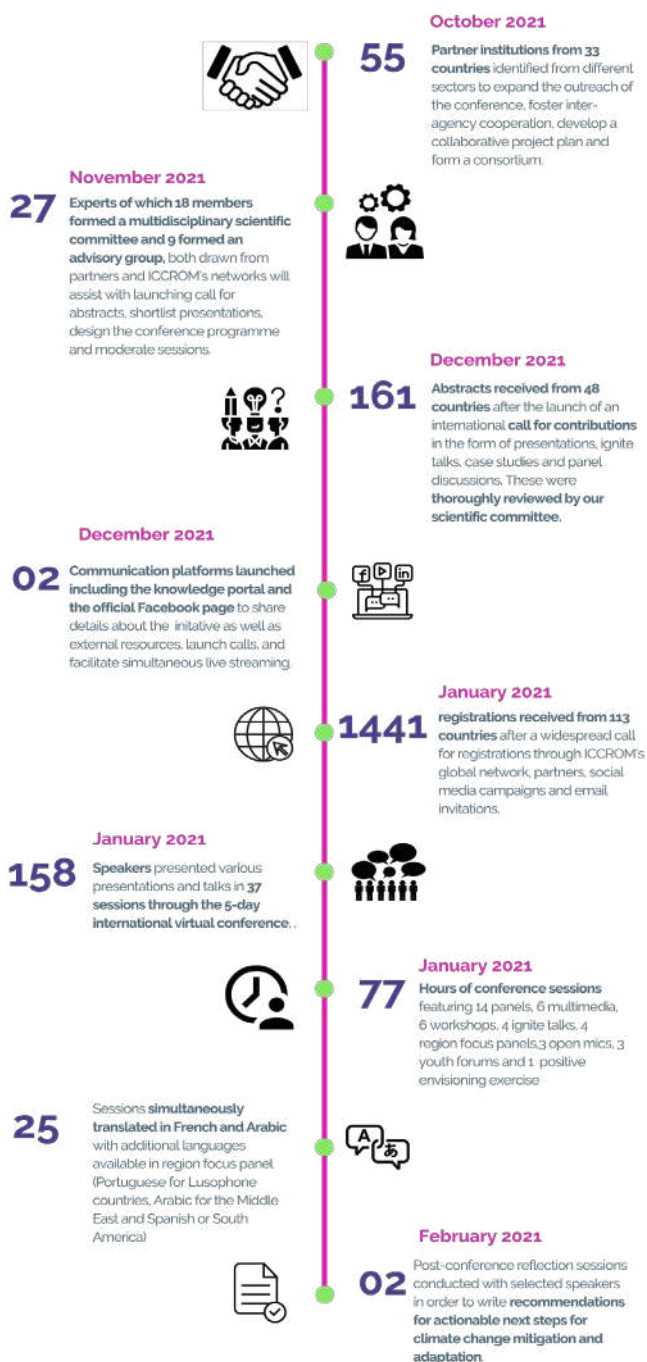
# Methodology

# Conference methodology

“ If we lose the land, we lose the culture. Lose the culture, lose the peace. Lose the peace, lose the community. Lose the community, lose our way of life forever. ”

*-Mshai Mwangola, Performance Scholar and Peacebuilder*

## Bringing Local Voices to a Global Partnership

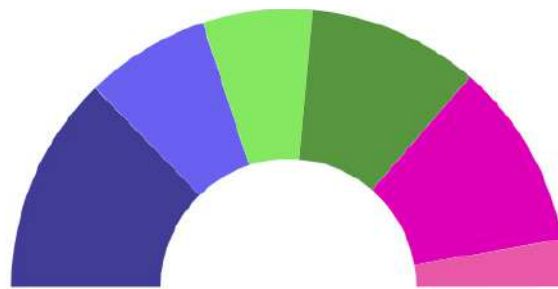


*Climate.Culture.Peace* was a six-month project with the objective of building a globally applicable foundation for the engagement of culture in climate change mitigation and adaptation. The 5-day virtual Conference aimed at being inclusive by bringing together voices from across generations, countries and languages, as well as varied experiences to address the interconnected issue of heritage safeguard, climate resilience and well-being of at-risk cultural bearers.

Moving away from an expert-centric discourse, the Conference captured stories from not only heritage practitioners, professionals, scientists and researchers, but also from the representatives of at-risk communities, youth and young professionals, as well as Indigenous leaders who are all directly or indirectly experiencing impacts of climate variability and change around the world in different ways, at different rates.

In order to strengthen existing groups working for heritage safeguard, the Conference tapped into ICCROM FAR's alumni of over 800 cultural first aiders from 87 risk-prone countries, and their respective networks to contribute to the Conference in multiple capacities. As part of a conscious effort to initiate an intergenerational dialogue, this endeavour also engaged well-established youth networks such as U-Inspire and Confederation of Risk Reduction Professionals, India, who are already working on disaster risk reduction and climate action, to organize a Youth Forum.

To promote transdisciplinary thinking and multisectoral collaboration, a global consortium of 55 partners from 33 countries was set up. They were drawn from the fields of cultural heritage, disaster risk reduction, education and research, urban planning, climate science, peace and conflict studies, as well as humanitarian and development aid. Across this broad range of sectors, our partners are active in advising policy, providing publications, building networks and platforms, organising training and capacity development, carrying out research, as well as safeguarding heritage. Thanks to the efforts of the partners to promote this initiative amongst their networks, the reach of the Conference was widespread.



- Universities and research institutions
- Climate change and disaster risk management agencies
- Cultural heritage departments, museums and archives
- International organizations for culture and heritage
- National heritage NGOs and foundations
- Humanitarian and development aid agencies

(For a full list of partners, visit the [website](#)).

## The Support of Experts

### The Scientific Committee

A multidisciplinary Scientific Committee was drawn from the consortium of partners to review abstracts, design the Conference programme, moderate, as well as promote the Conference and its calls. 18 experts from varied fields contributed their time and knowledge to ensure that the Conference included diverse sectors, perspectives and voices.

For the full list of scientific committee members please see [Annexe 03](#)

### The Advisory Group

The members of the Advisory Group were drawn from ICCROM and partners' networks to support the Scientific Committee in its work, including helping to design the Conference programme and moderate Conference sessions. Nine experts from varied fields shared their knowledge and advice, strengthening the organization of the Conference.

For the full list of advisory group members please see [Annexe 04](#)

## Approach to Conference Design

The following four themes were outlined to guide this initiative and organize the Conference programme and materials. For a more in-depth explanation of these themes and their core ideas, please visit the [website](#).

Theme 1 | Culture – the missing link

Theme 2 | Climate change as a risk driver for culture and people

Theme 3 | Culture-based mitigation, adaptation and renewal

Theme 4 | State of knowledge and action

The themes of *Climate.Culture.Peace* addressed concerns related to the implementation of Sustainable Development Goals and their targets as outlined in the UN Sustainable Development Agenda 2030. Primary goals highlighted during the Conference are listed below.



[SDG 3](#) – Good Health and Well-Being

[SDG 4](#) – Quality Education

[SDG 5](#) – Gender Equality

[SDG 11](#) – Sustainable Cities and Communities

[SDG 12](#) – Responsible Consumption and Production

[SDG 13](#) – Climate Action

[SDG 16](#) – Peace, Justice and Strong Institutions

[SDG 17](#) – Revitalize Global Partnerships

## Call for Contributions

An international call for contributions was published and widely disseminated, inviting submissions in the form of case studies, presentations or multimedia. A knowledge/practice/research presentation (10-minutes) that provided context and details or a short ‘ignite’ talk (5-minutes) meant to spark conversation. This call was published on the Conference web portal and ICCROM’s platforms, shared with our partners for them to publish and disseminate, promoted in a social media campaign, distributed amongst student and youth networks, as well as recommended through word-of-mouth. Extra efforts were made to reach out to the French, Arabic, Portuguese and Spanish-speaking regions across the Middle East and Africa.

To read the call for contributions, visit the [website](#).

## Review process

A simple review process was used to accommodate the project’s short duration, with all proposals assessed anonymously by at least two members of the Scientific Committee, as well as two members from the Conference team. As a way to include all voices and opinions, reviewers could suggest further development of a submission or a change in presentation style, in addition to accepting or rejecting it.

## Development of Actions and Recommendations

Developing the recommendations for actionable next steps was an iterative process. Based upon key takeaways from sessions, moderators, the Scientific Committee and the organising team, recommendations were shared in the closing panel and then disseminated amongst all Conference partners, moderators and speakers for their comments. Two reflections sessions were held with key speakers to build upon this foundation and further develop an actionable agenda.

See Chapter [Building an Agenda for Collective Action](#)

# The Conference

The Conference connected people from all around the world, with simultaneous interpretation provided in French and Arabic, as well as dedicated region-focus sessions held in Spanish, Portuguese and Arabic. 37 interactive sessions over 77 hours, ranging from formal to informal discussions, ensured that all views were shared and in turn facilitated a wider knowledge exchange in various forms, encouraging meaningful dialogue and reflection.

The range of sessions included: research, knowledge and practice presentations; multi-media films; performance art; free-form discussions during the climate open mic sessions; young voices and aspirations during the youth forum; and six capacity development workshops on heritage-based climate action. At each stage, speakers, moderators and attendees were invited to think about actionable next steps, which formed the basis of the Conference recommendations.

See the full list of sessions and their descriptions, visit the [website](#).



## Afterlife

- *Climate.Culture.Peace* will build upon the strong foundation of the Conference as an initial moment of collecting and sharing knowledge on heritage and climate from risk-prone regions around the world. It will continue to grow the [knowledge portal](#), engage with its partners, and expand the international network established through the Conference.
- With the knowledge network, this initiative aims to create a robust group of multidisciplinary professionals and engage them in upcoming and relevant discussions and projects. This network will be encouraged to further develop the ideas discussed during the Conference.
- As a follow-up to the Conference and in preparation for this report, the team has conducted initial feedback and discussion meetings with the Scientific Committee, Advisory Group, partners and key contributors. Similar meetings and other interactive activities such as knowledge building webinars, workshops, etc. will continue periodically
- Case studies documenting place-based stories of heritage and climate will be shared on the knowledge portal, as well as published as a book, highlighting lived experiences and existing climate action efforts.
- The [recommendations](#) contained in this report will be further refined in collaboration with the consortium of 55 partners and the 158 contributors to the Conference. It will then be widely disseminated through ICCROM and its partners' networks.
- ICCROM FAR's upcoming capacity development initiative, [Net Zero - Heritage for Climate Action](#), will build on the momentum of *Climate.Culture.Peace*, and field test strategies to scale up heritage based climate action at five innovation sites that will be set up in places where communities are directly suffering from the impacts of climate extremes.



# Conference Findings



# Conference Findings

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“ We are nomadic. We move from one place to another one to find water and pasture. We can move up to a thousand kilometres, the size of California, within one year. And this life helps us to live in harmony with our ecosystem. We understand each other. For us, the nature is our supermarket where we can collect our food, our water. It is our pharmacy where we can collect our medicinal plants, but it is our school where we can learn better how to protect it. ”

*-Hindou Oumarou Ibrahim, Indigenous knowledge meets science to take on climate change.*

---

Findings of Climate.Culture.Peace are drawn from presentations across the Conference and rich discussions during the thematic sessions, climate open mic sessions, the two in-depth reflection meetings with Conference presenters held following the Conference and solicited input from the Scientific Committee and Advisory Group.

Findings are grouped according to three overarching themes: Culture – the Missing Link; Climate Change as a Risk Driver for Culture and People; and Culture-based Mitigation, Adaptation and Renewal. Supporting evidence gathered from the presentations is referenced following the format (S-01-Surname). Please use the [Annexe 2 - Conference Playlist](#) to view recordings of the relevant sessions.

## Culture - The Missing Link

One of the strongest ideas discussed across *Climate.Culture.Peace* was that in order for human society to meet the challenges of climate change and its variability, as well as create sustainable, equitable, and meaningful futures, shifts are needed in how we understand and speak about climate change, climate variability, culture and heritage. With such shifts, it will be more possible to see new connections and shape new pathways for action. These needed shifts include:

### *The Demand for a Community-Led Approach to Heritage for Climate Action*

Heritage has long been understood as a legacy of the past, either tangible or intangible, which has inherent values.<sup>1</sup> But when heritage is understood as a people-centred process that recognizes competing interests, as well as various relationships between people, things and their environment, energy and avenues for transformative change and action are created.

