

SCIENTIFIC COUNCIL OF ICOMOS
TRIENNIAL SCIENTIFIC PLAN (TSP) 2021-2024

CULTURAL HERITAGE AND CLIMATE ACTION



TRIENNIAL SCIENTIFIC PLAN 2021-24

Appreciation

To all the Scientific Committees, National Committees and Working Groups who contributed time and effort into the 2020 annual report survey, and hence the preparation of this report, all the members of ICOMOS thank you. By providing us all with examples, ideas and case studies, this new Triennial Scientific Plan 2021-2-024 emerges. Thank you.

The three years ahead will hold many opportunities for capacity building, collaboration and dialogue. Challenges and opportunities that the ICOMOS network will be sharing. Please engage.

This report was compiled by a small Triennial Scientific Plan 2021-2024 Working Group of volunteers, that was established by the Advisory Committee early in 2021 to undertake the implementation of the Triennial Scientific Plan Reboot 2019-2021 report. It was chaired by Scientific Council Officer Sheridan Burke (Australia, author chapter 2 and Question 1) and included scientific Council Officer Christer Gustafsson (Sweden, Question 2 author) and an enthusiastic team of AdCom volunteers: Kate Lim (Philippines, Question 3 author); Graciela Mota (Mexico, Question 4 author and Spanish translation) and Oliver Sukrow (Austria, Question 5 author) each of whom generously provided many hours of collaborative analysis and input. The intergenerational engagement and multi-regional and interdisciplinary composition of this working group is distinctive of the ICOMOS network. The many, many contributions of ICOMOS committees and individual members to the development of the TSP21-24 is gratefully acknowledged and appreciated by your ICOMOS colleagues.

Thanks to Clare Moore Designs and Marita Smith for volunteering to help in final editing, photography and layout. From many different authors, a cogent report emerged thanks to their patience and skill.

The advice and input of Will Megarry (Ireland, author chapters 1 and 2), the incoming ICOMOS Focal Point for Climate and Heritage has been wise, intensive and much appreciated by the TSP working group. We look forward to the roll out of the CCHWG engagement strategy and the 2021-2024 Triennial Scientific Plan ahead.

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15 October 2021

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ICOMOS and its fondness for **ACRONYMS**

To help you get in touch with ISCs for collaboration and inspiration and to understand the acronyms we use in this report, below is the current list of ICOMOS <u>International Scientific Committees</u>. It is regularly updated on the ICOMOS website, as is the list of <u>national committee addresses and contacts</u>.

Addresses and contacts of International Scientific Committees

ISCARSAH: International committee on Analysis and Restoration of Structures of Architectural Heritage

ICAHM: International committee on Archaeological Heritage Management

ISCCL: International committee on **Cultural Landscapes** ICOMOS-IFLA

CIIC: International committee on Cultural Routes

ICTC: International committee on Cultural Tourism

ISCEAH: International committee on Earthen Architectural Heritage

ISCEC: International committee on Economics of Conservation

ISCES: International committee on Energy and sustainability

IcoFort: International committee on Fortifications and Military Heritage

CIPA: International committee on Heritage Documentation

CIVVIH: International committee on Historic Cities, Towns and Villages

ICIP: International committee Interpretation and Presentation Cultural Heritage Sites

ICICH: International committee on Intangible Cultural Heritage

ICLAFI: International committee on Legal, Administrative and Financial Issues

PRERICO: International committee on Places of Religion and Ritual

IPHC: International **Polar Heritage** Committee

ICORP: International committee on Risk Preparedness

CAR: International committee on Rock Art

ISCSBH: International committee on Shared Built Heritage

ISCV: International committee on Stained Glass

ISCS: International committee on Stone

Theophilos: International committee on Theory and Philosophy of Conservation and Restoration

CIF: International committee on Training

IIWC: International committee on Wood

ICUCH: International committee on Underwater Cultural Heritage

CIAV: International committee on Vernacular Architecture

ISC20C: International committee on 20th Century Heritage

THE CLIMATE CRISIS ICOMOS TRIENNIAL SCIENTIFIC PLAN 2021-24

Climate change is the greatest threat facing humanity and its cultural heritage. The gravity of the situation was acknowledged at the 2020 ICOMOS General Assembly which declared a Climate and Ecological Emergency and called upon other culture and heritage organisations to do the same. It also called for urgent collective action by all relevant actors to safeguard cultural and natural heritage from climate change, acknowledging that existing heritage practices, mechanisms and methodologies may need to change or be supplemented. The Assembly significantly resolved that, for the first time, its next Triennial Scientific Plan (TSP 2021-2024) would be focused on climate change action, and resolved to support collaborative work between all its committees and members for presentation as the TSP 2021-2024to the 2021 General Assembly.

This is the first ICOMOS Triennial Scientific Plan to ambitiously attempt a coordinated effort amongst members and committees to focus on this single scientific issue. It proposes three—years of dedicated engagement by the ICOMOS Scientific Council and National Committees, International Scientific Committees, Working Groups and the Climate Change and Heritage Working Group (CCHWG). There are two key drivers for this plan.

The first driver is the groundbreaking *Future of Our Pasts* Report (colloquially known as the FOOP report) which was prepared by the Climate Change and Heritage Working Group for ICOMOS in 2019. This document outlined, for the first time, the many intersections between cultural heritage and climate, and identified key future challenges for climate action.

The second driver is the Scientific Council survey of all ICOMOS committees and working groups about climate change related initiatives within 2020 Committee Annual Reports, aligned to key themes from the *Future of Our Pasts* report. Most importantly, the survey asked respondents to identify areas where support, collaboration and direction were needed.

These two drivers have provided us with both a snapshot of current activities and a roadmap for future direction. This Triennial Scientific Plan 2021-2024 attempts to marry both, providing an overview of

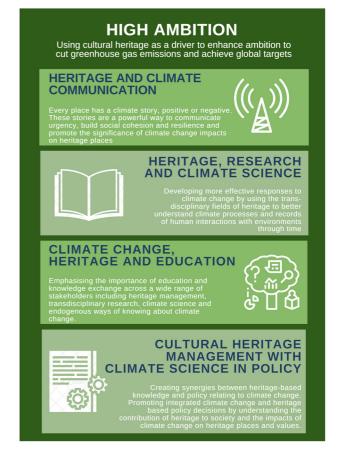
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key themes and action points, while also identifying future opportunities and directions for ICOMOS and its committees.

What is clear is that many in the ICOMOS community are already meaningfully engaged in climate action on a range of fronts. From conferences and networking to training and policy engagement, Working Groups, Committees and the ICOMOS Secretariat are already key stakeholders in the wider climate heritage movement. Initiatives like the Climate Heritage Network, the upcoming IPCC-UNESCO-ICOMOS 2021 expert meeting, and contributions to the updated UNESCO guidance on climate change and World Heritage attest to the scale and high ambition of this action.

Yet one of the key findings of the survey was also the strong desire amongst other parts of the ICOMOS community for increased support and dialogue on climate change, and collaboration on climate issues. This includes greater collaboration and communication within ICOMOS and also a desire to build networks with relevant stakeholders outside the organisation.

A desire to engage more fully with traditional ways of knowing and knowledge systems was also clear from the survey responses, and this aligns strongly with both the Paris Agreement and themes from the *Future of Our Pasts* report including traditional ecological knowledge in climate adaptation strategies, carbon and greenhouse gas mitigation and achieving high ambition for climate action. It also reflects the importance of both climate justice and social justice, and alignment of ICOMOS' climate action with the United Nations Sustainability Goals.



The *Future of Our Pasts* report discussed the importance of both climate communication and collaboration in some detail; specifically, it promotes the need to engage with the best possible science (including traditional knowledge systems) to better understand impacts and adaptation and to ensure that policies and climate actions are fair and equitable. Key to all this is the immense communicative

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power of people and places. Case studies and stories make heritage a powerful climate action asset and ICOMOS is in a unique position to promote and share these stories.

At an organisational level, ICOMOS must also continue its high-level collaboration and policy development efforts while also offering grass-roots support to committees to encourage climate action. Many Committees felt they lacked the capacities and knowledge necessary to meaningfully engage in climate action. Many relevant resources are, or have been, developed by ICOMOS or other organisations in recent years (for example, the Climate Vulnerability Index or CVI), and these can be made more accessible to members. Other actions can include embedding carbon literacy at every level of the organisation and working with scientific committees to identify gaps and develop and share appropriate toolkits and training resources. This support will become increasingly important as existing assessment and vulnerability methodologies adapt to the climate crisis and new tools emerge to fill gaps. This will be a challenge, but the resilience and resourcefulness of 10,000+ ICOMOS members is a force to be harnessed.

This TSP 2021-2024 has been conceived to be a dynamic platform for engagement, shared learnings and collaboration for committees and members. The Scientific Council in collaboration with the CCHWG will report to the Board regularly on its progress. Committees will be invited to report on their activities and needs and annual Advisory Committee meetings will update all ICOMOS members and share outcomes and initiatives. A number of the organisational recommendations will need consideration by the Board and resourcing for its implementation. The urgency of the issue is well understood at all levels.

Fundamental to the ICOMOS response must be an acknowledgement that climate change is a distinctly cultural phenomenon. From the industrial revolution to the present, human agency and culture has been central to the crisis. ICOMOS National and International Scientific Committees and Working Groups felt they had a role in stressing urgency and promoting climate action to the general public as well as professional colleagues. The importance of this climate communication, stressing urgency and raising ambition were key themes in the *Future of Our Pasts* and this acknowledgement clearly reflects a deep understanding of, and belief in, the value and power of culture and heritage for society as a whole. Fundamentally, we cannot adapt our way out of this crisis. Meaningful, just and global action is required to achieve change and cultural heritage is a key part of the solution.



Facing the Climate Change Emergency

This is the first ICOMOS Triennial Scientific Plan to ambitiously attempt a coordinated effort amongst members and committees to focus on a single scientific issue. The urgency of the impacts of climate change demands such attention from us all.

At the virtual General Assembly in December 2020, ICOMOS members unanimously resolved to support the <u>Triennial Scientific Plan (TSP) 2019-21 Climate Change Reboot</u> report to re-focus all our joint and combined efforts on climate change action, by collaboratively identifying ways and means to expand knowledge and share good practice responses to climate change.

TSP 21-24 OBJECTIVE 1: Develop and identify climate heritage change actions, research and documentation throughout the ICOMOS network and make it accessible.

TSP 21-24 OBJECTIVE 2: Re-focus proposed ICOMOS meetings and Scientific Symposia 2021-24 on climate change impacts on specific heritage places and issues.

The General Assembly also approved the **ICOMOS General Programme 2021 - 2023** mission to: Actively promote the theme of climate change and cultural heritage as the core topic of the Triennial Scientific Programme Outcome: Inclusion of cultural heritage issues and approaches in core scientific work and policies on climate change at the national and international level.