Talks that supported the idea of fully shifting to people-centred, as well as community-led approaches for heritage include:

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<sup>1</sup> UNESCO (no date) “Cultural Heritage” (available online at: <https://en.unesco.org/fieldoffice/santiago/cultura/patrimonio>).

- Laurajane Smith's keynote ([S-05-Smith](#)) emphasised the importance of a people-centred approach to heritage, challenging the 'authorised discourse' of heritage, which is often expert-centric and exclusionary. Heritage should not be reduced to physical 'thing' such as a place, building or an artefact. Instead, it should be seen as a social process of bringing the past into the present and making meaning to tackle current crises, such as the climate emergency.
- Eva Zeidan's presentation ([S-15-Ziedan](#)) made a case for acknowledging heritage as a 'living' and dynamic concept by illustrating how local communities in Syria, using their traditional social ties and place-specific knowledge, worked across divided areas to share resources in order to keep their farms irrigated and infrastructure working through years of conflict.
- Minister Simon Kofe's address ([S-00-Kofe](#)) explained how the Tuvaluan culture and values of *olaga fakafenua* (communal living systems), *kaitasi* (shared responsibility), and *fale-pili* (being a good neighbour) would allow it to continue as a nation, even if it were submerged by the rising seas.
- David Harvey's presentation ([S-01-Harvey](#)) discussed how concepts like heritage, climate change and peace are often over-simplified and commodified for convenient interpretations. Building on this idea, in an open mic contribution ([S-03](#)), he highlighted how current ways of talking about climate change impacts are often separated from underlying human causes.
- Yohei Kiyonaga ([S-01-Kiyonaga](#)) underscored how the Japanese System of the Preservation of Districts for Groups of Traditional Buildings (PDG) had formally recognized the importance of community-held skills and knowledge for the sustainable growth of cities. The community-led approach of PDGs has now been incorporated in Japan's urban development model.

## Nature Culture Heritage Integration

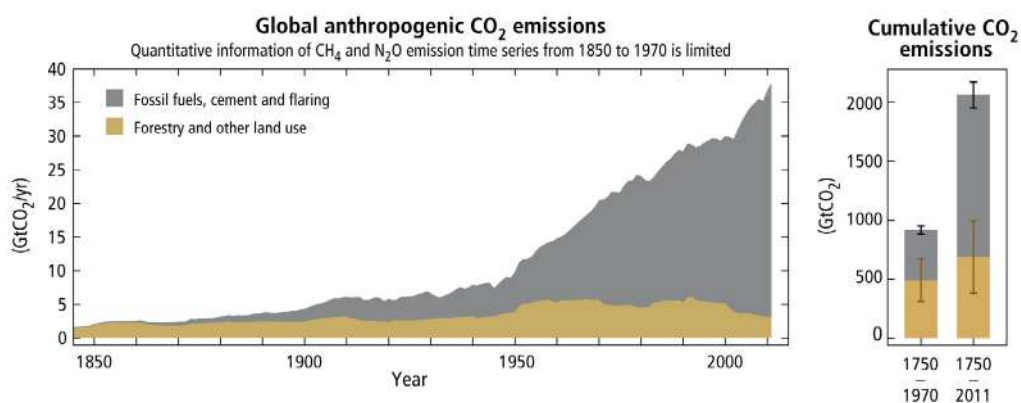
The separation of nature and culture in how heritage is understood and managed is a longstanding problem. Several presentations recognise that the separation of nature and culture, as well as the values that support this separation has contributed to accelerating global warming. Work to reconnect nature and culture, in thought, practice, and across disciplines, is ongoing.

Examples of work to re-integrate nature and culture include:

- Anne Poelina ([S-19-Poelina](#)) introduced herself as a woman of the iconic *Martuwarra*, also known as the Fitzroy River. She advocates for the indigenous worldview, which in her own words is ancient wisdom embedded in the natural landscape, giving the right to live not only to humans and other species but also to the water's cultural and nurturing flow.
- Nicole Franchisini ([S-22-Franceschini](#)), presented PANORAMA – Solutions for a Healthy Planet, a multi-partner initiative of ICCROM that documents and promotes examples of inspiring and replicable case studies, enabling cross-sectoral learning and reducing divides between nature and culture.
- Kelly Hazejager ([S-01-Hazejager](#)) explained how our actions are influenced by the way we think about the relationships between humans and nature. Using historical examples of the management of human waste and the use of animals as cultural and political symbols, she demonstrated how we strive to control nature. She concluded by asking - what mental models are needed of culture and nature to support collective and inclusive climate action?

- Mike Newland ([S-22-Newland](#)), speaking from his work in California, noted a contrast between Indigenous place names, which often reflected unique characteristics of a local environment, and place names given in the style of European settlers, which often referenced individuals or situations unconnected with the local environment. He suggested that re-engaging with Indigenous place names could provide means to reconnect with our local environments and protect the natural and cultural resources of our shared home.
- A film by the International National Trust Organization (INTO) ([S-00-INTO](#)) described the Melting Snows and Rivers in Flood project, through which community Elders and cultural leaders are tracking and sustaining natural flood management techniques in Rwenzori, Uganda. The project also supports the eroding belief systems, cultural rites, and sacred sites in the region.
- Tim Badman through his presentation ([S-00-Badman](#)) emphasised that the ongoing and future impacts of climate change and disasters on biodiversity and culture must not be seen in isolation, but rather addressed through comprehensive landscape-scale approaches developed by the International Union for Conservation of Nature (IUCN).

## Climate Change Has a History



Source: IPCC, 1.1. [Observed changes in the climate system](#)

The Paris Climate Agreement sets its targets to limit global greenhouse gas emissions with respect to the pre-industrial era. The Intergovernmental Panel on Climate Change (IPCC) uses 1850-1900 as its baseline period for the pre-industrial era due to the unavailability of earlier data<sup>1</sup>, even though it is recognized that industrialization began nearly a century before.<sup>2</sup> Climate change is also often presented as a complicated domain of scientific experts. What is largely missing is attention to climate change as an outcome of human action over more than 250 years, as well as how humans have continued to experience it. It will not be possible to address climate change well without understanding and working through this history.

Talks that emphasized the need to work with the human history of climate change include:

1 IPCC (2018) Global warming of 1.5 C. An IPCC Special Report on the impacts of global warming of 1.5 C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of, sustainable development, and efforts to eradicate poverty.' World Meteorological Organization, Geneva, Switzerland.

2 Carbon Brief (2017) "Guest post: The challenge of defining the 'pre-industrial era.'" (Available online at: <https://www.carbonbrief.org/challenge-defining-pre-industrial-era>).

- Braden Paynter, as part of the workshop Dialogue and the Root Causes of Climate Crisis (S-33) shared the example of how battles fought by coal miners for the right to organize their labour in the early 20th century, and the memories of those battles in mining communities now are influencing their decision whether to transition away from fossil fuels.
- Anne Hyland (S-06-Hyland) raised questions about how to value abandoned industrial complexes in Victoria, Australia.
- Marcy Rockman, as part of the workshop Every Place has a Climate Story (S-18), highlighted the importance of understanding the human history of climate change. To tell this type of story, she recommended starting with questions such as: “how has the modern climate situation come to be? What are the social, cultural, technological, economic, intellectual, and philosophical trends that have combined over time to create the present-day – a present that includes climate change?”

## ***Intergenerational Responsibility***

As the climate crisis worsens, there is a growing sense of anxiety among young people about their future and what it holds. A key finding of the *Climate.Culture.Peace* Youth Forum is that gaps in awareness of the climate crisis and advocacy for climate action are prevalent not only among sectors but also, across generations. As shared by the participants of the Youth Forum, everyone has to be made aware of: the environmental impacts of climate variability and change, the roles of culture in creating climate change, as well as the individual responsibility for action they can take.

Supporting conversations from the Youth Forum (S-07) on climate change, climate variability and culture are summarized below:

- Rahma Hanifa: Everything has a good and a bad side. As young people, we must focus on the positive side and use the wealth of community-held knowledge to develop strategies for adaptation and mitigation. Collective effort and intelligence will make way for positive change.
- Bhola Saha: Common and differentiated capacities must be recognized in climate action. Some people may have the awareness, while others hold the knowledge. To stop the cycle of good and bad actions, intergenerational dialogue and advocacy are needed.
- Taiwo Ogunwumi: For effective climate action, it is crucial to bridge the gap between policymakers and communities, as well as support education on the environmental impacts of our practices and actions.

# Climate Variability and Change – A Risk Driver for People and Heritage

Shoreline Change  
Rate:1949 to 2010



Shoreline Change  
Rate:2010 to 2019

Source: Kieran Westley (S-09-Westley), Assessing climate change threats and impacts to coastal archaeology in the Middle East and North Africa presented in the Climate.Culture.Peace Conference. (January 2022)

Climate variability and change are giving rise to cascading risks. As a result of climate change, weather-related hazards are becoming more frequent, intense, and widespread. It has been observed that a changing climate is increasing the vulnerability of coastal, agrarian, and pastoralist communities who rely on sea, arable land, freshwater resources, stable temperatures and rainfall. Vulnerability to more intense and frequent climate extremes is also leading to food insecurity, forced migrations and unemployment, which in turn, are giving rise to tensions, fuelling new, as well as old conflicts. Therefore, it seems that climate variability and change are eroding the resilience of the exposed populations.

Heritage in its tangible and intangible forms is vulnerable to the risk of damage and loss because of climate-driven extreme hazard events and conflicts. Several presentations across *Climate.Culture.Peace* discussed climate impacts that are increasing the disaster risk for people and heritage in Africa, the Middle East, the Asia-Pacific and South America. Nonetheless, more in-depth research is required to establish direct and indirect causal linkages.

Concurrently, specific examples from Iraq, Nigeria, Palestine, Syria and Yemen illustrated that heritage can be used in ways that intensify conflicts and/or otherwise increase stress. Moreover, if processes of heritage making and safeguarding are exclusionary, top-down or insensitive to the environment, they could enhance inequality and vulnerability, thereby feeding into the root causes of conflicts and disasters, and/or contributing to environmental degradation.

In the absence of aggregated baseline data gathered from multiple disciplines, it is difficult to identify all likely interactions between heritage, climate variability and change, as well as disaster and conflict; quantify the climate risks to people and their heritage; and develop comprehensive risk scenarios<sup>1</sup>.

<sup>1</sup> Strengthening risk-informed decision-making: Scenarios for human vulnerability and exposure to extreme events <https://www.undrr.org/publication/strengthening-risk-informed-decision-making-scenarios-human-vulnerability-and-exposure>

Key talks that outlined different types of climate impacts and their associated risks to people and their heritage are listed below.

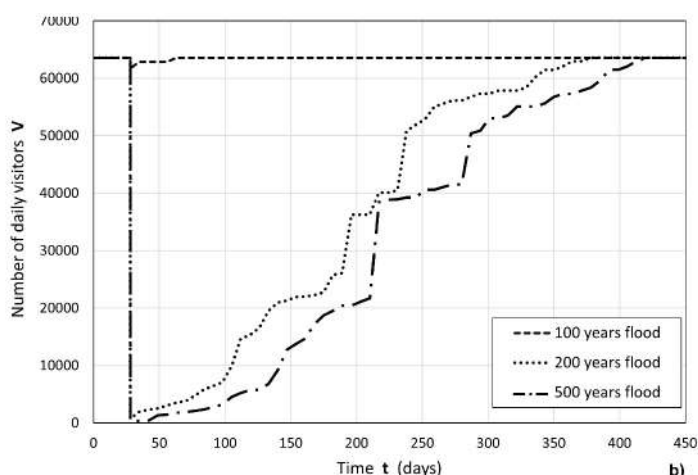
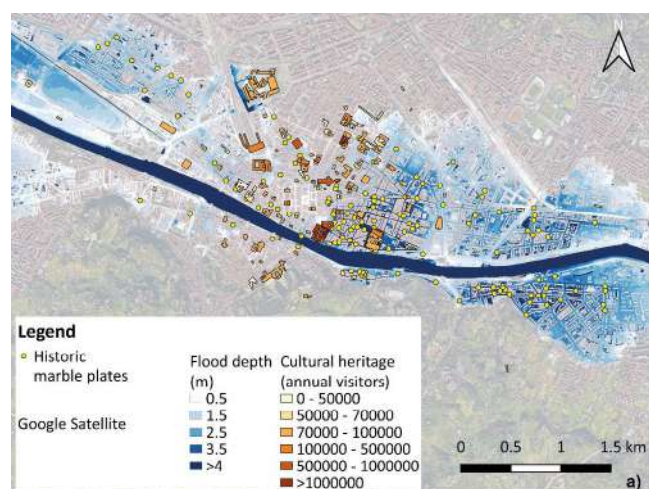
## Sea-Level Rise

One of the most visible impacts of global warming is sea-level rise, which is affecting coastal environments and communities that live along and are connected to coasts around the world.