Also at the virtual 20th General Assembly in December, ICOMOS declared a <u>Climate and Ecological Emergency</u> and called upon other cultural and heritage organizations to do the same. The strategic principles of the 2017 <u>ICOMOS Action Plan for Cultural Heritage and Localizing the Sustainable Development Goals (SDGs)</u> provided impetus to the call to action and the TSP 2020-2021 reboot.

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Externally, ICOMOS has been instrumental in the establishment of the <u>Climate Heritage Network</u> (2018), in co-hosting the Nature Culture component of the <u>Panorama</u> platform (2020) and providing commentary on a range of declarations and guidance documents globally, recently including the <u>Draft updated Policy Document on the Impacts of Climate Change on World Heritage Properties</u> (unesco.org)

ICOMOS participates in a multitude of international meetings and fora to advance debate and public visibility of the role of heritage in climate change adaptation. With the impact of the Covid 19 Pandemic, the accessibility of such meetings has expanded and opportunities for member participation and observation has grown.

"The Future of Our Pasts: Engaging Cultural Heritage in Climate Action ICOMOS (2019) scoped the ways in which cultural heritage can drive climate action and also catalogued the many impacts of climate change on heritage places and values.

Internally, the *Triennial Scientific Plan Reboot* and the roadmap to be prepared by the CCHWG were to be the major engagements for ICOMOS committees and members. Although the CCHWG roadmap did not eventuate, three major actions were initiated by the Scientific Council, in collaboration with a range of ICOMOS working groups and committees which eventuated in an even more inclusive roadmap that aligns directly with the engagement strategy proposed. This included:

- A survey of all National and Scientific Committees to identify actions underway and needs of committees and their hopes of what ICOMOS could collaborate
- Planning for the triennial annual Scientific Symposia to set themes aligned to climate change issues,
- Planning for the climate change action related themes for the International Monuments and Sites Day (18 April) for the next triennium with the EPWG.

ICOMOS Committees at Work

TSP20-21 OBJECTIVE 1

Develop and identify climate heritage change actions, research and documentation throughout the ICOMOS network and make it accessible.

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Responding to this objective of the TSP Reboot report, a survey was integrated into the 2020 Annual Report survey. All ICOMOS National and International Scientific Committees and Working Groups were asked:

- Q1 What can each ICOMOS committee and WG contribute to support heritage places and professional practice in climate change action?
- Q2 What can ICOMOS do organizationally to develop and provide access to dialogue, research, and documentation linking climate change and heritage?
- Q3 What can ICOMOS members do to engage climate scientists in understanding the role that cultural heritage plays in climate change responses and action?
- Q4 What can ICOMOS do to understand the repercussion of climate change in heritage conservation processes and policies, and to adapt practice to the changing situation?
- Q5 What can ICOMOS do to improve policies and practice, to minimize the impact on cultural heritage conservation of climate change?

The analysis groups committee responses to the survey under five key actions:

- Improving Communication,
- Facilitating Collaboration,
- Developing Research and Policy,
- Building Capacities and
- Respecting traditional knowledge

Committee responses indicated that they understand that raising public awareness by telling climate change stories is central to improving policies and practice, and to reducing impacts on cultural heritage conservation of climate change in the first place. Committees are trying to achieve this by sharing experiences and acknowledging best-practice examples as well as by seeking closer ties with political actors in order to involve ICOMOS's climate change topics in national agendas.

Telling climate change stories is pursued with webinars, on Facebook pages, conferences, lectures, or by publishing guidelines and manuals. Some ISC's and NC's are collaborating with each other to share experiences but many committees are seeking direct collaborations with policy decision makers and political leaders, e.g. to re-formulate management plans that include climate change risks and consequences. Research and policy development is taking place within the committees themselves (by adapting conservation policies) or by co-research with local management agencies, universities or local communities.

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Those newly developed or adapted guidelines might support capacity building to understand, educate, and train (future) experts to face challenges of climate change (e.g., through tool kits, dedicated working groups).

While traditional knowledge is respected as a rich source of inspiration and knowledge for places facing climate change consequences on a local level, bottom-up perspectives are not often accessible to committees.

World Heritage sites were identified as opportunities for case studies and collaborative effort.

How can ICOMOS most effectively share and learn from these initiatives?

Annual Report Survey Outcomes: What Next?

The Annual Report survey responses did not include all committees and during the triennium 2021-24, more committee initiatives and actions will join the structure, and be included at each review period of the triennium. Nonetheless, these responses included valuable initiatives and case study stories. To successfully support these concepts four major outcomes have been distilled:

COMMUNICATIONS

1. There is strong support for developing a centralised ICOMOS on-line portal to access heritage and climate change action (CCA) related documentation, guidance, discussions, solutions and building blocks and forums. Demonstrating ICOMOS global leadership, this portal would be hosted via the ICOMOS website, with support from ICOMOS organizationally and administrative input from ICOMOS Volunteers and CCHWG members.

CAPACITY BUILDING

2. Committees need an assembly of climate change action and cultural heritage capacity building resources. By simply sharing good solutions, methods, examples and case studies through ICOMOS toolkits, members can build their own capacities, as well as educating clients, practitioners and governments about climate change action and its linkages to cultural heritage assets. Such a knowledge exchange platform will be dynamic, ever changing, and is most appropriately managed by the CCHWG (in collaboration with the Secretariat). A key example of content for the toolkit would be an Executive Summary of the FOOP report for broad use. The role of CCHWG focal points in WG, ISCs and NCs in monitoring, managing and developing this platform through the triennium is a task ahead.

EDUCATION AND DISCOURSE:

3. Enhancing timely access and content to an events calendar on the ICOMOS Website will improve committee communication and collaboration opportunities. Uploading items about national climate change action events of global interest as well as international symposia, will broaden access and participation, especially during Covid, when so much has moved on-line. A rolling program of thematic engagement on climate change issues is recommended.

ENGAGEMENT

- **4.** Engaging respectful discourse with traditional knowledge holders about climate change action is acknowledged as needed by many committees. Exploration of appropriate engagement and learning through the Indigenous WG and OCD-RBA WG in collaboration with the CCHWG would be valued.
- **5.** World Heritage sites are opportunities to share experience and engage communities in stories about climate change learnings. ICOMOS' role in World Heritage assessment and management offers access and means to showcase great work and encourage improvements.

ICOMOS Members Engaging

TSP 20-21 OBJECTIVE 2: Re-focus proposed ICOMOS meetings and Scientific Symposia 2021-24 on climate change impacts on specific heritage places and issues.

Responding to the second objective of the TSP Reboot report, The Scientific Council has developed climate action alignments for the ICOMOS Annual scientific symposia and annual monuments and sites day themes for the triennium 2021-24.

ICOMOS ANNUAL SCIENTIFIC SYMPOSIA THEMES:

2021 – LIVING HERITAGE 'How will climate change affect understanding, assessing and managing places directly or tangibly associated with events, or living traditions with ideas or beliefs and artistic and literary works -the Rights Based Approach group (OCD RBA WG) and the Intangible (ICICH) have taken the lead.

2022 – RELIGIOUS HERITAGE 'How will climate change affect Celebrating and conserving places of religious and ritual significance in a global world' PRERICO (Religion) to lead development

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of symposia theme, collaboration invited including Intangible (ICICH), Legal (ICLAFI), and Archaeology (ICAHM) committees.

2023 GA – HERITAGE CHANGES: RESILIENCE – RESPONSIBILITY – RIGHTS RELATIONSHIPS The General Assembly 2023 theme will examine the tumultuous changes of the first years of the 2020s, including climate change and sustainability: Australia ICOMOS leads.



INTERNATIONAL MONUMENTS AND SITES DAY THEMES:

2022 "Heritage and Climate Justice" is the theme proposed for 18 April 2022, to motivate relevant communities and actors to collaborate through international partnership, inclusion and solidarity for the most vulnerable groups. Opportunity for committees to showcase strategies that protect lands and seas, Disaster Risk (Climate-Induced, Human-Induced), Vernacular Heritage, Heritage in Conflict, Heritage & Democracy, Indigenous Heritage, Scared-scape or Sacred Heritage Refer: SDGs 1, 2, 6, 7, 10, 11, 12, 13, 14, 15 and 1).

2023 "Heritage, Climate Action and Innovative Transformations" is the theme proposed for 18 April 2023, focusing on creative technological innovation through integration with traditional/historic building construction of adaptive reuse, energy efficiency of heritage buildings and landscapes; advocating for economic viability of heritage sites as sustainable investments for future cities and settlements. Opportunities for committees to showcase how heritage can be part of solutions and innovations to combat climate change and address Disaster Risk (Climate-Induced, Human-Induced), Vernacular Heritage, Heritage in Conflict, Heritage & Democracy, Indigenous Heritage, Scaredscape or Sacred Heritage Refer: SDGs 4, 7, 8, 9, 11, 12, 13, 14, 15, 17.

The Triennium Ahead

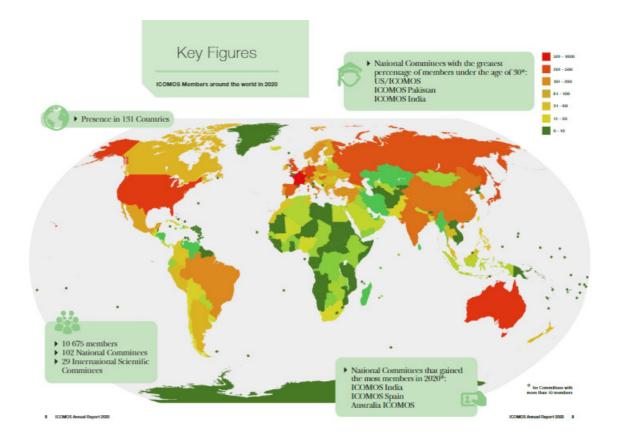
The energetic responses from members and committees to the TSP 2021-2024 survey indicate that ICOMOS committees and members are already engaged in a wide range of climate change activities.

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Never before has a single issue united the 10,000+ members of ICOMOS in a similar way. Here is an important role for ICOMOS organizationally - to develop An on-line knowledge portal for members; and for committees to build their capacity, educate members and to share experience and case studies. Though the ICOMOS network and partnerships committees envision opportunities to engage with key stakeholders including traditional knowledge holders and climate scientists on our global future.

The Covid 19 pandemic has taught us all the benefits (and drawbacks) of zoom communications and social media reach. We have seen at the first virtual General Assembly that the openness of online meetings can facilitate attendance by a wider range of members, including many unable to travel but able to zoom. This is a lesson for the implementation of the Triennial Scientific Plan-support is strong for on-line access to documentation, guidance, discussion and forums will be the most significant communication channel over the life of this Triennial plan. Enhanced support from ICOMOS organizationally will be needed, with input from CCHWG and ICOMOS Volunteers.

We start the next triennium with apprehension about the ongoing impacts of the Covid 19 pandemic, we will end it with a heightened sense of emergency if the measures of the Paris Agreement fail. ICOMOS and its members all have roles to play.





Onward and Upward

This plan is a call to action for all the ICOMOS community. The 2019 *Future of Our Pasts* report and the 2020 ICOMOS committees annual report survey clearly show a desire for action, but also a call for help and guidance which requires an organisational response. This response necessitates three key inputs/ strategies. These are:

- 1. The capacities, knowledge and continued dedication of ICOMOS Committees and Working Groups, specifically the Climate Change and Heritage Working Group, to share their time and experience to develop resources to share and help each other achieve climate action;
- 2. The support and resources of the ICOMOS Secretariat and ICOMOS volunteers to help with the construction of a web portal and to assist in the dissemination of guidance documents and encouragement to the wider ICOMOS community based on a strategic engagement plan; and
- **3.** Guidance and oversight from the ICOMOS Scientific Council for the ongoing development and implementation of the Triennial Scientific Plan 2021-24.

The two key parts of this strategy are: An ICOMOS Resource Portal, and a Climate Change and Cultural Heritage Engagement Plan.

An ICOMOS Resource Portal

Central to resourcing the wider ICOMOS community is the availability of information and resources. It is proposed that a public-facing web portal be created, where ICOMOS committees and members can access the information and resources they need to meaningfully achieve their climate action ambitions. This plan has outlined the range and extent of these resources including stories and case studies, carbon literacy resources, and toolkits and guidance on best-practice for heritage management,

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including vulnerability assessment and adaptation planning. There is also a strong desire for networking, collaboration and community.

This portal could be used to share events and experiences through a calendar and can act as a 'one stop shop' - a toolkit for the National and International Scientific Committees and members requiring resources to achieve climate ambition and promote action. It could be hosted by the Secretariat but content would be created and moderated by Climate Change and Heritage Working Group members, with input from Committees through CCHWG Focal Points, Scientific Council and ICOMOS volunteers. A proof-of-concept is presented below.

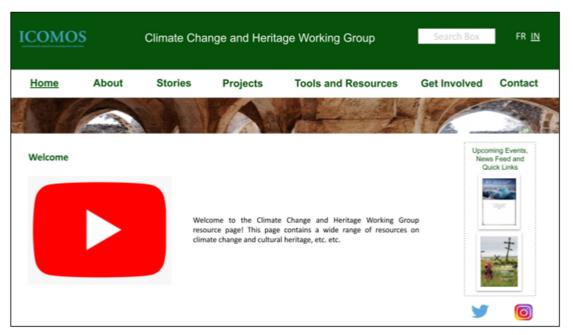


Figure: Examples of potential ICOMOS resource site. Home Page (Above)

The Climate Change and Heritage Working Group

The Climate Change and Heritage Working Group is in a unique position to support this portal and the wider Triennial Scientific Plan. With membership in almost all National and International Scientific Communities, it is embedded within every part of the ICOMOS community. It is proposed that the Working Group develop a three-year engagement strategy aligned with the themes of the *Future of our Pasts* report and the new Triennial Scientific Plan 2021-24, to promote key actions to the wider ICOMOS community. The strategy would focus on different themes and topics at different times, and the abovementioned resources would be released to coincide with this timetable. International Scientific and National Committees would be encouraged to align events and strategies to reflect this

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strategy. However, it is accepted that some topics will be more relevant than others. Material and suggestions can be disseminated via the ICOMOS Secretariat and online via the CCHWG Working Group website.

2022 - Impacts			2023 - Action			2024 - Communication		
January - April	May - August	August - December	January - April	May - August	August - December	January - April	May - August	August - December
Loss & Damage	Adaption Planning	Equity, Justice & Sustainability	Mitigation	Conservation	Tools & Methods	High Ambition	Stressing Urgency	Heritage as an Asset

Table: Example of themes and engagement strategy 2022 - 2024



Q1: What can ICOMOS committees and working groups contribute to support climate change action for heritage places & professional practice?

Six Key Actions for Committee contributions

ICOMOS Committees want to maximise the effectiveness of their contributions to climate change action. This needs improvements to communication platforms both organizationally within ICOMOS and through committees and working group activities. The leadership role of the CCHWG and respective committee focal points will energise these efforts throughout ICOMOS. Activities in six high ambition areas are planned:

- 1. COMMUNICATIONS: Support for developing a centralised ICOMOS on-line portal to access heritage and climate change action related documentation, guidance, discussions, solutions and building blocks and forums. Demonstrating ICOMOS global leadership, this portal would be hosted via the ICOMOS website, with support from ICOMOS organizationally and administrative input from ICOMOS Volunteers and Climate Change Heritage Working Group members.
- 2. CAPACITY BUILDING: Facilitating the assembly of climate change action and cultural heritage capacity building resources. By simply sharing good solutions, methods, examples and case studies through ICOMOS toolkits members can build their own capacities, as well as educating clients, colleagues and governments about climate change action and its linkages to cultural heritage assets.

Such a knowledge exchange platform will be dynamic, ever changing, and is most appropriately managed by the CCHWG (in collaboration with the Secretariat). The role of CCHWG focal points in WG, ISCs and NCs in monitoring, managing and developing this platform through the triennium is a task ahead. A key tool recommended is an Executive Summary of the *Future of Our Pasts* (FOOP) report for broad use.

4. EDUCATION AND DISCOURSE: Enhancing timely access and content for an events calendar on the ICOMOS Website will improve communication and collaboration opportunities. Uploading items about national climate change action events of global interest as well as international symposia, will broaden access and participation, especially during Covid, when so much has moved on-line.

5.ENGAGEMENT:

Engaging in respectful discourse with traditional knowledge holders about climate change action is acknowledged as a gap by many committees, exploration of appropriate engagement and learning through the Indigenous WG and Our Common Dignity OCD-RBA WG in collaboration with the CCHWG would be appreciated and valued.

6.WORLD HERITAGE SITES

World Heritage sites are opportunities to share experience and engage communities in stories about climate change learnings. ICOMOS role in world heritage assessment and management offers access and means to showcase great work and encourage improvements.

Committee Contributions Underway

- An online course on <u>Climate change and risk assessment for cultural heritage</u> was offered by ICOMOS Argentina, La Plata City Foundation and the Heritage and Climate Change Initiative, in 2020, with support from the EPWG.
- Caring for Country Webinars (Australia ICOMOS WG) Australia ICOMOS established a working group of Indigenous and non-Indigenous members: the Caring For Country Committee. to create a conversation around the issues arising in Oceania on climate change and the impacts for Indigenous people on country and culture. A series of webinars started mid-2021 for three years, to allow a voice for Indigenous people in the region and for the discussion

to continue in the leadup to GA2023 in Sydney, where a face to face Caring for Country workshop will be organized.

• Antarctic Archaeology Guidelines (IPHC) The Guidelines being developed by IPHC on archaeology in Antarctica, and on underwater heritage in polar regions, will provide professional guidance including best practice approaches required for climate change responses. The importance of broad consultation to provide information and insights and to develop institutional engagement with the draft guidelines has been demonstrated via multilevel engagements necessary under the Antarctic Treaty. All committees have been invited to comment on the draft and input from the SDGWG has already further strengthened its relevance to climate change responses.

Opportunities

- There is an opportunity for ICOMOS to facilitate easy sharing of access to Climate change
 and heritage information through a website platform, accessible across its membership and
 partners. Several ICOMOS committees already have a proven track record of providing regular
 events and Enews, as proof of concept models and protocols are available.
- Access to the ICOMOS Website calendar for timely publicizing of national events of global interest as well as international symposia would be welcomed, building member participation and capacity.
- Engaging with current research and respectful discourse with traditional knowledge
 holders about climate change action was acknowledged as a gap by many committeesexploration of such engagement and learning through the Indigenous WG and OCD-RBA WG
 in collaboration with the CCHWG would be valued.
- Telling the climate stories of World Heritage sites as exemplars and case studies for climate change action is a global opportunity for ICOMOS members to engage locally and globally. Every place has a climate story.



Q2: What can ICOMOS do organizationally to develop and provide access to dialogue, research and documentation linking climate change and heritage?

Five actions for ICOMOS to develop as an organization globally

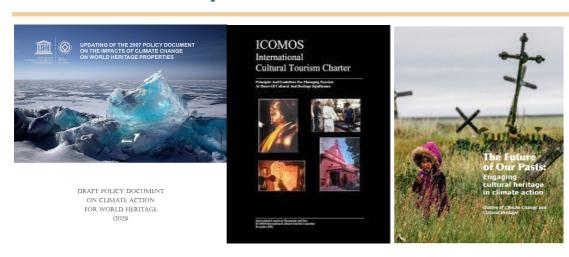
ICOMOS committees identified five major actions needed at organizational level by ICOMOS to assist the Triennial Scientific Plan implementation, to support the IPCC report as well as the UN SDGs in all its committee work at local and regional initiatives. A summary extract of committee responses is at Annex B.

The role of the Climate Change and Heritage Working Group and its committee focal points will be instrumental in implementing the TSP 2021-2024, developing toolkit documents and assembling research supported by the Secretariat facilitating organizational communication platforms. Key actions include:

Communications and dialogue: in addition to participating in high level policy development
and debate externally, developing a centralized ICOMOS platform for sharing member
access to relevant climate change information is needed, facilitating international linkages and
frameworks for collaboration and research, including circular economy strategies for members
and committees - a new ICOMOS webpage.

- 2. Capacity Building Resources: the **sharing of** good tools, methods, examples and case studies about climate change action is needed to help committees build capacity swiftly and with authority
- 3. Collaboration support: a calendar of ICOMOS climate change related conference and webinar activities managed across ICOMOS to facilitate broad audience reach and access, and particularly to engage emerging professionals would be welcomed.
- 4. Engaging with current research and discourse with **Traditional Knowledge holders about climate change action** is lacking. The support of the Indigenous WG in collaboration with the CCHWG would be valued.
- 5. Research and Documentation: need to support and provide ready access to **reference materials** and current research on cross sectorial work, e.g. via **Open Archive**, universities initiative.

Actions Underway



- Energy saving norms regulations and policies may be incompatible with the preservation of historic urban landscapes and buildings. Historic features may disappear or be greatly altered in the process of renovation (insulation of facades, roofs and levels, replacement of windows, modification in heating systems, etc.). In many countries around the world this is an important topic for discussion, research, and training and education, e.g., in Belgium.
- In Mexico, a diagnosis of World Heritage sites in the face of climate change shall be established in 2022 in connection to the 50th anniversary of the World Heritage Convention.
- ICOMOS provided review and support for the 2021 <u>Draft Policy Document on Climate Change</u> and World Heritage, through the CCHWG

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- <u>Cultural Tourism Charter Review</u> (ISCCT) The Cultural Tourism committee is updating and amending its charter currently and the impact of climate change will be addressed
- <u>Future of Our Pasts</u> Executive Summary (CCHWG)The preparation of an executive summary of the FOOP report is proposed as a useful tool for all committees

Key ICOMOS Opportunities

- Engaging with current research and discourse with **Traditional Knowledge holders about** climate change action.
- Development of a centralized **ICOMOS platform** for sharing access to relevant climate change information.
- Collaborative research on the role of climate change and heritage in the circular economy.