Presentations that outlined the effects of sea-level rise on cultures and heritage include:

- Anna Naupa, joined by her Elders Aunty Helen and Aunty Kelma ([S-19-Naupa](#)), spoke about how in Vanuatu, sea-level rise is eroding coastal sites and places to which traditional knowledge is attached.
- Henry Wellington ([S-16-Wellington](#)) described the effects of rising sea levels on built heritage along the coast of Ghana, where capillary action from the higher water tables is causing deterioration in the substructures of historical stone masonry buildings.
- Fatma Twahir ([S-23-Twahir](#)) reported that along the coast of Kenya, impacts of climate change are being seen at more than 60 heritage sites through varying combinations of higher temperatures, coastal erosion, storms, and increased rainfall.
- William Deadman ([S-07-Deadman](#)) shared the example of the Endangered Archaeology of the Middle East and North Africa (EAMENA) project's work to assess the impact of rising sea levels in southern Iraq.
- Kieran Westley ([S-09-Westley](#)) described the ongoing Maritime Endangered Archaeology (MarEA) project. It aims to document and assess risks to maritime archaeological sites across the Middle East and North Africa. MarEA includes both regional-scale and site-scale threat assessments to help create baseline data on site conditions.

## Floods



Source: Study of flood impacts on cultural heritage and tourists in Florence, Italy by Chiara Arrighi ([S-10](#)) presented in the Climate.Culture.Peace Conference. (January 2022)

Climate variability and change are increasing the frequency of floods. Along the coasts, the flood risk is increased due to storm surges and sea-level rise. Inland, the risk of flooding has increased due to high precipitation, soil degradation, impervious surfaces, inadequate flood defences, and several other factors. According to a recent United Nations report, by 2040, exposure to damaging flooding is expected to increase from 2.2 billion to 3.6 billion people, trending toward half of the world's population.<sup>1</sup>

Consequences of flooding for culture and heritage may be amplified by existing vulnerabilities such as lack of maintenance and improper drainage. Physical impacts on heritage may combine with broader socioeconomic effects such as loss of income. Together, flooding and its consequences can lead to food insecurity and migration, which in turn risks the loss of place-specific knowledge.

Examples include:

- Peter Wasswa ([S-16-Wasswa](#)) described flooding as one of the climate effects affecting the Karamoja region of Uganda, restricting areas in which pastoralists could graze their herds, and in turn stressing their social systems, as well as increasing tensions with farming communities over control of resources and land.
- Chiara Arrighi ([S-07-Arrighi](#)) shared how flooding affects not only physical aspects of heritage in historic art cities but also its broader socio-economic context related to tourism, with the case example of Florence, Italy.
- Fares Altowaity ([S-11-Altowaity](#)) showed how intense rainfalls damaged almost 40% of houses in the historic city of Sana'a, Yemen. The damage was exacerbated by weaknesses in building materials and lack of maintenance due to the ongoing armed conflict and economic crisis.
- Pingqian Zhou ([S-16-Zhou](#)) presented work underway in China to develop an early warning system for cultural heritage affected by climate variability and change, with flooding at the Summer Palace as a case example.

## ***Droughts and Desertification***

Climate variability and change are causing prolonged droughts, leading to water scarcity and increased desertification. These are directly affecting the lives, cultures and heritage of pastoral and agrarian communities. The risk for physical heritage, such as archaeological sites and monuments is also growing.

Examples include:

- Bijan Rouhani ([S-16-Rouhani](#)) described the impacts of drought and water scarcity on archaeological sites in the Sistan region on the border of Iran and Afghanistan. Both sides of the border are in extreme water stress due to geopolitical tensions around water management and meteorological drought. More than 95% of sites assessed showed damage from strong winds, movement of sand dunes and flooding.

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<sup>1</sup> UN Disaster Risk Reduction (2020), *Measuring What Matters: A New Approach to Assessing Sovereign Climate Risk*, pg. 1 (available online at: [https://www.preventionweb.net/news/measuring-what-matters-new-approach-assessing-sovereign-climate-risk?utm\\_campaign=PreventionSavesLives&utm\\_source=Twitter](https://www.preventionweb.net/news/measuring-what-matters-new-approach-assessing-sovereign-climate-risk?utm_campaign=PreventionSavesLives&utm_source=Twitter)).

- Haifaa AbdelHaleem (**S-08-H. Abedalhaleem**) described the importance of the traditional *Hima* system of having protected areas for addressing water stress in the Arab region, which includes 14 of the world's 20 most water-stressed countries and where ongoing conflict, political instability, hunger and poverty interweave with water stress.
- Mamadou Samaké (**S-03-Samake**) discussed the risks posed to the World Heritage site of the Tomb of Askia in Mali, where exposed archaeological structures are increasingly threatened by advancing desert and uneven heavy rainfall, which are in turn contributing to the scarcity of traditional building materials for the maintenance of mud adobe heritage structures at the site.

## **Biodiversity Losses**

In 2019, the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES) established that “nature and its vital contributions to people, which together embody biodiversity and ecosystem functions and services, are deteriorating worldwide.” They gave the grave warning that “Biodiversity – the diversity within species, between species and of ecosystems – is declining faster than at any time in human history.”<sup>1</sup>

The International Union for Conservation of Nature (IUCN) highlighted that biological invasions are among the top drivers of biodiversity loss and species extinctions across the world. Climatic changes, along with human activities such as global trade or deforestation, could result in the proliferation of invasive alien species that are out-pacing native plant and animal species.<sup>2</sup>

Presentations across the Conference shared how losses of biodiversity affects cultural knowledge, practices and heritage and how in turn, protection of cultural knowledge and heritage may support biodiversity. These include:

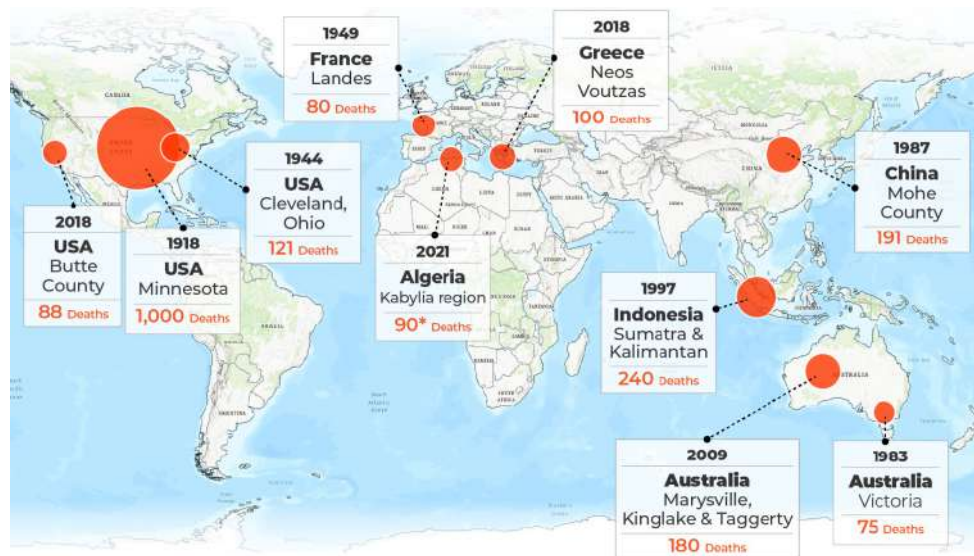
- Mudhafar Salim (**S-08-Salim**) illustrated how the biodiversity of the Southern Iraq *Ahwar* (marshlands) are threatened by water scarcity, extreme temperatures and human migrations due to conflict over scarce natural resources. He pointed out that conservation of these marshes would help sustain age-old Mesopotamian cities and open avenues for dialogue with upstream countries, which include Iran, Syria, and Turkey.
- Anne Poelina (**S-19-Poelina**) underscored how unjust development practices continue to destroy biodiverse areas.
- Cheyenne Chang-Yunn (**S-34-Chang-Yunn**) identified key threats to wildlife and natural heritage at the UNESCO World Heritage Site Vallée de Mai in Seychelles. Primary among them are climate change impacts, invasive alien species, poaching and forest fires. She outlined a multi-layered project that aims to engage local communities and the youth for conserving biodiversity and promoting sustainable development.

<sup>1</sup> [https://ipbes.net/sites/default/files/inline/files/ipbes\\_global\\_assessment\\_report\\_summary\\_for\\_policymakers.pdf](https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf)

<sup>2</sup> <https://www.iucn.org/resources/issues-briefs/invasive-alien-species-and-climate-change>



## Wildfires



Source: Centre for Research on the Epidemiology of Disasters, Image: Mohammed Haddad and Mohammed Hussein AJLabs, AlJazeera, (August 2021)

Estimates in a recent United Nations report state that by 2040, nearly a third of the world's population may live in areas where the meteorological conditions and vegetative fuel availability would allow for wildfires to spread, if ignited<sup>1</sup>.

Effects of wildfires on culture and heritage include destruction of structures and sites, as well as their contents; charring of ecosystems; and baking of soils. They can also present direct threats to those working on heritage sites in the field. Wildfires are often followed by secondary hazards such as the increased risk of floods and landslides when rains fall on burnt landscapes.

Talks that discussed wildfires include:

- Saadat Guner ([S-28-Guner/Aydin](#)) shared the experience of facing wildfires during excavations at the archaeological site of Keledaris, Turkey, which involved the evacuation of the site. With this example, she explained the importance of disaster preparedness for all excavation teams, including supplies and reliable means for communication.
- Enas Alhsskiek ([S-07-Alhssiek](#)) described fire risk posed by higher temperatures at the archaeological site of Leptis Magna, Libya. Temperatures in the area have reached as high as 47°C, which led to the drying of plants and weeds that grow in the cracks of the site's mosaic floors and walls, placing them at high risk of catching fire.
- Esmeralda Paupério ([S-32-Paupério/Romão](#)) shared the case of the 2017 wildfires in Portugal which were caused by *Queimadas*, a traditional practice of burning the remains of crops in combination with strong winds in the wake of Hurricane *Ophelia*. The fires caused extensive damage to life and property, including 23 heritage properties and 444 archaeological sites. She emphasised that in the face of the growing risk of wildfires, pre-defining standard procedures would enable the systematic collection of damage and loss data for heritage and associated communities.

<sup>1</sup> UN Disaster Risk Reduction (2020), *Measuring What Matters: A New Approach to Assessing Sovereign Climate Risk*, pg. 1 (available online at: [https://www.preventionweb.net/news/measuring-what-matters-new-approach-assessing-sovereign-climate-risk?utm\\_campaign=PreventionSavesLives&utm\\_source=Twitter](https://www.preventionweb.net/news/measuring-what-matters-new-approach-assessing-sovereign-climate-risk?utm_campaign=PreventionSavesLives&utm_source=Twitter))

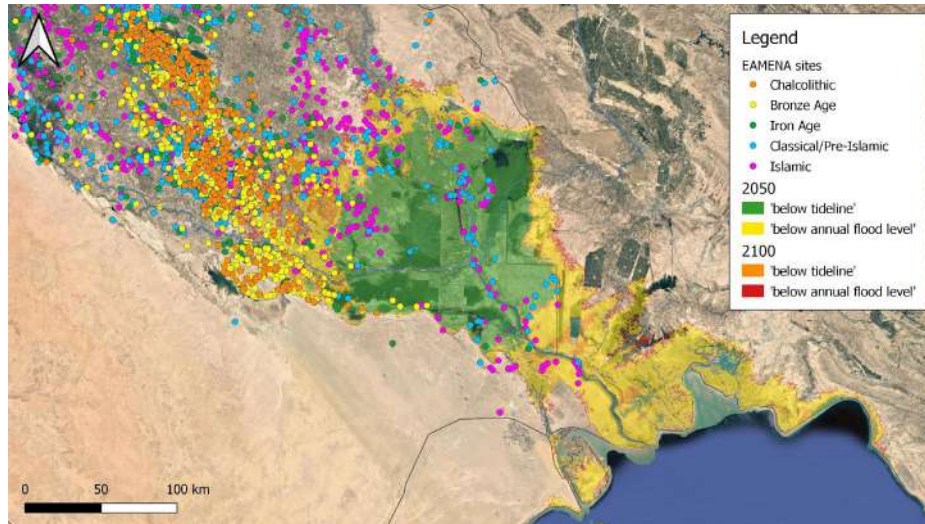
## Conflict Risk

There is evidence to support that environmental stresses and climate extremes could give rise to new tensions or intensify ongoing conflicts. In a violent conflict, tangible and intangible heritage may suffer direct or indirect harm. On the other hand, heritage can intensify conflict in a place or trigger newer tensions when it is used in contestations over power, identity, and control of natural resources. Systematic interdisciplinary studies need to be conducted to ensure peaceful outcomes for heritage interventions.