Q3: What can your committee members do to engage climate scientists and strategic stakeholders in understanding the role that cultural heritage plays in climate change responses and action?

Five Actions for Engaging Stakeholders

ICOMOS Committees propose to engage stakeholders including climate scientists through 5 courses of action:

- 1. Communications and dialogue: initiating discussions, building networks, and disseminating information both within ICOMOS committees and toward external stakeholders (government, academe, climate scientists, climate-related stakeholders, non-government organizations. A wide range of platforms are identified) publications/journal articles, press releases, town hall gatherings, webinars, educational activities) to raise awareness, share knowledge, and to collaborate on potential activities.
- **2.** Capacity Building Resources: Committees identified opportunities to organize education activities and workshops to public managers, universities, and other stakeholders where climate action in heritage can be discussed, and projects developed.
- 3. Collaboration: Virtually all committee responses reflected the need to build networks and extend known contact lists of possible collaborators. Emphasis was placed on including students/young specialists, emerging professionals and/or experts in the field. Ideas include establishing a team of experts to support various institutions and initiating multi-disciplinary and multi-sectoral programs and inter-ICOMOS Committee project activities.
- **4.** Committees recognize the need to continually be up to date with current research and advice as to respected sources and best practice methodologies (e.g. vulnerability assessments) is sought, to enable them to engage with a range of stakeholders. The need for respectful discourse with traditional knowledge holders about climate change action was not often mentioned in responses and building relationships through engagement/collaboration with

- groups such as RBA and the newly formed Indigenous Working Group is therefore a recommended action point for ICOMOS.
- 5. Research and Documentation: Committees recognized that to equip themselves for climate change engagement, many need to develop and recognize lessons, scientific knowledge within different sectors, which may be new to them. The use of case studies to comprehend issues and action points better was often cited as a means to engage. Committees also saw that there is a need to engage with community strategies to promote climate change resilience and felt that ICOMOS might provide a legal framework for being direct partners for international projects.

A summary extract of committee responses is at Annex C.

Actions Underway





- <u>Culture x Climate 2020</u> was a virtual global forum for arts, culture and heritage-based climate action presented by the <u>Climate Heritage Network</u>. It ran from 12 October to 27 November, anchored by Climate Heritage Week 2020 (16-22 November).
- SDGsWG: Established an MoU with UN-Habitat, which will look at issues of urban planning and SDGs and a partnership with the Global Heritage Fund, which will look at understanding how policy and heritage practice can come together to link heritage and sustainable development. A partnership with the United Cities and Local Governments (UCLG) will also encourage the role of heritage in cities, towns and villages. In all these partnerships, engagements to climate action can be integrated. Together with CCHWG and UN-Habitat, SDGWG have identified a potential project to review the New Urban Agenda for 2022 (Quito+6).
- <u>Colombia NC:</u> Each technical committee that is part of ICOMOS in Colombia, will have to undertake work to review and assess the production of scientific knowledge in different sectors

(not just the one that concerns the cultural), with this it is possible to articulate different perspectives to the management of the Cultural Heritage and bring it closer to the cultural communities that inhabit different regions. Each committee must demonstrate the link between the various sectors on cultural rights issues and how heritage will strengthen these links.

Key ICOMOS Opportunities

Based on the survey results, there is an enthusiasm by Committees to engage a range of stakeholders including climate scientists by identifying potential collaborators and partnering with them for various activities. This collaboration may be within the ICOMOS organization, between NCs and ISCs/WGs, and other external organizations like the government, non-government organizations, academic institutions, and individual experts. Collaborative activities may range from short-term engagements or long-term ones; however, the immediate action points relayed in the responses are more inclined to the short-term ones.

- Developing a long-term program within ICOMOS is an inviting opportunity to be developed within the TSP 2021-2024, perhaps on a rolling thematic basis, examining aspects of climate change where experience and research can be shared over an agreed time frame.
- Case studies mentioned may be interesting to those Committees that plan to examine programmatic and research action points that also require strong partnerships.
- Appropriate discourse with Traditional Knowledge owners is an apparent gap in committee experience and needs further consideration by ICOMOS committees and working groups.
- There is also a need to enhance networks and knowledge sharing by utilizing the internet-based digital platforms (e.g., website, social media) to foster information dissemination and collaborations.
- Besides expert engagement and institutional arrangements, there is a need to mentor and collaborate with heritage advocates and the next generation. Many committees are engaging with emerging professionals as they initiate and lead activities about heritage climate action.



Q4: What can your committee do to understand the repercussions of climate change in heritage conservation processes and policies, and to adapt practice to the changing situation?

Six key action areas for Adapting Practice

Many ICOMOS committees are engaging in assessing vulnerability and understanding impacts on heritage sites and materials. The climate drivers are recognised and mechanisms of impact are evident-table 1 from the FOOP report below conveniently summarises drivers and impacts. Committees are producing or adapting practice and guidance documents in response. A summary extract of committee responses is at Annex D. Key action include:

- Raising public awareness and engagement: to increase the state of the art knowledge about climate change, promoting heritage best practice methods and solutions for climate change impacts, improving collaboration on climate change policies and providing climate change risk preparedness advice and support.
- 2. Producing toolkits & frameworks to define climate change vulnerabilities and indicators: to help members to understand patterns of impacts and to share experience of adaptation measures in heritage management including scientific research case studies and surveys. Management Plans are the vehicle through which climate change vulnerability, adaptation and mitigation can be documented and the starting point of a multi-scale planning, from the global to the local.
- 3. **Disseminating solutions** through different talks, seminars, webinars, discussions and congress as well as presentations on things to consider in heritage protection practice due to climate change.
- 4. **Collaboration** and strengthening cooperation planning to contribute to international activities, from the recent review of the Climate Action for World Heritage document to COP meetings

- and the IPCC report. This will in turn foster more multidisciplinary research within the NCs and ISC of ICOMOS and is external to ICOMOS.
- 5. Capacity building to address climate change -particularly training-, and collaborations internal and with external groups and partners are underway or in planning stages. The IPCC report as well as the UN SDGs can be the starting point for discussion in e.g. webinars to recognize, document and follow up on cultural heritage practices associated with climate change and what committees can contribute with to achieve the different goals and targets.
- 6. **Recovering and respecting traditional knowledge**, assessing its benefits for adaptation, including the use of traditional organic and natural building materials/techniques and land management. Using heritage places such as World Heritage sites as focal points for tracking the impacts and implications of climate change, developing policies and providing training is a key collaboration opportunity for ICOMOS committees. There are so many climate stories to share.

Committee Actions Underway

- India NCWG is creating a national database of impacts of climate change on Heritage sites, to help understand impact patterns and to develop toolkits & frameworks for mitigative measures in heritage management.
- **Turkey NC** is working on vulnerability assessment defining pilot area(s) (such as WH sites of Turkey and other listed cultural heritage sites).
- **Russia NC** is supporting provision of equipment to monitor impacts on the state of monuments in the open air.

Key ICOMOS Opportunities

- The survey shows that there is a need for committees to engage more systematically and strategically in developing and providing access to dialogue, interdisciplinary research, documentation linking climate change and cultural heritage. There is also a need to engage and appreciate the role that traditional knowledge plays in site management and adaptation.
- There is a gap and clear opportunities for further consideration by ICOMOS organizationally in promoting interdisciplinary heritage research with climate science, which the Universities Initiative might take up.

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- Engaging respectfully with traditional knowledge, appreciating the knowledge of indigenous peoples and local knowledge community systems, with a view to understanding and integrating adaptation knowledge into relevant socioeconomic and environmental policies and actions, is a practice and knowledge gap. Rights Based Approaches (RBAs) to heritage offers a useful set of tools involving and listening to communities and building relationships.
- Collaboration and building knowledge exchange with committees and experts through communication, skills development and learning scenarios will facilitate understanding, learning and engagement. Joint meetings and projects have been identified by several committees.
- Dialogue may be within the ICOMOS organization, between NCs and ISCs/WGs, and other external organizations like the government, the public sector, non-government organizations, academic and culture institutions, and individual experts. It could be at international, national, regional or local levels. It might also be open to cooperation with the private sector. Collaborative activities may range from short-term engagements or long-term ones; however, the immediate action points relayed in the responses are more inclined to the short-term ones. Thus, developing a long-term rolling engagement program over the next triennium is an inviting opportunity to be examined. (Refer What's Next chapter).

Climate Driver	Mechanism of Impact				
	Influence on risks linked to frost				
	Heat-waves and days of extreme heat				
	Urban Heat Island Effect				
Increased Temperature	Thawing of permafrost (destabilization of buildings, foundations and infrastructure)				
	In cold and wet regions, the risk of damage to materials by chemical degradation is weak, while the risk of mechanical degradation is relatively high.				
	In warm and dry regions, there would be a high risk of chemical degradation, but the mechanical degradation would be reduced.				
	Coastal erosion leading to the destruction of landscapes, structures and archaeological sites.				
Sea Level Rise	Submersion of the littoral zone by over Flooding, crossing and rupture of protective structures.				
	Invasion and salt inundation of continental zones by marine waters.				
	Erosion of façades in stone, rendering and brick.				
	Degradation of concrete: carbonation, corrosion of steel rebars.				
Climate Change (e.g. temperature,	Soiling and colour change of façades				
precipitation, humidity and wind) and air pollution combined	Alteration of ancient stained-glass windows				
(outdoor)	Corrosion of metals				
	Biodegradation of façades				
	Wind damage				
	Biodegradation of wood.				
Climate Change (e.g. temperature	Bio-infestation and chemical degradation of collections and archives.				
and humidity) and air pollution combined (indoor)	Bio-infestation and chemical degradation of decorated caves				
	Degradation of polymers, papers, films and contemporary artworks				
	Intensity and duration of extreme precipitation events or Droughts				
	Recurrent fluvial flows and flash-Floods: damages by the force of Flood water, debris, sediments; release of pollutants				
Precipitation and humidity	Rising of salt loaded moisture (i.e. efflorescence) by capillary action in walls, frescoes, wall paintings, mosaics and statues				
	Effects of wet-frost on porous materials				
	Swelling-shrinkage of clay minerals in soils endangering the stability of buildings.				
	Landslides				

Table 1 Drivers and Impact. Source: *Future of Our Pasts* ICOMOS 2019: Summary of key climate factors and mechanisms of impact on heritage materials, sites and landscapes N.B. This table is based on one originally published by the US National Park Service in its Cultural Resources Climate Change Strategy (https://www.nps.gov/subjects/climatechange/upload/NPS-2016_Cultural-Resources-Climate-Change-Strategy.pdf). Morgan, M., M. Rockman, C. Smith, & A Meadow. 2016.



Q5: What can your committee do to improve policies and practice, to minimize the impacts of climate change on cultural heritage conservation?

Four Key actions for Improving Policies to Minimise Impacts

ICOMOS committees identified a multitude of ways to improve heritage policies and practice to minimize climate change impacts, many nationally applicable or subject specific, others cross-sectorial. To assist committees four coordinated actions to support their work were identified:

- Publication Access: To share best practice and policy development, a systematic and openaccess publication strategy is needed that regularly publishes updates and case studies from NC and ISCs and partners. This will support committees developing relevant localised or typological policies and guidelines;
- 2. World Heritage sites as key case studies: It would be useful to conduct surveys to identify WH sites which are undertaking climate change research and adaptation work, including revisions of management plans with regards to the TSP 2021-2024, climate change challenges to share their experience and learnings amongst communities and practitioners.
- 3. **Key Reference links:** Committees want to build their own capacity and help communities and sites adapt practice and create relevant policy, so easy member access to authoritative key climate literacy material is needed. Key climate change action references and data accessible on an ICOMOS webpage is needed.
- 4. Traditional Knowledge: Committees recognised the knowledge gap and the specific need to engage with **traditional knowledge** in relation to policy development and practice change.

A summary extract of committee responses is at Annex E.

Committee Actions Underway







Australia: Publishes Sustainability Guide for Australia ICOMOS Conferences and Events to use for all ICOMOS events and encourages Climate Change risk be a key consideration in Australian Government triannual 'State of the Environment' reporting.

Ireland: 2020 Heritage Week ICOMOS Ireland invited members to join a Climate Change Conversation, aimed at identifying ways and means to expand knowledge and define good practice for supporting heritage responses to climate change: "What can ICOMOS Ireland do to focus on Climate Change?"

SDGsWG: In 2021, the SDGWG supported the review of the toolkit being developed by UNESCO in reviewing the World Heritage Sustainable Development. Entitled "Preliminary Health Check" and "Project Sustainability Check" the document looks at all the aspects of sustainable development including environmental sustainability and climate change.

Key ICOMOS Opportunities

The Annual Report survey responses did not include all committees and it is anticipated that more committee initiatives and actions will join the TSP 2021-2024 structure and be included at each review period of the triennium, nonetheless, the responses give examples of valuable initiatives for various activities based on the results. The survey shows that there is a need for NCs, ISCs and working groups to engage more systematically and strategically in developing and providing access to dialogue, research, and documentation linking climate change and cultural heritage so that practice and policy is well founded and documented.

Only a few NCs mentioned cooperation with academic and research institutions in relation to policy improvements. Collaboration with universities engaged in climate change studies seems an opportunity worth pursuit.

Capacity building as far as policy and practice is concerned only seems to involve a small number of NCs and ISCs at this early stage, but it is expected to be a strong focus in the future.

Engaging with traditional knowledge is an apparent knowledge gap and a clear opportunity for further consideration by ICOMOS organizationally. Both aspects – capacity building and the implementation of traditional knowledge – should be seen as coordinated challenges.

PART 2

Annex A

Q1. What will each ICOMOS committee or working group contribute to support heritage places and professional practice in terms of climate change action?

Committee response analysis

Approximately 50% of ISCs and NCs and 30% of Working Groups responded to the annual report survey, others contributed through discussions and meetings to this report. A summary extract of committee responses is at Annex A. This Triennial Scientific Plan is envisioned as a dynamic program, with committees adding and adapting material continually over the triennium 2021-2024.

Responses to the annual report question1 showed that many ICOMOS committees are already actively contributing to communication and dialogue about heritage and climate change action. They recognize the need to build their capacity to become more climate literate and to engage with colleagues, partners and communities on this journey. Committees saw an important information sharing and coordinating role for ICOMOS, both organizationally and also through its specialized working groups led by the CCHWG, and respective committee focal points.

Conferences and meetings, webinars are underway or planned by most scientific and national committees, with a range of publications and guidance documents/programs foreseen over the triennium by committees including Belgium, Australia, Ireland, Russia, Saudi Arabia, Slovenia, Sweden and USA. Most Scientific Committees also propose conferences and publications with Vernacular CIAV, Training CIF, Archaeology ICHAM, Fortifications ICOFORT, Intangible ICICH, Energy ISCES, Polar IPHC, and Cultural Tourism already in planning stages for 2022 events.

The Covid 19 pandemic has taught us all the benefits (and drawbacks) of zoom communications and the reach of social media. We have seen at the first virtual General Assembly that the openness of online meetings can facilitate attendance by a wider range of members, including many unable to travel but able to zoom. This is a lesson for the implementation of the Triennial Scientific Plan 21-24- support

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is strong for on-line access to documentation, guidance, discussion and forums will be the most significant communication channel over the life of this plan, and enhanced support from ICOMOS organizationally will be needed, with management and input from CCHWG and ICOMOS Volunteers.

There is an opportunity for ICOMOS to demonstrate leadership by facilitating easy sharing of access to Climate change and heritage information through a website platform, accessible across its membership and partners. Several ICOMOS committees already have a proven track record of providing regular events and Enews. Access to the ICOMOS Website calendar for timely publicizing of national events of global interest as well as international symposia would be welcomed. The Sustainability group SDGWG has recently initiated a regular calendar issued to its members; Australia ICOMOS has a hosted a weekly ENews running for a decade plus, available to all members and many international subscribers, which has a more general outreach. Simple protocols for management are well established and could be adapted by ICOMOS platform and effectively managed by volunteer administrators.

Several national committees have already formed national working groups or national scientific committees on climate change and on sustainability to facilitate and encourage local interest and activity including Australia, Ireland, Italy and India. The relationship of national scientific committees and working groups to their international counterparts is not yet established in practice and will benefit from proposed amendments to the ICOMOS Rules of Procedure.

Heritage and Climate Communication: Using ICOMOS Networks

In answering Q1, about committee activities, 29 % of all committee and working group survey responses identified actions to improve communication and Dialogue on climate change action, whether via newsletters and publications (Chile, Lithuania and Training CIF) or via new doctrinal work, or adaptation of existing guidance to include climate action (Towns CIVVIH, Interpretation ICIP Training CIF, Cultural Tourism).

Virtually all respondents to Q1 mentioned their need to quickly gain knowledge and share it locally and nationally. Committees with diverse interests- from Norway and Panama to Underwater Heritage, are developing programs to promote climate change action dialogues that will be open to the public as well as ICOMOS members. Climate change being an important interface by committees with public interest, for some committees this will be foray onto broadening audiences- beyond the specialist

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colleagues and into public consultation and engagement. The need for convenient access to climate change briefing notes and current studies and data is something members are looking for, and an ICOMOS Toolkit approach is underway or proposed by several committees already, a concept that would benefit from global inputs and access.

The usefulness of the FOOP report in public engagement was mentioned by several committees, including Ireland and Historic Cities CIVVIH. In at least one instance adoption of the report as a government guidance document (by the NSW Heritage Council) is noted. However, the FOOP Report was not as often cited as expected, which may mean lack of knowledge of the report by committees or a need for an executive summary to be developed to communicate its key messages more generally.

Although ICOMOS has been expressly concerned with external visibility on climate action globally, the knowledge of these activities was not often raised in committee responses, with only three committees mentioning their involvement with the Climate Heritage Network. Engagement in COP meetings was mentioned by New Zealand and Spain (who have representatives on CHN Working Groups), but their importance was not mentioned otherwise by respondents. This may be due to the timing of the survey (March to June 2021). Broadening members' knowledge of these ICOMOS global activities, especially CHN, and their engagement in CHN working groups is an opportunity for ICOMOS members more broadly and could benefit from more exposure within ICOMOS.

Opportunities to share heritage documentation on climate change with specialist colleagues such as climate scientists was well recognized, with mention of Open Archives tempered by concerns about the complexity of its upload operation and its imitations on dealing with grey literature.

Communication and publicizing of ICOMOS studies and documents on international and national level via an ICOMOS website portal would be welcome by all.

Collaboration: Engaging Cultural Heritage Management with Climate Science

Many, many examples of current collaboration were mentioned in committee responses to Q1, as well as the need to forge new relationships. Armenia, Honduras, Georgia and Colombia are already initiating collaborations with relevant organizations and new partners.

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Committees are also being asked to engage with Climate Heritage Action at a local level, already contributing to vulnerability assessments, policy development, training and responsive planning-including Honduras, Ireland, Lebanon Latvia, Mexico, Nepal, Philippines, Turkey, Tunisia and Korea. These early collaborations may offer examples and ideas for duplication elsewhere and sharing these experiences will benefit other committees making contributions.

Opportunities to collaborate with World Heritage sites in assessing vulnerabilities, impacts and developing adaptation concepts were mentioned by several committees, utilizing World Heritage sites (WHS) as excellent public examples for public engagement, and as leaders in impact assessment and adaptation. Portugal, for example, is planning to make a study of WHS exposures and to publish its conclusions, a model other committees might repeat. The USA is discussing interpretive programs for visitors that link climate change as a concept to the environment experienced at World Heritage sites. The Cultural Routes committee is looking to collaborate in the identification and monitoring of how climate change affects the cultural routes and historic roads on World Heritage sites.

Developing Heritage and Climate Research and Policy

Integral to many of the collaborations and dialogues mentioned above is a wide range of underlying research and policy development. Some committees are partnering in research through universities or government agencies, others are undertaking or advising on policy development to help equip communities.

Projects range for Australia ICOMOS working towards GA2023 being a carbon neutral Global Assembly and developing a policy manual that can be adapted for future ICOMOS meetings; to the extensive work of the SDGWG, which is looking at all the various dimensions of sustainability, including environmental resilience and climate change and developing strategies to nationalize discussions on the Sustainable Development Goals and case studies related to climate change action.

Climate Change Heritage and Education Building Capacity

35 % committees that responded to Q1 recognized that climate change was a subject where they needed to build their own technical capacity, and several have plans to develop toolkits. Australia has a heritage toolkit with a climate change section already, and toolkits are in development in Colombia, India and by Interpretation ICIP and Documentation CIPA.

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The value and use of case studies to analyze and demonstrate the impacts of climate change and adaptation was mentioned by many committees with Nepal, Austria, India, Honduras Lithuania, Malaysia, Russia, New Zealand Vernacular CIAV, Documentation CIPA, Underwater Heritage ICUCH, Archaeology ICHAM, Polar IPHC, Structures ISCEAH, ISCES, and the SDGsWG already leading the way.

Standard tools for undertaking consultations with authorities to implement climate change action principles in policies and action would be of great assistance in building committee capacity.