Examples include:

- Noor Abdelhamid and Anisha Patel ([S-14-Patel/Abdelhamid](#)) explained how the traditional knowledge of olive farming in Palestine is threatened by climate change. They also shared how the past and present conflicts, which have divided communities and separated knowledge bearers from their land, have led to a disruption of intergenerational knowledge exchange. They emphasised that the communities on the ground face challenges that are a product of intersections between conflict, climate change, and culture. Therefore, dealing with issues in silos will not allow us to address the interlinkages that exist between these three elements, or to effectively leverage them for solutions.
- Abiodun Abioye ([S-15-Abioye](#)) illustrated that climate and heritage are central to food security and peace in Nigeria. He cited the example of conflict affecting the Igboho community, which involves long-standing disputes between herders and local farmers over the use of essential resources such as farmland, grazing areas and water. Due to climate-induced degradation of pasture and violence in the country's far north, nomadic herders have been forced to move to the central and southern areas. On the other hand, the expansion of farms and settlements has engulfed grazing reserves and blocked traditional migration routes. Moreover, the elimination of traditional systems for dispute resolution, unaddressed grievances that date back to the colonial era, as well as religious divides have further increased tensions between farmers and herders.
- Lorraine Finch ([S-14-Finch](#)) presented on the tensions in Great Yarmouth, a port city in England that has centuries-old built heritage. The sea level rise in this low-lying city has been causing coastal erosion. The current population includes recent immigrants who are struggling to adapt to a new environment. A conflict is evident between traditional heritage preservation priorities established from outside of Great Yarmouth and the needs and preferences of current residents. She highlighted the need for greater community engagement in setting priorities for heritage preservation in order to make it meaningful for everyone.
- Nick Brooks ([S-15-Clarke/Brooks](#)) shared how conflict itself has set the context for the increased vulnerability of Sahwari communities and their heritage in Western Sahara. Conflict in this region has pushed the traditionally pastoralist Sahwari into sedentary refugee camps. Intense rainfall and risk of flooding in the camps has led to preferences for concrete homes rather than traditional tents. The combination of ongoing conflict and changes in the dwelling environment is eroding the Sahwari cultural knowledge including lived experiences of resource management.

## Status of Tools and Methods to Assess Climate Risk for Heritage



Source: Assessing the Impact of Rising Sea Levels on Southern Iraq's Cultural Heritage by William Deadman (S-07-Deadman) presented in the Climate.Culture.Peace Conference. (January 2022)

Several presentations across *Climate.Culture.Peace* shared tools and methods to record impacts of climate change on cultural heritage, as well as support risk management. Sources of data range widely, from satellite imagery to on-the-ground disaster damage recording. From discussions held during the Conference, it is clear that the capacity to identify physical deterioration is the most advanced, while methods for identifying indirect and direct causal linkages, assessing vulnerabilities and quantifying climate risks need further development. One of the key challenges in understanding climate-related risks to heritage is the absence of baseline data. An important part of this data is place-based knowledge, as well as stories that record previous conditions and the impacts of past events.

Examples of the tools and methods presented include:

- William Deadman (S-07-Deadman) and Bijan Rouhani (S-16-Rouhani) both shared methods of the EAMENA project, which makes use of satellite imagery to rapidly record and analyse information about heritage sites and landscapes under threat.
- Daniela Molinari (S-09-Molinari) presented the MOVIDA tool, which assessed potential flood damage to tangible and intangible heritage. Developed in the Po River District, Italy, the tool supported both cost-benefit analysis and other multi-criteria analyses that can be used in flood risk management plans.
- Maya Ishizawa and Eugene Jo (S-06-Ishizawa) shared the Heritage Place Lab, which is working to develop management approaches for World Heritage Sites. The Lab's climate change work is looking at baseline data needed by site managers and how to define indicators to monitor impacts of climate change. Currently, the Lab has brought together eight research practice teams, from Argentina, Botswana, Ghana, Guatemala, India, Norway, Peru and Zimbabwe.
- Françoise Collanges (S-10-Collanges) shared the experience of damage assessment tool developed in cooperation with the ICCROM-FAR programme, following the July 2021 floods that hit eastern Belgium and many parts of Northeastern Europe. A crisis committee for heritage created an information-gathering point and a quick evaluation tool. The use of the tool was limited and ways in which it could be used widely is an area that requires more research.

# Culture-Based Mitigation, Adaptation and Renewal

The challenges of climate action include how to reduce greenhouse gas emissions, as well as build equitable and sustainable ways of living in the world's environments and with each other. Culture and heritage are powerful sources of ideas, governance, techniques, and approaches that can help face these challenges. Working with culture and heritage as a source of “culture-based solutions” does not mean returning to an earlier time, but rather working with all the ways people have lived with each other and their environments throughout time. Safeguarding heritage not only protects heritage but can also contribute to climate action.

Presentations across *Climate.Culture.Peace* shared approaches to climate action that stretch across education, governance, storytelling, and emissions reduction. Findings of how safeguarding culture and heritage can contribute to climate action include:

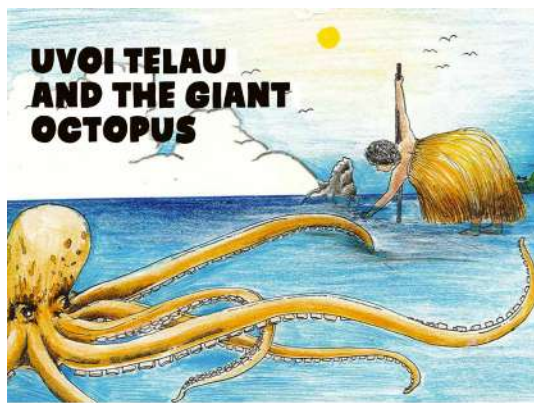
## *Culture and Heritage as Part of Climate Change Education*

Culture and heritage are instrumental in educating about climate change and disaster risk reduction, as they help connect people/learners to places and examples that are meaningful and relevant to them.

Talks that illustrate this idea in practice include:

- Gabriel Brunnich Dunand ([S-31-Dunand](#)) explained that teachers are hesitant in teaching about climate change because it is complicated with its technical concepts, controversial with regards to the role of humans in climate change, as well as difficult to make relevant and tangible for young students. She shared how the UNESCO Office of Climate Education (OCE) distills information captured in reports of the Intergovernmental Panel on Climate Change (IPCC) into freely available and multilingual tools for teachers that address and respond to local needs and practices. Heritage is one of the richest sources of information that helps shape these tools for different regions.
- Samuel Franco Arce ([S-31-Arce](#)) spoke about how the Cultural Rescue Centre in Antigua, Guatemala began as a Documentation Centre of Intangible Cultural Heritage of the living Mayan communities. As the region also has a deep history of earthquakes and volcanic activity, the Centre evolved to include training in disaster preparedness and safeguarding of heritage in emergencies. By involving multi-sectoral capacity building activities, the Centre provides learning experiences to children, cultural heritage professionals, and museum staff.
- Amira El Sayd ([S-31-ElSayed](#)) shared training by the Egyptian Heritage Rescue Foundation that brings together heritage, disasters, and climate change for children in Alexandria, Egypt. Through multi-day workshops, children and teens aged 8-13 were introduced to concepts of heritage and hazards that can affect heritage, as well as how to reduce these hazards. These children were able to develop detailed scenarios and outline steps for providing concrete solutions. In 2019, climate change related issues were incorporated into the training in the face of increasing climate change impacts in Alexandria, Egypt.

## Traditional and Indigenous Knowledge for Sustainable Land and Water Governance



Source: Netai en Namou Toc : Capturing traditional ocean knowledge on Erromango island, Vanuatu by Anna Naupa (S-19-Naupa) presented in the Climate.Culture.Peace Conference. (January 2022)

Traditional and Indigenous knowledge, land governance, and resource management all hold information about the natural world. Traditional and Indigenous knowledge is crucial for place-based governance, sustainable management of natural resources, preserving some of the last standing biosphere reserves and developing appropriate legislation to support multi-species justice. They teach us how people have and can continue to live in balance with the natural world and are particularly powerful in the conversations they allow about where and how we place value.

Talks that advocated for traditional and Indigenous knowledge include:

- Mike Newland (S-22-Newland) shared an illustration of the web of resources that the Tolowa Tribe of California use and honour in their traditional smelt fishing.
- Marlikka Perdrisat (S-19-Poelina), through her [film](#), talked about the Indigenous Australian tradition of connecting each person with a [jadiny](#) (totem), which is a species they come to know and protect throughout their lifetimes. She also shared that Aboriginal law, described by outsiders as folklore or Dreamtime stories, are means of communicating combinations of Aboriginal science, law and values to the next generation.
- Anna Naupa, joined by Elders Aunty Helen and Aunty Kelma (S-19-Naupa) highlighted how in Vanuatu, sea-level rise is eroding coastal sites and places to which traditional oceanic knowledge is attached through *Netai en Namou Toc* (Stories of Our Mother Ocean). But this impact should be understood as the most recent of a series of stresses – epidemics following European contact resulted in the loss of nearly 80% of the Erromango population and five out of six of their languages. She explained how the Erromango Cultural Association on Vanuatu uses a blend of traditional storytelling and artistic techniques to record and teach sea-based origin stories about sacred relationships with marine life, which holds information about how to manage and maintain ocean resources. Their work also includes using relations with neighbouring islands to document and revive traditional weather and maritime knowledge, linguistics and traditional resource management.
- Hannah Lewis (S-02-Lewis) described the Ark for Iraq project, which is documenting and attempting to revive boatbuilding traditions and related crafts that have been used in Iraqi marshes and waterways for millennia. This project seeks to restore the direct relationship

between people and their environment and the resources it provides. Traditional boatbuilding materials are sustainable for the environment, far more so than the plastics that have been replacing them in recent decades.

- Letty Ten Harkel and Ahmed Shams (S-02-Harkel/Shams) shared archaeological studies underway on ancient water dams in the Sinai as part of a ‘living heritage landscape’. The dams hold traditional knowledge about water management in the region that has been disrupted by road construction, increased visitors, and rapid economic growth. Further work to understand the old dam systems is recommended as an ecological experiment and to inform sustainable water management and future interventions.
- Salem Ahmed Saeed Hamdiah (S-08-Hamdiah) shared how the island Socotra, Yemen, where numerous cyclones have occurred in recent times due to climate change, is experiencing impacts to biodiversity, natural reserves, as well as cultural heritage sites. The “Franklinia” project aims to protect the endangered and unique Boswellia trees by encouraging and supporting locals to plant the tree using local knowledge, traditions and practices which existed a long time ago.
- Hindou Ibrahim (S-34-Ibrahim) shared her work in participatory mapping that uses traditional knowledge combined with technology such as GIS or satellite imagery and climate data to develop community-led strategies for climate change and climate variability mitigation and adaptation. These collaborative initiatives in Sahel are building alliances between divided communities such as farmers, fishermen and pastoral practitioners, who have often not communicated well and have fought over common natural resources such as sacred forests, water resources, agricultural lands and medicinal plants.

## Storytelling for Understanding Climate Variability and Change



Source: Shots from the film *Para onde foram as andorinhas?*(2016) Mari Corrêa shown by Janaína Welle (S-06-Welle) in “The potential of documentary film in disseminating other epistemologies on climate change” at the Climate.Culture.Peace Conference. (January 2022)

A range of presentations, workshops, and videos shared the essential role of oral histories, traditional and modern storytelling through performances and multi-media in communicating the human experiences of climate variability and change. The capacity to share through storytelling and performance helps to understand ideas and visions for how we might live and respond to the impacts of climate variability and change.