Respecting Traditional Knowledge

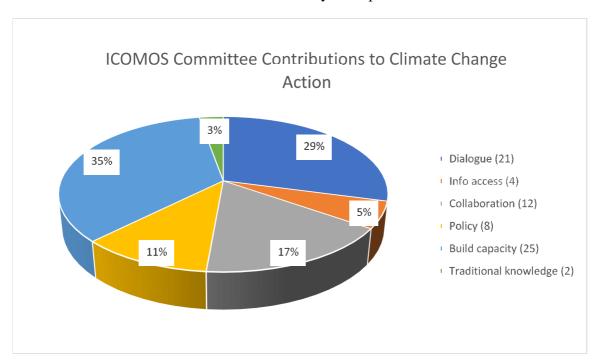
Few committees have begun to engage with Traditional knowledge holders including Georgia, Norway and Earthen ISCEAH, but relatively few. Australia ICOMOS supports a working group that developed a successful series of webinars: *Caring for Country* in late 2021-giving voice to case studies that expand this essential dialogue. Generally, however, engagement with an understanding of traditional knowledge was noted as a major knowledge gap by committees and working groups. The role of Our Common Dignity OCD-RBA WG and the Indigenous WG will be valued.

ICOMOS Committee Responses

Many ICOMOS committees and working groups are already actively contributing to communication and education about heritage and climate change action. They recognize the need to build their capacity to become more climate literate and to engage with colleagues, partners and communities on this journey. Most committees saw an **important information sharing and coordinating role for ICOMOS**, both organizationally and also through its specialized working groups, especially the CCHWG, and respective committee focal points.

Conferences and meetings, webinars are underway or planned by most scientific and national committees, with a range of publications and guidance documents/programs foreseen over the triennium by committees already in planning stages for 2022.

The Covid-19 pandemic has taught us all the benefits (and drawbacks) of zoom communications and social media reach. We have experienced at the first virtual General Assembly that the openness of online meetings can facilitate attendance by a wider range of members, including many unable to travel, but able to zoom. This is a lesson for the implementation of the Triennial Scientific Plansupport is strong for an ICOMOS platform providing on-line access to documentation, guidance, discussion and forums. The leadership of ICOMOS organizationally with management and input from CCHWG and ICOMOS Volunteers is warmly anticipated.



The following table provides selected quotations from committee responses to question1:

	NATIONAL COMMITTEE RESPONSES	
Committee	Response	
Armenia	ICOMOS Armenia will try to cooperate with other relevant organizations and provide its professional experience in climate change action to preserve heritage places.	
Australia	We continue to add to our toolkit resources about disaster and risk preparedness, especially bushfires. We are working towards GA2023 being a carbon neutral Global Assembly. A working group was established, and a policy manual prepared ready for implementation for GA2023	
Austria	Collaboration in the development of materials and methods for sustainable restoration and conservation of built heritage on a specific case study	
Belgium	ICOMOS Belgium plans on dedicating its next scientific forum to "Climate Change and Heritage". The format, program and date (2021/2022?) of this event have yet to be discussed and determined. The five questions asked here could serve as starting points for forum	
Chile	We want to contribute to making the issue visible, through an event and dissemination of information in our newsletters.	
Colombia	As a national committee, we are fully committed to contribute to support places and professional practice in regard to climate change as one of the main challenges we face. The working groups are working on the planning of collaborations, toolkit development and advice, improving the participation of stakeholders/public/privates and the communities. We expect to put together the results of the proposals of working groups by July-September 2021.	
Estonia	NC is active in promoting European Green Paper and Quality Principles	
Georgia	ICOMOS Georgia collaborates with the Georgian Heritage Crafts Association on recording and dissemination of the Traditional Knowledge. We are in the process of establishing a permanent capacity building center for craftsmen and heritage communities.	
Honduras	Technical guidance, advice and collaboration in case studies. Our committee is participating in the new Land Management Plan for the Central District where the capital city of Honduras is situated.	
India	Case studies: toolkit development and frameworks to apply to World Heritage sites / cities	
Ireland	Commit to actively participate in actions as articulated in seminal EU/Council of Europe publications (Green Deal; Cultural Heritage Green Paper; New Bauhaus initiative; Renovation Wave initiative, Faro Convention, etc.).	

	Work on national implementation/ advocacy of Quality Principles and their link to these other European initiatives which connect cultural heritage and climate action.
	Annual Maura Shaffrey memorial Lecture: will: align with the various EU Green Deal programs, in the form of a panel to include Orla Murphy (New European Bauhaus high-level roundtable); TBC (CH Green Paper); TBC (Towns Centre First Program).
	Members' Conversation (September) In addition, ICOMOS Ireland would like to invite all members to join in a members meeting conversation, to explore how the work of the various NSCs and working groups might focus on this topic. ICOMOS Ireland member Jacqui Donnelly, will present the lessons learnt from the Climate Heritage Network, followed by presentations from each NSC
	Ongoing Triennial Program: As an outcome of the above conversation, NSCs and WGs may wish to pursue a program of further action, perhaps seeking additional funding from suitable programs. Subject to available funds, the NC will offer match / seed fund to NSCs to support these TSP Rebooting initiatives, under the emerging new business plan and associated criteria.
	Demonstrate the importance and value of retaining and conserving 20th century cultural heritage in Ireland as a viable alternative to demolition and the release of embodied carbon and unnecessary use of resources.
Korea	Collaborations
Latvia	ICOMOS Latvia will apply for funding for translation of Green Paper to foster knowledge on climate change action in the heritage field.
Lebanon	To provide technical advice to local authorities responsible of Heritage
Lithuania	(a) Case-studies: we will focus on the main heritage sites in Lithuania and launch their monitoring which will also include the impact of climate change on those sites. (b) advice to governmental institutions upon their request; (c) spread information about heritage and climate change to mass audiences.
Malaysia	Case Studies & Collaborations
Mexico	In recovering the relationship between human beings and nature. Establish the methodology for planning the conservation of cultural and natural assets, giving priority to the re-introduction of native and/or endemic vegetation.
Nepal	ICOMOS-Nepal plans to collaborate with different stakeholder to conduct case studies and making policies
New Zealand	Australasian network of Emerging Professionals (ICOMOS New Zealand, Australia ICOMOS, ICOMOS Pasifika): Scouting opportunities for discussing and disseminating Australasian approaches towards climate action - through case study development and application of unique regional theoretical frameworks/philosophies.
	Ongoing contributions to ICOMOS International Emerging Professionals Working Group, ICOMOS International Climate Change Working Group and Climate Heritage Network: Upcoming initiatives include Presentation at G20 Culture

	Webinar: ""Addressing the Climate Crisis through Culture. Preserving Cultural Heritage and Supporting the Green Transition"": (12 April 2021); Prospectively participating in planning team for Pre-COP26 ""Youth Climate Driving Ambition event"" (30 September - 2 October 2021)
	Ongoing support for our new National Scientific Committee on energy in buildings
	Ongoing Contribution to 'Heritage-based Adaptation and Mitigation' Online Course and Documentary: Collaboration with ICOMOS Argentina
Norway	We will seek to build relevant capacity among our own members and make our expertise available. The renovation wave for Europe consists of a large number of incentives and revisions of directives that will have consequences for the built heritage. There will also be opportunities to support our field in this initiative and build relevant capacity amongst members. ICOMOS Norway will stay informed and especially focus on bringing attention to traditional crafts and methods valuable in climate change.
Panama	Knowledge and understanding, on one hand of the problem's climate change can bring to cultural heritage. On the other hand, on how to position heritage places as fundamental climate action assets in building community resilience and demonstrating how to mitigate and adapt to the anticipated Impacts of climate change
Philippines	Currently, we have one person with this skill. We will invite new members with this skill set. We can assist with data collection where available. We are a country of 7,100 islands and are most affected by this. In the past we have contributed site characterization and climate change vulnerability for Vigan.
Portugal	ICOMOS PT is planning to make a study of exposure to the different dangers of the Portuguese immovable heritage and in particular of that classified as WHS and to publish the report of the conclusions of this study
Russia	Case studies using aerial scanning technology. Workshops on digital archaeology. Technical guidance. In many regions, cooperation with city/settlement administrations and owners of immovable cultural heritage is envisaged in the development of protective measures. Participation in the evaluation of renewable energy projects.
Saudi Arabia	Saudi ICOMOS will established a team of experts to support the government in this subject of academic fields of climate change
Slovenia	Development and dissemination of the new knowledge on the field of climate changes and cultural heritage
Spain	Mr. Fernando Vegas is currently working in the Climate Heritage Network in the group "Making the case for building reuse through better metrics for avoided operational and embodied carbon" We are working on future presentations on the field for COP26 at Glasgow

Sweden	Share knowledge and experiences from the international network and from a global perspective	
Turkey	define pilot heritage area(s) that are most vulnerable to climate change impacts, organize training courses and offer technical guidance for vulnerability assessment, develop a guideline for government bodies responsible for heritage preservation on "climate change vulnerability assessment"	
Tunisia	Inventory of exposed and/or impacted sites; identification of threats and risk assessment	
USA	We are planning a November webinar on tourism, post-Covid, in collaboration with that will draw from tourism patterns over the previous summer, and what they can tell us about how to manage the tourism footprint at World Heritage sites and other protected areas. Areas of emphasis might include interpretive programs for visitors that link climate change as a concept to the environment experienced at World Heritage sites. We will also examine possibilities of using virtual tours to World Heritage sites in countries that cannot be visited because vaccination programs there have not been effective, and how such virtual experiences might be used as a means of encouraging responsible travel and tourism in the future.	
INTERNATIONAL SCIENTIFIC COMMITTEE RESPONSES		
CIAV	Case studies are published by CIAV members in the newsletter and annual conference.	
CIF	We are developing principles and creating a new CIF web site which will incorporate all these aspects. We are also intending to produce publications	
CIPA	CIPA-HD could contribute to toolkit developments and case studies analysis	
Cultural routes	In line with global -priorities, we propose action priorities based on three main areas: cross-cutting work, climate action and digital transformation. The key issues and develop/implement the next "Triennial work plan". Promote and identify cross-cutting themes exchange between our committee and members of International Scientific Committees and National Committees. Collaborate in the identification and monitoring how Climate Change affects especially the Cultural Routes and Historic Roads on World Heritage Sites. Valorize actions of conservation and divulgation with support of digital technologies. Contribute with education for a better knowledge and conservation of Cultural Routes. Identification and support of community managers or caregivers through National ICOMOS. Focused on the registration and documentation of how many and what weather events will affect this heritage in the next three years.	
CIVVIH	CIVVIH will update its Valletta Principles with respect to climate change. We will contribute to support historic cities, towns and villages and will take into consideration the ICOMOS document, "The Future of our Pasts: Engaging cultural heritage in climate action". The document outlines how heritage and climate change intersect and produces a roadmap for consideration of climate change in the cultural framework	