A few talks that demonstrated the power of storytelling include:

- Mshai Mwangola's (S-00-Mwangola) storytelling performance instigated an intergenerational conversation that draws from the wisdom of the past, distilled in the present, challenging the audience and people everywhere to invest in the future. Her invocation used prose and poetry featuring the word of visionary women, Ngwatilo Mawiyoo and Wangari Maathai.
- Janaina Welle (S-06-Welle) showed the power of documentary film for capturing Indigenous and local environmental knowledge, with examples of the films *Para Onde Foram as Andorinhas?* (Where have the Swallows Gone?) and *Quentura* (Heat), both set and made in Brazil. These films share the experiences of the Indigenous people facing the effects of climate variability and change through accounts of changes in their daily activities. Documentaries such as these can open the way for other voices to discuss human-induced climate change.
- A video by Creative Carbon Scotland (S-06) highlighted the need for stories of resilience in the face of climate change as they allow and encourage building collective visions for the future.
- Nik Petek-Sargeant (S-07-Petek-Sargeant), noted that when talking about archaeology and climate change, it is important not to start with the data, but rather with values and why things are important. While archaeology makes climate change tangible, the social dimensions of climate and weather are crucial to understanding how people relate to, and interpret climate variability and change in everyday situations.
- Marcy Rockman, for the workshop Every Place has a Climate Story (S-18) shared a simple process for building climate narratives for any place that is or has ever been a home to people. This process combines four themes that link climate and people in different ways and the And-But-Therefore narrative arc format. Together these capture diverse experiences and ensure that climate stories create a shared basis for understanding and action.
- Braden Paynter, for the workshop Dialogue and the Root Causes of the Climate Crisis (S-33), defined dialogue as "sharing ideas, information, experiences and assumptions for the purposes of personal and collective learning – not like other communication techniques that focus on conveying information or persuading to a particular point of view."

## ***Culture and Heritage as Sources of Innovation for Coping with and Adapting to a Changing Climate***

Several presentations showed how culture and heritage is a source of ideas, inspiration, and means of coping with the effects of climate variability and change. Strategies range from repurposing or revival of heritage and heritage-related techniques to working with heritage in community based discussions of loss.

Some cases are listed below:

- Gamze Ozmertyurt (S-20-Ozmertyurt) described how underground water systems, such as wells, cisterns, aqueducts, qanats, and others have been used across tropical and low temperate latitudes around the world for millennia to balance water use with available water supply. Along with the social systems that manage them, these underground water systems continue to provide water services in rural areas in the face of the climate crisis.

- Alex DeGeorgey ([S-25-DeGeorgey](#)) shared how he and colleagues combined archaeological excavation techniques and sniffer dogs to create a method of recovering cremains from homes destroyed by wildfires. (cremains are the ashes of people who died and were cremated before the wildfire, not victims of the fires). This method was pioneered in California in 2017, and to date has recovered cremains from more than 300 homes in the aftermath of eight major wildfires.
- Aziza Chaouni ([S-25-Chaouni](#)) in her presentation, used musical heritage as a basis for addressing desertification, depopulation, and tourism damage at the oasis of M'hamid el Ghizlane, a UNESCO Biosphere. Joudour Sahara Music School for children draws on the unique musical history of the area and passes on knowledge of older village residents. The school has a multi-disciplinary curriculum that includes training, recording music, cultural activities, eco-tourism initiatives, etc., encouraging local communities to safeguard their traditions against the pressures from climate variability and change. The physical design of the school also uses traditional architectural techniques and landscape features that combat desertification.
- Tom Dawson ([S-29-Dawson](#)) shared the range of actions taken by communities in Scotland to carry forward parts of their heritage threatened by eroding coastlines. Supported by Scottish Coastal Archaeology and the Problem of Erosion (SCAPE), community members were encouraged to come together to discuss their at-risk heritage and implement creative projects best suited to their local sites and preferences.

## ***Culture and Heritage in Limiting Climate Change and Environmental Degradation***



Source: Immersion of idols of Goddesses Kali and Lakshmi in the River Ganga, India. Photo by: Mohammed Imran Khan, on [www.downtoearth.org](http://www.downtoearth.org) (November 2019).

Throughout the Conference, we reflected on the share of heritage in global environmental degradation, including carbon emissions. On one hand, historic built environments hold carbon, but on the other, some heritage practices use and emit carbon, as well as pollute the environment. The heritage sector has not yet given full attention to this fact. Specific presentations during the Conference raised awareness on, and shared ideas for reducing environmental degradation caused by heritage sector, as well as called for urgent action. They also explored the current patterns of material consumption through heritage.



Examples include:

- Andreia Nogueira ([S-27-Nogueira](#)) described the high energy demands and related emissions of digital documentation methods that have been proposed as solutions for heritage at risk of being lost due to climate impacts and related social changes. She raised the questions: ‘Is it really a solution if it is making the problems it is addressing, worse? How do we track whether it is a sustainable solution? How do we achieve carbon-neutral digital preservation practices?’
- Deborah Briccola ([S-27-Briccola](#)) raised the issue of the carbon emissions triggered by the overuse of concrete such as for building shock-proof shelters/barriers for protecting built and movable heritage during an ongoing conflict. Highlighting a common field of investigation for material scientists and practitioners, she shares her work on metaconcrete, an innovative material made out of demolition waste or plastic, tires, and rubber scraps, as an alternative to the carbon-intensive overuse of concrete.
- Mohona Chakraborty ([S-21-Chakraborty](#)) explained how certain traditional cultural industries and festivals could increase environmental degradation. She cited the example of Durga Puja, a festival inscribed on UNESCO’s Representative List of the Intangible Cultural Heritage of Humanity. To celebrate this festival, idols that were traditionally moulded out of clay, straw and bamboo were immersed in the holy rivers. However, now idols are made out of non-biodegradable materials, polluting rivers and water bodies. She asks, ‘In a world where environmental degradation and climate change are causing cyclic disasters or fuelling conflicts, what could be the impact of such cultural practices on the environment in the longer run?’

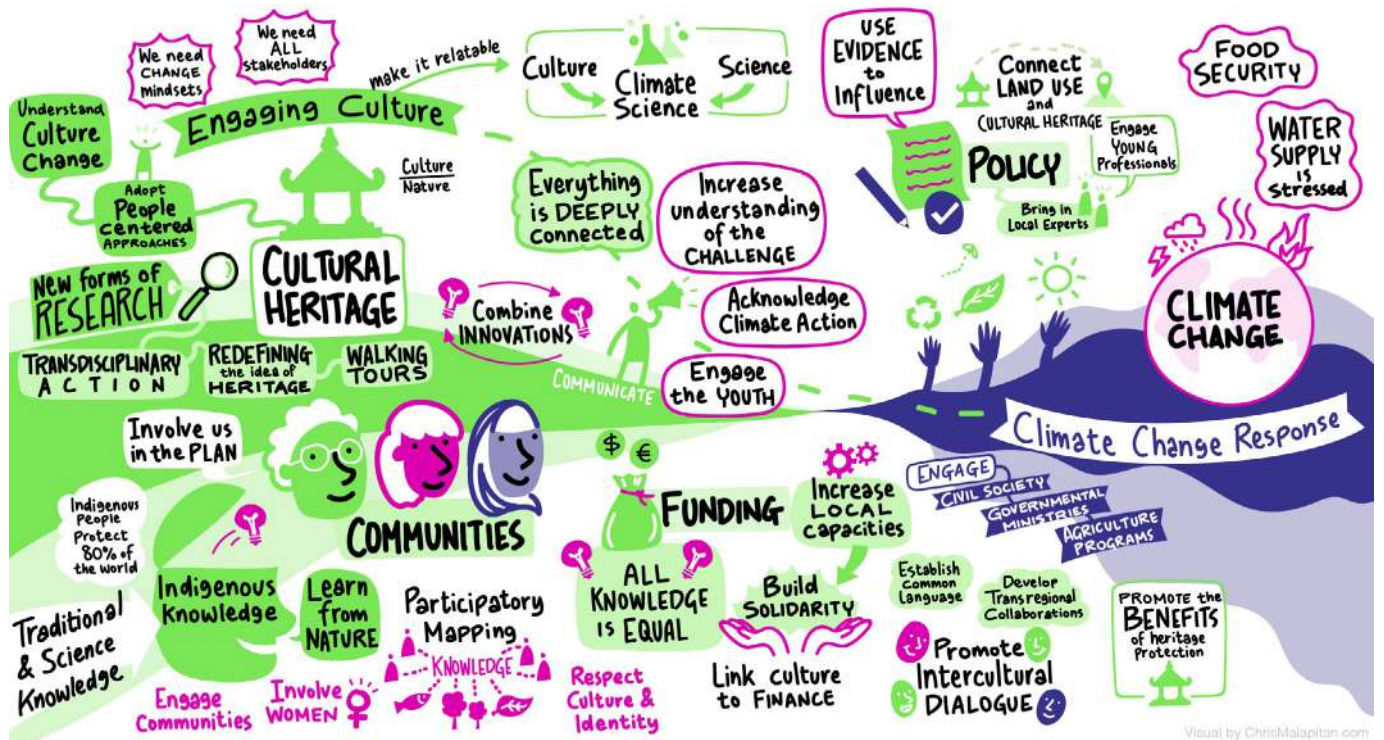
## ***Heritage in Support of Disaster Risk Reduction, Peacebuilding and Sustainable Development***

Through the key findings of the Working Group II (WGII) contribution to the [Sixth Assessment Report \(AR6\) on Impacts, Adaptation and Vulnerability](#), IPCC recognizes that when integrated actions for risk reduction, equity, justice and peace are prioritized, climate resilient development is enabled. This calls for collaboration with marginalized communities, including Indigenous peoples, as well as recognizing the value of lived experiences of the past.

Key presentations that supported culture-based integrated action include:

- Rafif Al-Amassi ([S-21-Amassi](#)) explained through her work that initiatives on cultural heritage sites in a conflict-afflicted place like Palestine, can lead to sustainable socio-economic development if they are multidisciplinary, led by youth and involve the local communities that hold traditional knowledge. She also advocated for heritage sites as inclusive and safe spaces for local communities, enabling them to freely express their thoughts and ideas through cultural practices and activities.
- Anisha Patel and Noor Abdelhamid ([S-14-Patel/Abdelhamid](#)) argued that engaging the youth in intergenerational knowledge transfer in areas of conflict, food insecurity and other forms of resource scarcity can encourage dialogue, generate livelihoods and reduce tensions. They outlined their plans of supporting intergenerational knowledge exchange on olive farming in Palestine and encouraging the setting up of seed banks. However, current geo-political situation in the region could limit the success of such efforts.

- Salwa AbdelHameed ([S-08-Salim/S.Abedelhameed/Salem](#)) pointed out in her presentation that inclusion of women in national, sub-national and local humanitarian aid and development programme, helps to promote the use of traditional knowledge for protecting the natural environment. She shared how such national and local initiatives in Sudan, reduce the vulnerability of women to climate extremes by improving their living conditions. These women are also the bearers of place-specific traditional knowledge.
- Tanmay Gound ([S-25-Gound](#)) presented the case of Ahmedabad, India. He underscored that inter and intra-community relations are crucial for risk-informed sustainable development of the city. The inter-communal ties helped marginalized communities to cope with the negative impacts of COVID-19, demonstrating how cultural heritage is a powerful contributor to risk management and peacebuilding.
- Nick Shepherd ([S-34-Shepherd](#)) shared his initiative of “walking seminars”, which transports conventional classroom-bound discussions outdoors and puts them into motion. This approach connects participants directly with the landscape that holds the topic of their discussion and reconnects them with their bodies and each other. The humble, everyday act of walking offers a route towards a mode of engagement, where we are directly involved with the living environment of the people who are part of a research.
- Zeynep Yılmaztürk ([S-13-Yılmaztürk](#)) urged that to better understand climate change, we must listen to the local community and their daily experiences. Her work studying traditional beehives and granaries in the Teke Highlands of Elmalı in Turkey, showed how the local community know that the climate is changing, and that action must be taken. They only need to be guided to the right terminology to describe their everyday experiences of climate variability and change. She also pointed out how traditional knowledge held in vernacular and rural architecture cannot be overlooked in the search for sustainable ways to mitigate the effects of climate variability and change on cultural heritage.
- Elobaid Mohammedali ([S-23-Mohammedali](#)) highlighted the need to document, preserve and restore knowledge of traditional and vernacular architectural elements, through the case of the island of Suakin, Sudan. Increased migration on this island is leading to the loss of traditional knowledge about vernacular architecture that has been adapted to climate variability and weather extremes over time. As vernacular architecture reflects and responds to socio-cultural elements of each place, it holds traditional knowledge that can support adaptation for a resilient and sustainable future.
- Thierry Joffroy and David Gandreau ([S-23-Joffroy/Gandreau](#)) presented their work of CRAterre, an international centre for earthen architecture based in Grenoble, France. CRAterre has developed methods of researching traditional architectural styles and methods and translating these for use in rebuilding following disasters. They highlight that locally available materials, local expertise and architecture that draws from vernacular styles and techniques can withstand natural hazards. Their work in Haiti following the 2010 earthquake, demonstrated that traditionally inspired post-earthquake homes are not only seismically safe but can also withstand hurricanes.



Visualization of the closing session of the Climate.Culture.Peace Conference  
 Christopher Malapitan, Creative Facilitator | Trainer  
[ChrisMalapitan.com](http://ChrisMalapitan.com)



# Building an Action Agenda

# Building an Agenda for Collective Action

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“ Societal choices and actions implemented in the next decade determine the extent to which medium- and long-term pathways will deliver higher or lower climate resilient development ”

*-IPCC Working Group II's Sixth Assessment Report (AR6) on Impacts, Adaptation and Vulnerability*

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This section proposes some broad actions that draw on the ideas and experiences discussed during the Conference and outlines an action agenda that could lay a foundation for engaging culture and heritage in climate action, disaster risk reduction, and peacebuilding.

Areas recommended for action include:

- Increase awareness of community-led heritage interventions that promote conservation of ecosystems and help reduce inequity, as well as vulnerability to disasters and/or conflicts.
- In order to map numerous and multidirectional connections between climate, people, heritage, peace, and resilience, develop a common language that enables working with people in a given place and across different sectors. Create spaces for people to reflect on their language, avoiding the use of technical jargon.
- Build a shared understanding of the critical role that climate plays in influencing human history, as well as that of the human experience in both adapting to climate variability and shaping climate change.
- As a way to effectively communicate climate risks and to step up climate action, bring all human emotions, power of performances, creativity of arts and skills (traditional and non-traditional) of storytelling into public discourses about climate variability and change, as well as designing of actions on-the-ground.
- Develop place-specific educational content and interactive materials (videos and activities) that increase awareness and build understanding about the connections between climate, people, culture and heritage, among all age groups and all sections of society.
- Invest in transdisciplinary and community-centred research to study Indigenous and traditional knowledge, as well as practices for sustainable uses of natural resources and biodiversity conservation.
- Enrich place-specific scientific data on climate variability and change with Indigenous or traditional knowledge in order to design integrated action for disaster risk reduction, climate

action, peacebuilding and heritage safeguard.

- Conduct research on and develop shareable and replicable tools for assessing climate risks to heritage, including slow-onset cumulative processes and sudden-onset extreme hazard events.
- Promote intergenerational knowledge exchange and skill transfer to ensure the continuation of Indigenous and traditional knowledges, as well as practices on sustainable resource management.
- Encourage integration of traditional knowledge with science and technology to develop locally viable solutions.
- Promote multi-disciplinary and innovative research methods to analyse the direct and indirect risk pathways that connect climate variability and change, culture and heritage, as well as conflicts and disasters with the aim to better manage climate-related cascading risks to people and heritage.
- Through on-the-ground mechanisms, partnerships, training, and tools, enhance capacities among heritage decision-makers and practitioners to develop community-led approaches for gathering place-specific knowledge, as well as for identifying climate-related vulnerabilities and capacities that stem from systems of heritage recognition and management.
- Train heritage decision-makers and practitioners to adapt to change, recognize loss, and deal with complexity and uncertainty associated with climate risks.
- Develop conceptual frameworks, policies, guidance and tools that capture the potential of heritage to step up inclusive and equitable climate action.
- Increase the use of heritage places and cultural institutions as safe spaces for facilitating intergenerational and inter-communal conversations to foster peace and encourage sustainable resource management practices.
- Identify alternative ways to communicate and work with local communities that do not completely rely on hi-tech solutions in order to ensure large-scale integration, wider accessibility of information and knowledge.
- Engage in transformative scenario-building in order to work across sectors and envision positive change collectively.
- Develop policies and programmes for reducing emissions, increasing 'eco-friendly' practices and changing the culture of overconsumption within the heritage sector.
- Incorporate place-specific knowledge of communities and their existing social structures in urban planning to develop a sustainable dwelling environments.
- Find effective ways to bridge gaps between heritage experts, policy makers and alienated local populations.



# Conclusion

# Conclusion

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“ We need a culture of we, not me ”

*-Anne Poelina*

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Contributors across Climate.Culture.Peace converged on the idea that culture and heritage have a role in shaping, understanding and responding to the intersecting crises we face today. Yet, to put this idea in practice, fundamental shifts in our understandings of culture, nature, heritage and climate change are needed. (See the chapter [Findings](#)).

In preparation for Climate.Culture.Peace, we had outlined several pertinent topics, which could help us map all possible interactions between culture, heritage, disaster risk reduction, peace and sustainable development. Most of these were touched upon during the Conference proceedings by several contributors, but some need to be analysed further. These include, but are not limited to, forced displacements and associated losses of place-specific knowledge; climate justice and violations of human and cultural rights; assessing and communicating climate risks for heritage; inequitable and authoritative uses of heritage which further conflict; acknowledging climate change in our relationships with the history of industrialization and colonization, as well as industrial and colonial heritage; and moving away from the culture of overconsumption within and beyond the heritage sector. We propose that these are critical areas for further consideration, research, and collaboration.

The discussions during the Conference reaffirmed that we cannot continue with ‘business as usual’ and that we must make changes. What do these changes entail? What would a transformational change look like?

In his address at the inaugural session (S-00-Kofe), Minister Simon Kofe presented a dramatic culture-based vision for the future of Tuvalu: that if and when Tuvalu is submerged by rising seas, it will continue as a digital nation, retaining the connection to place and between its citizens through shared stories, history and values. Other sessions and presentations (such as Culture-the Missing Link: Learning from the Past (S-02), Culture for a Sustainable Future in the Arab Region (S-08), Adaptation through Built Heritage (S-23) included several examples that place community-held resource management knowledges and practices at the centre of successful adaptation to a changing climate.

Yet, as shared in the Youth Session, My Voice Counts (S-13), what still feels to be missing is the understanding as to who is responsible for bringing about this change.

To rise above this challenge, a source of hope is needed, which heritage can provide. Anne Poelina (S-19-Poelina) urged us to tap into the ancient wisdom of Indigenous people, past and present, which emphasises multi-species justice, and points to our individual, as well as collective responsibilities of ‘living with the land’ and the ‘law of the land.’

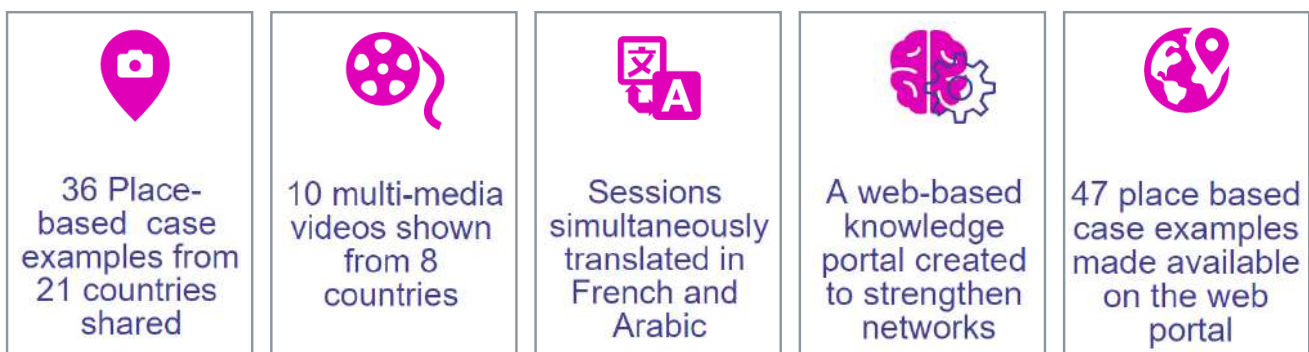




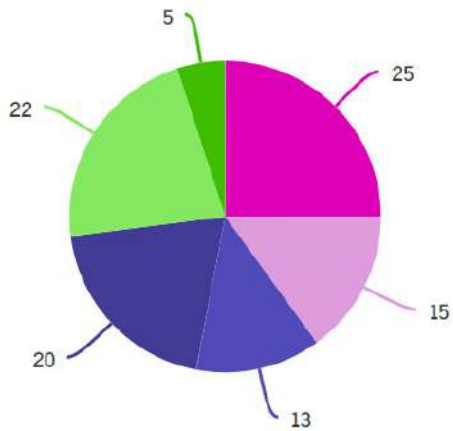
# Annexes

# Annexe 01 - Conference in Numbers

**5 Days 77 Hours**

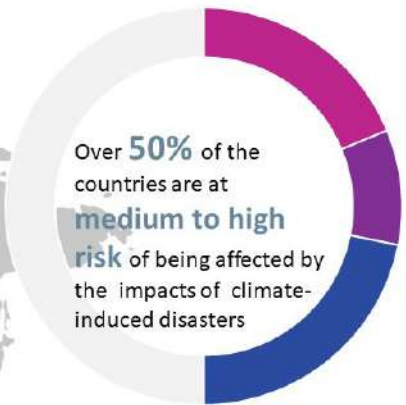
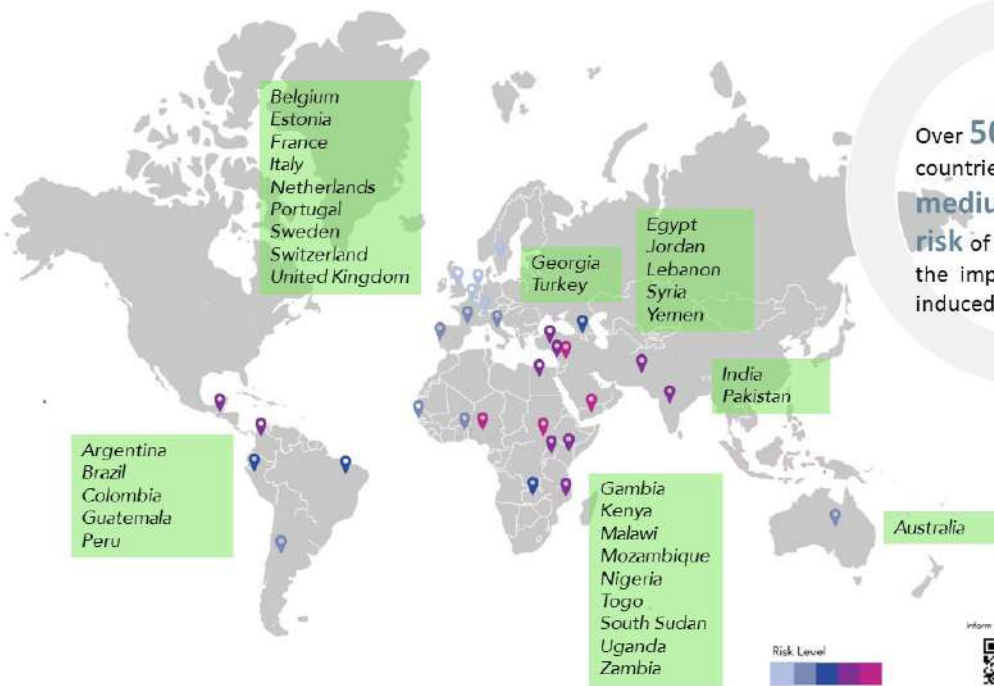