ICHAM	The management of existing World Heritage Sites and the upstream process toward nomination does not currently include Climate Change vulnerability studies and these must be included in management plans, both retroactively and for tentative list and new nominations. The ICAHM Bureau intends to solicit such guidance and partnerships specifically for each listed site and on the tentative list. Collection of place-based case studies (stories) from members on climate impacts and responses with an emphasis on challenges and solutions. These could be presented as a blog on the ICAHM website or published as a PDF. Given the amount of published reports etc. this could also possibly be developed as a Podcast with discussion between people facing similar challenges in very different places. There have already been several similar initiatives so ICAHM would attempt to develop this through collaborative action with other bodies and organizations rather than duplicating work that's already taken place.
ICICH	Communication and Dialogue: Scientific Symposium "Climate Change and Heritage" (2021/22
ICIP	 Create a section on the website for specific case studies from ICIP members with focus on climate change challenges and practices. Update ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites to include climate change. Establish toolkit for Interpretation of Heritage places that are and will be affected by extreme weather conditions, disasters and climate change through its working groups and cross communication, collaboration, and knowledge exchange with relevant ISCs and National Committees. Resurrect the postponed ICIP 2020 Angkor conference on Heritage Interpretation and UN Sustainable Development Goals in a form of smaller webinar series, symposiums and workshops to increase awareness of climate change on the interpretation of cultural heritage places. ICIP could collaborate with ICTC in developing a discussion platform on implications of climate change on heritage interpretation as part of cultural tourism. ICIP could explore other means of heritage interpretation in considering various effects of climate change in addition to traditional methods of heritage interpretation
ICOFORT	We will hold a major congress in June 2022 in the Amazon region, in the Brazilian city of Belem, where the topic will be one of the treaties.
	We have created a list of indicators of impact on fortifications by climate change, developed within the Monument Inventory of American Fortifications Project
ISCCT	Incorporate principles addressing climate change issues into the updated International Cultural Tourism Charter. - Participate fully in the 6ISC Risk management for a Shared Future process to address climate change and tourism issues as part of the interdisciplinary approach.
	 Develop a white paper on climate change implications on cultural tourism. Propose a climate change and cultural tourism session for the upcoming ICOMOS 2021 Scientific Symposium taking place in November 2021

ICUCH	ICUCH will focus on technical guidance, raise awareness of the threats to UCH and promote solutions to ensure climate change is understood and the opportunities within the Decade of Ocean Science for Sustainable Development 2021-2030 are utilized. In addition, ICUCH will where feasible incorporate Climate Change and the Decade of Ocean Science into its capacity building activities.	
IFLA	Decade of Ocean Science into its capacity building activities.	
	Climate change will be a major topic in a conference, probably to be held in Cambridge in 2022 (Covid pandemic allowing), being planned by IPHC in conjunction with PAN and other NGO and Government bodies.	
IPHC	The Guidelines being developed by IPHC on archaeology in Antarctica, and on underwater heritage in polar regions, provide professional guidance augmenting best practice approaches required for climate change responses.	
	Case studies being developed for presentation through the Polar Cultural Heritage and Environmental Science (CHESS) forum, in which the IPHC is an active partner, include topics related to climate change impacts and responses	
ISC20C	ISC 20C needs to develop an organized focus on this subject and identify leadership to identify, organize and implement specific actions. We are behind.	
ISCEAH	Database of traditional knowledge approaches and climate change events. Collecting the current conservation methods and measures through literature review. Preparation of technical guidelines, case studies, collaboration.	
ISCES	Definition of "Sustainability" with regard to historic buildings Technical guidance to sustainable historic building maintenance and renovation by means of best practice case studies dissemination Involvement in research developed by the committee's members as observer	
	institution, scientific advisory board etc. Providing with the website of ISCES (under development in the moment) an information hub on the topic of historic buildings sustainability	
	WORKING GROUP RESPONSES	
	Brainstorming sessions within EPWG to raise awareness	
EPWG	Developing a social media strategy to deepen engagement, not only with representatives but with EPs around the world	
	Networking and integration of emerging and established professional/practitioner perspectives within prospective projects (e.g., technical guidance, advice, dissemination support, information dissemination support, research support)	
SDGWG	The SDGWG is looking at all the various dimensions of sustainability, including environmental resilience and climate change. Our Policy Guidance team is developing strategies to nationalise discussions on the SDGs and case studies	

related to climate change action will be included in this local Policy Guidance. Task Team 1 covering the ICOMOS Policy Guidance will be monitoring the localisation of the Policy Guidance and report back in 2023 the discussions that have been made by various NCs and ISCs on this topic of SDG 13 and other dimension of Environmental Sustainability (SDG 6, 7, 11, 13, 14, 15)

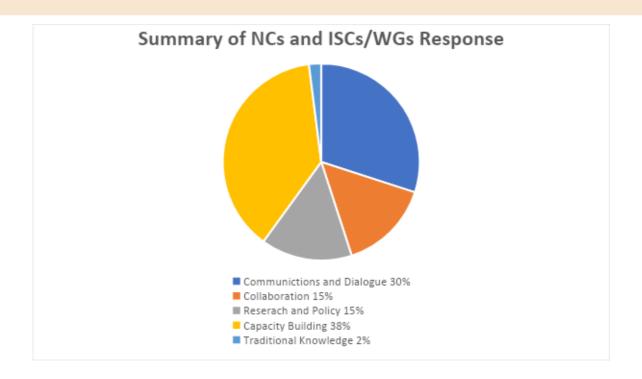
Annex B

Q2. What does your committee suggest that ICOMOS do as an organization to develop and provide access to dialogue, research, and documentation linking climate change and heritage?

Committee Response Analysis

Committees are urgently looking to ICOMOS to provide central leadership through sharing climate change tools, data and networks to build committee capacity and are actively seeking the tools and collaborations needed to upskill (38%). Many committees identified that they would be working on developing dialogues and communications such as conferences, joint webinars and publications (30%) to share and develop knowledge. Committees also recognized the need to build their own technical capacity (23%) and are actively seeking the tools and collaborations needed to upskill (15%). Very few committees have already engaged with current research and discourse with **Traditional Knowledge holders about climate change action.** Exploration of such engagement and learning through the Indigenous WG in collaboration with the CCHWG would be welcome.

From a total of 107 committees, 33 (30,84%) committees answered the question on *What does your NC suggest that ICOMOS do as an organization to develop and provide access to dialogue, research, and documentation linking climate change and heritage?* All of them were NCs. For each of the responses, these were classified according to the categories assigned given the context of each of the committee replies. Some answers were also a combination of the different categories.



Summary of committee responses per activity category in percentage form.

Opportunities/Gaps

The Annual Report survey on which this analysis is based did not include responses form all committees and it is anticipated that more committee initiatives and actions will join the TSP 2021-2024 structure and be included at each review period of the triennium, nonetheless, the responses give examples of valuable initiatives for various activities based on the results. However, the survey also shows that there is a need for Committees to engage more systematically and strategically in developing and providing access to dialogue, research, and documentation linking climate change and cultural heritage.

Collaboration and dialogue may be within the ICOMOS organization, between NCs and ISCs/WGs, and other external organizations like the government, the public sector, non-government organizations, academic and culture institutions, and individual experts. It could be at international, national, regional or local levels. It might also be open to cooperation with universities, relevant institutions and the private sector. Collaborative activities may range from short-term engagements or long-term ones; however, the immediate action points relayed in the responses are more inclined to the short-term ones. Thus, developing a long-term program is an inviting opportunity to be examined.

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While relatively few responses were linked to Research and Policy, the case studies mentioned here may be interesting to other Committees that plan to look into programmatic and research action points that also require strong partnerships.

Traditional Knowledge has apparent gaps and clear opportunities for further consideration. Engaging with current research and discourse with Traditional Knowledge holders about climate change action was acknowledged as a gap by many committees - exploration of such engagement and learning through the Indigenous WG in collaboration with the CCHWG would be welcome.

Besides expert engagement and institutional arrangements, there is a need to mentor and collaborate with heritage advocates and the next generation. The youth and emerging professionals are especially well placed to initiate and lead activities about heritage climate action in the years ahead.

At the top of all committee and working group responses were actions to improve Communication and Dialogue on climate change action, through traditional means such as conferences and publications and also through cross sectoral Collaborations, such as webinars and joint research. All committees recognized that climate change was a subject where they needed to build their own technical Capacity building, and the lack of research and engagement with Traditional knowledge holders was a major knowledge gap.

Committees were unified in their need to readily accessible current climate change documentation Policy and Research are considered top looking responses to engage ICOMOS as an organization to develop and provide a platform to share access to such policy examples, dialogues, research, and documentation linking climate change and heritage.

Many committees are already actively seeking to engage non-heritage communities/people in discussions and/or short-term collaborative activities (e.g., webinars, discussion groups, and seminars). When it comes to Research and Policy-related answers to this question, only a few specific examples and general recommendations were forwarded. While only two committee responses were deemed under Capacity Building like those proposed workshops and other educational activities, no committee responses were considered under Traditional Knowledge.

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Some Committees are specific to the answers, already have targeted agendas, or have already started on activities related to this question that contribute to organization-wide profile for ICOMOS. There are also different levels of engagement to a particular activity. Whilst some projects and concepts may be in the exploratory stages of the issue while other committees already proceeded to their action points, with a wide range of case studies indicated in each category stated specific as examples of either past, on-going, or proposed activities.

I. Communication and Dialogue

Several committees mention inspirational joint webinars and creation of networks as starting points for communication and dialogue to link cultural heritage to climate change. This might open up for people in general public discussion, as well as media and policy-makers to be more interested in the connection as well as a means to involve more ICOMOS members in this field. There is a desire to ensure all via at least one member of the national committee is engaged in the climate change and heritage working group, and for focal points to network closely, providing collaborative leadership with committees.

Communication of ICOMOS studies and documents on international and national level via an ICOMOS website platform is even as needed, as are access to examples of standard climate change tools for undertaking consultations with authorities. This will enable committees to implement the principles in policies and action and build committee capacity. The opportunity of more easily using the ICOMOS; Open Archive to allow upload of information and case studies for all to access was supported. The development of a toolkit with easy to use documents such as a summary of the FOOP report would be useful to many committees.