# 55 Partners - 33 Countries

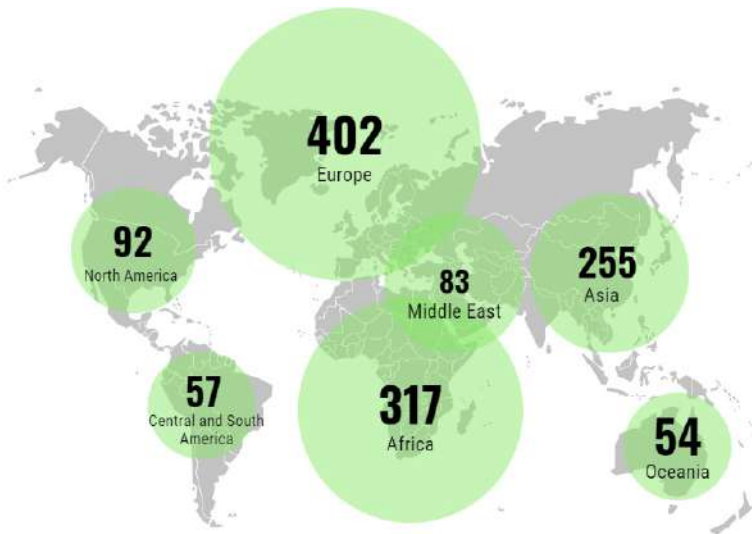


- Education and research institutions
- Climate change and disaster risk management agencies
- National heritage NGOs and Foundations
- International organizations for culture and heritage
- Cultural heritage departments, museums and archives
- Humanitarian and development aid agencies

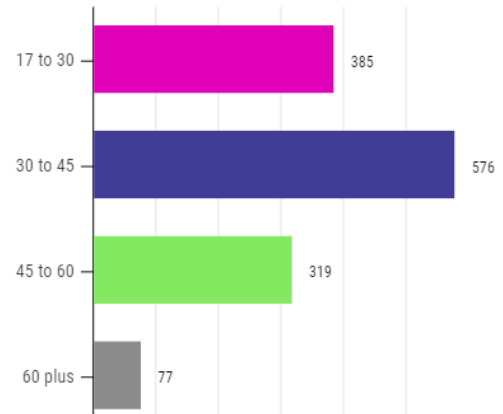
 Engineering and Architecture	 Education and research	 Material sciences
 Disaster Risk Reduction	 Peace and conflict studies	 Policy making
 Urban Planning	 Climate and environmental sciences	 Capacity building
 Cultural heritage, museums, archives	 Humanitarian and development aid	 Networking



# 1441 Attendees - 113 Countries



7 out of 10 Attendees were Women



  
1441 Attendees from 113 countries

  
987 Logins to the web portal

  
400 Participants from 43 countries across Middle East and Africa Region



  
Risk Index Low to very high

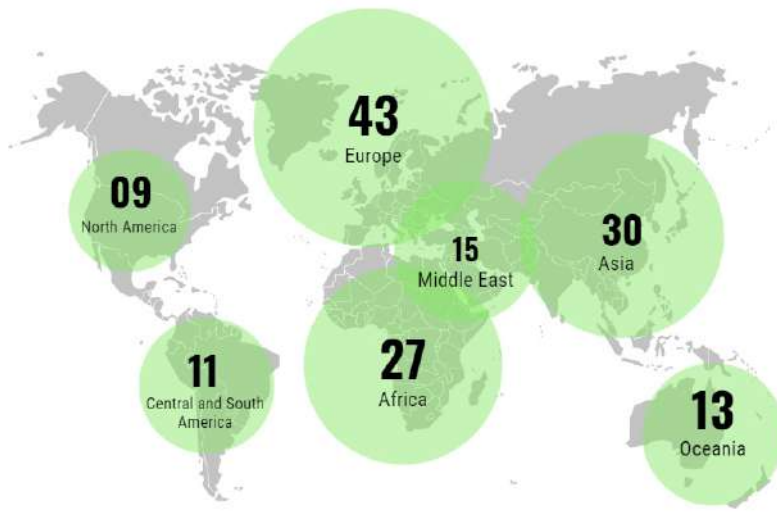


INFORM Risk models


## Countries arranged based on their risk profile

South Sudan, Yemen, Afghanistan, Niger, Mozambique, Syria, Mali, Ethiopia, Iraq, Nigeria, Sudan, Burkina Faso, Myanmar, Libya, Cameroon, Uganda, Pakistan, Bangladesh, Kenya, Colombia, Côte d'Ivoire, Tanzania, Guatemala, Philippines, India, Sierra Leone, Mauritania, Zimbabwe, Nepal, Lebanon, Mexico, Turkey, Brazil, Peru, Togo, Egypt, Nicaragua, Iran, Indonesia, Guinea-Bissau, Palestine, Ecuador, South Africa, Benin, Tajikistan, Jordan, Vanuatu, Senegal, Ghana, Bolivia, Zambia, China, Algeria, Thailand, Georgia, Morocco, Chile, Gabon, Bosnia and Herzegovina, Russian Federation, Kosovo, North Macedonia, United States of America, Suriname, Tunisia, Botswana, Serbia, Malaysia, Cyprus, Argentina, Albania, Fiji, Greece, Trinidad and Tobago, Oman, Cuba, Italy, Israel, Romania, Canada, Montenegro, Croatia, Australia, Maldives, Cabo Verde, Japan, France, Spain, Barbados, Republic of Korea, Germany, Mauritius, Aruba, Cayman Islands, United States of Minor Outlying Islands, United Kingdom of Great Britain and Northern Ireland, Malta, Seychelles, Belgium, Austria, United Arab Emirates, Portugal, New Zealand, Qatar, Ireland, Slovakia, Switzerland, Sweden, Netherlands, Slovenia, Lithuania, Bahrain, Denmark, Norway, Finland, Estonia, Singapore.


# 158 Speakers - 55 Countries




7 out of 10 Speakers were Women



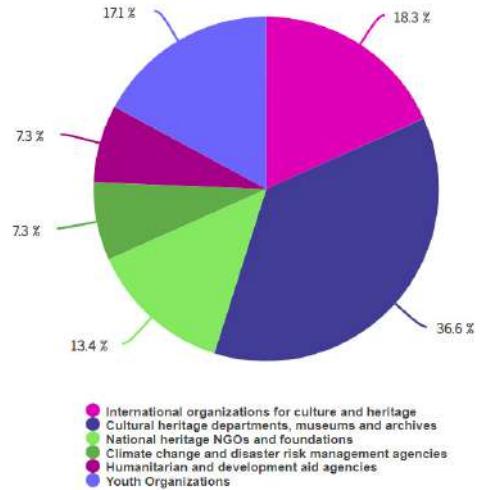
36 Youth speakers between 19-35 Years



53 Focus discussions on Middle East and Africa



42 Countries from the Middle East and Africa



Risk Index Low to very high



### Countries arranged based on their risk profile

Yemen, Chad, Mozambique, Syria, Mali, Iraq, Nigeria, Sudan, Libya, Kenya, Colombia, Guatemala, India, Lebanon, Turkey, Brazil, Egypt, Iran, Indonesia, Guinea Bissau, Palestine, South Africa, Jordan, Vanuatu, Ghana, China, Algeria, Tuvalu, United States of America, Suriname, Tunisia, Argentina, Greece, Trinidad and Tobago, Italy, Canada, Croatia, Australia, Cape Green, Japan, France, Spain, Germany, United Kingdom of Great Britain and Northern Ireland, Seychelles, Belgium, United Arab Emirates, Portugal, New Zealand, Ireland, Switzerland, Sweden, Netherlands, Slovenia, Denmark.

# Annexe 02 - Conference Playlist

## DAY 1

S-00	<b>Inaugural Session</b> : <a href="https://youtu.be/Wim_pDH_iRQ">https://youtu.be/Wim_pDH_iRQ</a>
S-00-Ndoro	00:04:33-00:13:21
S-00-Mwangola	00:14:11-00:37:40
S-00-Kofe	00:39:14-00:44:45
S-00-Firas	00:46:18-00:56:50
S-00-Ottone	00:57:09-01:07:54
S-00-Xanthaki	01:08:12-01:19:42
S-00-Badman	01:20:07-01:33:48
S-00-INTO	01:53:57-02:06:46
S-01	<b>What are the Links Between Climate, Culture and Peace?</b> <a href="https://youtu.be/3QCPXmQER4A">https://youtu.be/3QCPXmQER4A</a>
S-01-Jaoude	00:03:21-00:08:35
S-01-Kiyonaga	00:09:16 - 00:14:13
S-01-Singh	00:15:06 - 00:21:02
S-01-Hazejager	00:21:50 - 00:29:14
S-01-Harvey	00:30:04 - 00:36:36
S-02	<b>Culture the Missing Link – Learning from the Past</b> <a href="https://youtu.be/Bva1tmRAoOM">https://youtu.be/Bva1tmRAoOM</a>
S-02-Harkel/Shams	00:00:37 - 00:13:07
S-02-Lewis	00:13:45 - 00:25:45
S-02-Visonà	00:27:10 - 00:36:53
S-02-Ou	00:37:16 - 00:45:06 00:55:12 - 01:05:41
S-02-Strozzi	00:46:33 - 00:54:43
S-03	<b>Climate Open Mic</b> <a href="https://youtu.be/PRqgYsvsFy4">https://youtu.be/PRqgYsvsFy4</a>
S-03-Samaké	00:04:29 - 00:16:40
S-04	<b>Learn from the past (for a brighter present and future)</b> <a href="https://youtu.be/R_6TfFXcaJo">https://youtu.be/R_6TfFXcaJo</a>
S-04-Gomez	00:03:03 - 00:18:42
S-04-Hurst	00:20:41 - 00:35:36
S-04-Vilar	00:38:09 - 00:54:34
S-04-Gonzalez	00:56:29 - 01:11:14

## DAY 2

S-05	<b>Culture, Heritage and the Climate Crisis</b> <a href="https://youtu.be/Re8Rj6aCO00">https://youtu.be/Re8Rj6aCO00</a>
S-05-Smith	00:04:01 - 00:14:30
S-06	<b>Culture the Missing Link – Strategies for Heritage</b> <a href="https://youtu.be/I5pTk4-IDvU">https://youtu.be/I5pTk4-IDvU</a>
S-06-Hyland	00:04:42 - 00:17:31
S-06-Mallinson	00:19:16 - 00:43:56
S-06-Ishizawa	00:45:50 - 00:54:17
S-06-Welle	00:55:34 - 01:05:44
S-07	<b>Youth Forum: Intergenerational Dialogue on Climate.Culture.Peace</b> <a href="https://youtu.be/ljCqYSuSwbo">https://youtu.be/ljCqYSuSwbo</a>
S-07-Deadman	00:01:23 - 00:09:15
S-07-Alhssiek	00:16:07 - 00:21:01
S-07-Petek-Sargeant	00:29:07 - 00:36:58
S-07-Pujara	01:07:33 - 01:15:20
S-07-Youssef	00:47:25 - 00:59:16
S-07-Almoustafa	01:24:08 - 01:35:27
S-07-Saha/Prakash	01:44:47 - 02:00:19
S-07-Pucciarelli	02:05:40 - 02:14:16
S-07-Arrighi	02:25:00 - 02:31:41
S-08	<b>Culture for a Sustainable Future in the Arab Region</b> <a href="https://youtu.be/mFlo0CGgXZM">https://youtu.be/mFlo0CGgXZM</a>
S-08-H.Abedalhaleem	00:09:15 - 00:14:00
S-08-Hamdiah	00:15:10 – 00:20:42
S-08-S.Abedelhameed	00:21:14 – 00:25:15
S-08-Salim	00:26:00 - 00:31:07
S-08-Sameh-Antar	00:32:18 - 00:35:14
S-08-Shambol	00:35:35 - 00:38:35
S-08-Amokrane	00:38:56 - 00:45:13
S-09	<b>Climate Change as a Risk Driver for Culture and People - When Water Rises</b> <a href="https://youtu.be/Sy-0l8Fcs7c">https://youtu.be/Sy-0l8Fcs7c</a>
S-09-ElSiedy	00:03:30 - 00:13:43
S-09-Molinari	00:14:32 - 00:24:31
S-09-Fooh/Scriwanek	00:25:33 - 00:39:23
S-09-Westley	00:40:08 - 00:51:04
S-10	<b>Workshop - It is Flooded (English)</b> <a href="https://youtu.be/GAcslzhJgl">https://youtu.be/GAcslzhJgl</a>
S-10-Collanges	01:08:50 -
S-10-Arrighi	00:11:06 – 00:24:30
S-10-Tandon	

S-11	<b>Workshop – It is Flooded (Arabic)</b> <a href="https://youtu.be/sP77MfxNzP8">https://youtu.be/sP77MfxNzP8</a>
S-11-Altowaity	
S-11-al-Sharief	
S-11-Sabik	
S-11-Elsayed	
S-12	<b>Climate Open Mic</b> <a href="https://youtu.be/ZXvoNIZ7j5c">https://youtu.be/ZXvoNIZ7j5c</a>
S-12-Shah	00:01:22 - 00:05:25

### Day 3

S-13	<b>My Voice Counts</b> <a href="https://youtu.be/Lc7Fom2_XPo">https://youtu.be/Lc7Fom2_XPo</a>
S-13-Yilmaztürk	00:05:11 - 00:12:56
S-13-Malik/Tewari	00:14:57 - 00:22:51
S-13-Ulas	00:25:35 - 00:30:42
S-13-Salunke	00:31:50 - 00:43:25
S-13-Banikya	00:44:44 - 00:52:52
S-13-Bhuyan	00:54:00 - 00:58:12
S-14	<b>What do Climate Risks Look Like Around the World?</b> <a href="https://youtu.be/Ki6Dxl3rOe0">https://youtu.be/Ki6Dxl3rOe0</a>
S-14-Finch	00:02:43 - 00:08:06
S-14-Patel/Abdelhamid	00:09:44 - 00:14:35
S-14-Jiang	00:16:30 - 00:23:30
S-14-Nezory	00:24:51 - 00:29:05
S-14-Anshari	00:43:16 - 01:04:18
S-15	<b>Culture, Climate, and Drivers of Conflict</b> <a href="https://youtu.be/Y9Q5pp2Hewo">https://youtu.be/Y9Q5pp2Hewo</a>
S-15-Ziedan	00:02:31 - 00:09:58
S-15-Hu	00:11:01 - 00:16:46
S-15-Holtorf	00:20:45 - 00:31:44
S-15-Clarke/Brooks	00:33:40 - 00:43:59
S-15-Abioye	00:44:46 - 00:53:02
S-16	<b>Building a Map of Climate Impacts on Culture and Heritage</b> <a href="https://youtu.be/0f0ZbdgGZD4">https://youtu.be/0f0ZbdgGZD4</a>
S-16-Wellington	00:03:17 - 00:18:40
S-16-Rouhani	00:19:10 - 00:28:53
S-16-Wasswa	00:29:17 - 00:35:48
S-16-Zhou	00:36:22 - 00:42:37



S-16-Manti	00:43:08 - 00:55:42
S-16-Abdelrhman	00:56:16 - 01:01:52
S-17	<b>Climate Open Mic &amp; Positive Change Envisioning Exercise   Future is Now</b> <a href="https://youtu.be/5HRquEM3D6g">https://youtu.be/5HRquEM3D6g</a>
S-17-Kishnadwala	00:02:02 - 00:13:05
S-18	<b>Workshop – Every Place Has a Climate Story</b> <a href="https://youtu.be/j-kmgAdAUpU">https://youtu.be/j-kmgAdAUpU</a>
S-18-Elsayed	
S-18-Rockman	

## Day 4

S-19	<b>Climate Change, Culture and Peace in the Pacific Region</b> <a href="https://youtu.be/xx4KFkhMuc">https://youtu.be/xx4KFkhMuc</a>
S-19-Naupá	00:07:50 - 00:21:06
S-19-Ramsay/Ash	00:21:43 - 00:33:58
S-19-Poelina	00:34:22 - 00:47:18
S-20	<b>Adaptation in Action</b> <a href="https://youtu.be/YrhwsLCWC6Q">https://youtu.be/YrhwsLCWC6Q</a>
S-20-Soliman	00:03:57 - 00:16:12
S-20-Puglisi	00:18:16 - 00:26:37
S-20-Szalanska	00:28:22 - 00:36:55
S-20-Ozmertyurt	00:38:20 - 00:44:24
S-20-Pedersoli	00:45:53 - 00:55:30
S-21	<b>How Culture Sparks Solutions?</b> <a href="https://youtu.be/rVERK1YeZks">https://youtu.be/rVERK1YeZks</a>
S-21-Amassi	00:02:19 - 00:10:55
S-21-Mpumwana	00:11:35 - 00:18:20
S-21-Safi	00:19:00 - 00:27:23
S-21-Chakraborty	00:28:20 - 00:34:38
S-21-Kwapong	00:36:00 - 00:43:12
S-22	<b>Connecting Culture and Nature Knowledge</b> <a href="https://youtu.be/stfVyxwsBSo">https://youtu.be/stfVyxwsBSo</a>
S-22-Newland	00:24:56 - 00:37:37
S-22-Wong	00:42:21 - 00:50:03
S-22-Franceschini	00:02:26 - 00:21:25
S-22-Sonehag	00:53:17 - 01:01:35
S-23	<b>Adaptation Through Built Heritage</b> <a href="https://youtu.be/EGpczNriTYg">https://youtu.be/EGpczNriTYg</a>
S-23-Joffroy/Gandreau	00:05:41 - 00:18:20

S-23-Mohammedali	00:19:08 - 00:31:52
S-23-Fares/Hanna	00:33:49 - 00:46:18
S-23-Piqué	00:49:00 - 01:01:16
S-23-Twahir	01:13:15 - 01:25:45
S-23-Noro	01:43:24 - 01:59:56
S-24	<b>Workshop – The Futures We Write for Climate, Culture and Peace</b> <a href="https://youtu.be/pSbm50zUZ_8">https://youtu.be/pSbm50zUZ_8</a>
S-24-Unal	
S-24-Atabay	
S-24-Egeli	
S-25	<b>Heritage as a Source for Innovation and Coping Capacities</b> <a href="https://youtu.be/1cbAtO8Q-Sk">https://youtu.be/1cbAtO8Q-Sk</a>
S-25-Gound	00:04:30 - 00:14:59
S-25-DeGeorgey	00:15:50 - 00:26:12
S-25-Shirazi	00:27:06 - 00:38:51
S-25-Chaouni	00:40:11 - 00:52:40
S-25-Odegaard	01:15:45 - 01:25:47
S-26	<b>Youth Open Mic</b> <a href="https://youtu.be/XdwPomQ4FOs">https://youtu.be/XdwPomQ4FOs</a>

## Day 5

S-27	<b>Culture in Support of Carbon Budgets</b> <a href="https://youtu.be/6O0Kol_EbSk">https://youtu.be/6O0Kol_EbSk</a>
S-27-Nogueira	00:06:53 - 00:17:37
S-27-Briccola	00:18:34 - 00:30:34
S-27-Coggins	00:31:47 - 00:43:03
S-27-Cosaert/Whitehead/Wilson	00:44:26 - 00:53:57
S-27-Kramer	00:55:17 - 01:05:16
S-28	<b>At the Forefront of Culture, Heritage, and Climate</b> <a href="https://youtu.be/2NGq9CMXVqA">https://youtu.be/2NGq9CMXVqA</a>
S-28-Grady	00:02:43 - 00:10:00
S-28-Bullock	00:11:37 - 00:19:00
S-28-Woodside	00:21:09 - 00:31:45
S-28-Guner/Aydin	00:34:20 - 00:40:10
S-29	<b>Transdisciplinary Action to Recognize Loss and Enhance Sustainability</b> <a href="https://youtu.be/2G116voKa_k">https://youtu.be/2G116voKa_k</a>
S-29-Dawson	00:04:20 - 00:13:05
S-29-Celles	00:16:30 - 00:26:02
S-29-Ronchini/Glindmeier	00:28:35 - 00:39:42
S-29-Panayot	00:41:41 - 00:52:03

S-30	<b>Workshop – Vulnerability, Capacities or Justice?</b>
S-30-Chmutina	
S-31	<b>Growing Ways to Learn and Share</b> <a href="https://youtu.be/etpaM49gEh8">https://youtu.be/etpaM49gEh8</a>
S-31-Dunand	00:03:02 - 00:16:19
S-31-Wilson	00:17:45 - 00:30:57
S-31-ElSayed	00:32:07 - 00:45:05
S-31-Arce	00:46:17 - 01:00:17
S-32	<b>The Lusophone Perspective on Climate.Culture.Peace</b> <a href="https://youtu.be/QkBAIBsopuY">https://youtu.be/QkBAIBsopuY</a>
S-32-Charumar/Chuquela/Inoque	00:05:49 - 00:21:15
S-32-Fernandes	00:27:25 - 00:44:09
S-32-Ferreira/Carvalho	00:45:40 - 01:04:46
S-32-LéCó	01:05:15 - 01:23:54
S-32-Paupério/Romão	01:25:24 - 01:39:14
S-33	<b>Workshop – Dialogue and the Root Causes of Climate Crisis</b> <a href="https://youtu.be/8Gs2i9OCDkA">https://youtu.be/8Gs2i9OCDkA</a>
S-33-Paynter	
S-33-Norris	
S-34	<b>Heritage in Climate Action– Stepping Forward in Policy, Research and Practice</b> <a href="https://youtu.be/nS5sn-q4VTY">https://youtu.be/nS5sn-q4VTY</a>
S-34-Oner	00:12:20 - 00:17:22
S-34-Shephard	00:17:43 - 00:28:20
S-34-Chang-Yunn	00:28:48 - 00:35:34
S-34-Kombo	00:36:38 - 00:45:40
S-34-Kanji	00:59:04 – 01:06:38
S-34-Ibrahim	01:11:23 - 01:21:56
S-34-Jopela	01:22:08 - 01:34:39
S-34-Aslan	01:34:44 - 01:45:02
S-34-Douglas	01:47:45 - 1:58:40
S-34-Tiwari	01:58:46 - 2:08:04
S-34-Sciacchitano	02:08:13 - 02:17:26
S-34-King	02:17:34 - 02:29:07
S-34-Taboroff	02:29:12 – 02:45:30
S-34-Grant	02:45:36 – 02:54:44

# Annexe 03

## The Scientific Committee

Name	Country	Institution
<p>Aparna Tandon, Project Leader and Senior Programme Leader of the First Aid and Resilience for Cultural Heritage in Times of Crisis Programme (FAR), ICCROM</p> <p>FAR Team, ICCROM</p> <p>Jui Ambani, Editor, Design and Strategy Lead</p> <p>Kelly Hazejager, Editor, Website and Social Media Content Writer</p> <p>Mohona Chakraborty, Research, Evaluation and Monitoring</p> <p>Joao Pedro Otoni, Web Research and Networking (Lusophone Countries)</p> <p>Anthony Rizk, Partnerships and Networking (MENA region)</p> <p>Yurim Jeong, Intern</p>		
Marcy Rockman	USA	Consultant and Scientific Coordinator
Thierry Joffroy	France	AE&CC - ENSAG - Univ. Grenoble Alpes
Richard Asiimwe	Uganda	Uganda National Museum
Dr David Gandreau	France	AE&CC - ENSAG - Univ. Grenoble Alpes
Repaul kanji	India	Gujarat Institute of Disaster Management
Samuel FrancoArce	Guatemala	Casa K'ojom Cultural Rescue Center
Eugenie Crete	France	CRATerre
Xavier Romão	Portugal	University of Porto
Esmeralda Paupério	Portugal	University of Porto
Catherine Forbes	Australia	Australia ICOMOS
Anita Smith	Australia	La Trobe University
Sarah Stannage	UK	International Institute for Conservation of Historic and Artistic Works (IIC)
Abhiyant Tiwari	India	LEAD India
Ksenia Chmutina	UK	Loughborough University
Abdelhamid Salah al-Sharief	Egypt	EHRF
Carl Ampah	Ghana	UNESCO Office in Accra
Cathy Daly	UK	University of Lincoln
Eyyas Abras	Syria	UNICEF Syria
Bakonirina Rakotomamonjy	France	CRATerre

# Annexe 04

## The Advisory Group

Name	Country	Institution
Chiara Arrighi	Italy	University of Florence
Aline Vieira de Carvalho	Brazil	ICOMOS Brazil
Terry Little	Nigeria	Ahmadu Bello University
Rossana Mancini	Italy	Department of History, Representation and Restoration of Architecture – Sapienza University of Rome
Mohammed Aidid	Yemen	General Organization for Preservation of Historic Cities (GOPHCY)
Zeynep GülÜnal	Turkey	ICORP Turkey
DeborahBriccola	Switzerland	Institute of Materials andConstructions (IMC) and the Institute of Earth Sciences (IST) of the University of Applied Sciences and Arts of Southern Switzerland
Eefje Hendricks	Netherlands	Avans University of Applied Sciences
Eugene Jo	Italy	ICCROM
Rohit Jigyasu	Italy	ICCROM
Elly Harowell	UK	Coventry University
Bijan Rouhani	UK	Oxford University