Committee	Remarks		
Armenia	ICOMOS Armenia, suggests ICOMOS as an organization to develop and provide access to dialogue, research, and documentation linking climate change and heritage to ensure access to all research results and exchange of information by all possible means.		
Australia	Webinars reach many people and allow easy access for media and policy writers.		
Chile	Have at least one member of the national committee in the climate change working group.		
Colombia	ICOMOS promotes among its members through the technical commissions, to make an accompaniment to cultural communities that have been affected by this social situation; in this case, the actions of the committees should focus on recognizing and dialogue with the social actors of rural and urban territories in order to interpret the logics that lead to the protection of their cultural rights; In the same way, work should recognize, document and follow up on cultural practices associated with environmental protection that may mitigate the effects of the climate range.		
Estonia	Communication of ICOMOS studies and documents on international and national level.		
Ireland	Host joint webinars with major national/international cultural heritage agencies, government ministries, and heritage conservation stakeholders in relation to Climate - Change impact and mitigating initiatives. To provide a network to share information about projects, publications and events that demonstrate the importance and value of their retention and conservation as a viable alternative to demolition and the release of embodied carbon and unnecessary use of resources.		
Latvia	It would be useful to have targeted awareness-raising and inspirational webinars as well as systematizing information on the topic according to types (mould, rise of water level) of treats and by regions (e.g. Mediterranean, Baltic) as for places with less visible consequences of climate change is hard to convince the public, that it is a matter of concern.		
Lebanon	Join webinars by the NC focal point. Involve more members in this field in future.		
Malaysia	Joint Webinar		
Panama	Create a network		
Portugal	Joint webinars		
Russia	Shared webinars with simultaneous interpretation in more languages.		
Slovenia	We will organize the 4th International Scientific Symposium ICOMOS Slovenia on the topic of Resilient Heritage in September 2021.		
Spain	We are working on future presentations on the field for COP26 at Glasgow.		
Sweden	Multi-disciplinary and cross-boundary network.		
Tunisia	Webinars to facilitate the exchange of information and experience.		
ICIP	-ICOMOS website could have a designated tab at the main menu to emphasise the importance given to the Climate Change as one of its focuses. Currently, Climate Change is hidden under the tab of 'Themes' and even though we know about ICOMOS' focus it is hard to find it and increase awareness. Such a designated tab could have a dropdown menu to compile all of the activities/projects, publications, webinars, seminars of ISCs, WGs, and NCs. podcasts etc; and showcase the projects in one and visible part of the website so anyone can easily find them easily.		
ISC20C	Share information from other ICOMOS entities, academic institutions, focused on Climate change.		
SDGWG	Integrating CC in International Day of Monuments and Sites, and the Scientific Symposium so that topics such as climate change can be reviewed as part of an annual		

initiative. Data will need to be collected by each NC, ISC or WG so that an overall map of activities, research, and discussions can be plotted using the annual report. This will aid in mapping the activities of ICOMOS on climate and heritage. The CCHWG can potentially synthesize these patterns and include in their report the synthesis of the year and this can be done as a three-year project..

2. Collaborations

Committee	Specific institutions mentioned	Remarks
Austria	ICOMOS Indonesia and Indonesian universities	Joint webinars in collaboration with ICOMOS Indonesia and Indonesian universities.
Chile	National and international specialists	We propose at least one webinar on the topic climate change and heritage with participation of national and international specialists.
Estonia	Universities	Communication of ICOMOS studies and documents on international and national level.
Ireland	National/ international cultural heritage agencies, government ministries, and heritage conservation stakeholders	Host joint webinars with major national/international cultural heritage agencies, government ministries, and heritage conservation stakeholders in relation to Climate - Change impact and mitigating initiatives. To provide a network to share information about projects, publications and events that demonstrate the importance and value of their retention and conservation as a viable alternative to demolition and the release of embodied carbon and unnecessary use of resources.
Italy	ISC	First of all a reorganization about the groups that manage all these activities: this will make possible also a restructuring of existing ISC and a more clear participation: too many groups and ISC talk about the same argument without a clear common strategy.
Lithuania	ICOMOS International	Like all offered examples listed above, also ICOMOS International could provide some templates for heritage experts solving specific problems.
Panama	Network with other organizations/institut ions	Create a network of collaboration with other organizations/institutions and develop joint webinars.
Slovenia	Institute of the University of Ljubljana for Sustainable Heritage	We started cooperating with the Institute of the University of Ljubljana for Sustainable Heritage Protection in the implementation of international summer schools, which will be held every year.
ICIP	ISCs for collaboration include ICORP, ICICH, ICTC, CIVVIH,	Establish a collaborative platform of ISCs, who are essential role players in recognising and studying the impacts of the climate change. Use this to feed into a Toolkit on the interpretation of cultural heritage sites that have been, are or

ISCCL and CIF (and	will be affected by the climate change. Such a collaborative
CCHWG).	toolkit would effectively guide in protecting, recording and
	presenting memories and the tangible and intangible heritage
	of diverse cultures that are in danger of being lost

3. Research and Policy

Committee	Remarks	
Austria	Joint webinars in collaboration with ICOMOS Indonesia and Indonesian universities.	
Chile	We propose at least one webinar on the topic climate change and heritage with participation of national and international specialists	
Estonia	Communication of ICOMOS studies and documents on international and national level.	
Ireland	Host joint webinars with major national/international cultural heritage agencies, government ministries, and heritage conservation stakeholders in relation to Climate - Change impact and mitigating initiatives. To provide a network to share information about projects, publications and events that demonstrate the importance and value of their retention and conservation as a viable alternative to demolition and the release of embodied carbon and unnecessary use of resources.	
Italy	First of all a reorganization about the groups that manage all these activities: this will make possibly also a restructuring of existing ISC and a more clear participation: too many groups and ISC talk about the same argument without a clear common strategy.	
Lithuania	Like all offered examples listed above, also ICOMOS International could provide some templates for heritage experts solving specific problems.	
Panama	Create a network of collaboration with other organizations/institutions and develop joint webinars.	
Slovenia	We started cooperating with the Institute of the University of Ljubljana for Sustainable Heritage Protection in the implementation of international summer schools, which will be held every year.	

4. Capacity Building

Committee	Remarks	
Armenia	Suggests ICOMOS as an organization to develop and provide access to dialogue, research, and documentation linking climate change and heritage to ensure access to all research results and exchange of information by all possible means.	
Australia	Open archive/ toolkit to allow upload of information and case studies for all to access.	
Austria	Joint webinars in collaboration with ICOMOS Indonesia and Indonesian Universities have been started in 2020 and will be intensified within the framework of the capacity building program.	
Colombia	ICOMOS promotes among its members to make an accompaniment to cultural communities.	
Honduras	Joint toolkits	

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Ireland	To provide a network to share information about projects, publications and events.	
Korea	Toolkits, upload to Open Archives.	
Latvia	systematizing information on the topic according to types (mold, rise of water level) of treats and by regions (e.g. Mediterranean, Baltic)	
Malaysia	Open Archives and Joint Webinar	
Mexico	Emphasizing knowledge of the history of the site, which will shed light on the intervention to be carried out at a given site.	
Nepal	Open Archives	
New-Zealand	Access to toolkits and literature	
Norway	considering not only current practice but moreover the development paradigm practice is supporting.	
Philippines	Provide data on its effects on heritage.	
Russia	Uploading grey literature to the platform, uploading information to open archives.	
Saudi Arabia	As a leading global oil producer, we are fully aware of our responsibility in advancing the fight against the climate crisis, and that just as we played a leading role in stabilizing energy markets during the oil and gas era, we will work to lead the coming green era.	
Slovenia	Will prepare consultations on the topics of climate change and sustainability together with experts, policy makers and the general public.	
Switzerland	Joint webinars, toolkits, upload grey literature to platform	
Tunisia	Documentation	
USA	Participating in an ICOMOS project to build capacity among African heritage experts through the use of the Climate Vulnerability Index (CVI) in Tanzania and Nigeria. Coordinate some heritage policy/advocacy or public information activities	

5. Traditional Knowledge

Only one committee response was considered as part of Traditional Knowledge, although it was clear that other committees, e.g. Australia and Canada, are already engaged on this topic.

Committee	Remarks
Colombia	actions of the committees should focus on recognizing and dialogue with the social actors of rural and urban territories in order to interpret the logics that lead to the protection of their cultural rights.

Annex C

Q3. What can your committee members do to engage climate scientists and strategic stakeholders in understanding the role that cultural heritage plays in climate change responses and action?

Committee Response Analysis

Collaborations, and Communication and Dialogue were the top responses that Committees envision to engage stakeholders and climate scientists in understanding the role of cultural heritage in climate change action. To engage non-heritage communities/people in discussions and/or short-term collaborative activities many committees are planning webinars, discussion groups, and seminars.

When it comes to Research and Policy-related answers to this question, only a few specific examples and general recommendations were forwarded by committees. Two committee responses identified Capacity Building actions for engagement (proposed workshops and other educational activities). However, no committee responses were received relating to Traditional Knowledge.

Some Committees were specific in their answers, have targeted agendas, or have already started on activities related to this question. There are different levels of engagement for committees that are still in the exploratory stages of the issue while others have already proceeded to their action points. Case studies indicated in each category stated specific examples of either past, on-going, or proposed activities.

I. Communication and Dialogue

Initiating discussions, building networks, and disseminating information are common committee initiatives under this category. Specifically, Norway, Philippines, Australia, CIAV, CIPA answered that they would generally engage climate scientists/experts and climate-related stakeholders. Alongside this, Tunisie, Turkey, Australia also recommended reaching out to government and nongovernment organizations as key stakeholders.

Several NCs and ISCs/WGs also highlighted the importance of raising awareness and disseminating information on climate change and related heritage concerns. **ICAHM** suggested releasing a series of

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Press Releases by ICOMOS to the media. In contrast, **Ireland and ICTC** suggested creating publications and organizing webinars, town-hall gatherings, and other educational activities to further disseminate best practices. For example, specific to dissemination efforts are a planned seminar by **Italy** on data acquisition and quality assessment concerning climate change and heritage, **Latvia's** planned publication of a "Green Paper" and **ICUCH's** suggestion to "publish concerns, challenges, synergies and solutions in both marine science journals and traditional heritage outlets". Meanwhile, the **USA** NC also reflected on "broadening the membership and leadership to include those who have worked in fields that have been associated with the natural sciences and are working to do this." Meanwhile, **CHC** plans to have representatives and CIVVH members participate in the ICOMOS Climate Change and Heritage Working Group (CCHWG). **Lebanon** plans to establish a CCH working group in their NC.

Case Studies

There are on-going efforts for further engagement. **CIF** sees this time as an opportunity to be active during the Glasgow COP26 meeting while **USA** in their past activities, paper presentations from the Nature-Culture Journey event in 2016, the US/ICOMOS Annual International Conference, and the seminar on "Forward Together" will be published in a book by Routledge in 2021.

The **ICIP** has already established a CCHWG in its ISC to explore options for specific project tasks and collect case studies on the implications of the climate change in the interpretation of cultural heritage sites.

ICAHM highlighted a similar goal of adapting the idea of Panorama perspective and approach used for the Nature-Culture process, that could be released as a series of press releases to the media. This could be specific for climate change stories and adaptation for sites and communities

2. Collaborations

Many Committees are undertaking collaborative activities with a multi-disciplinary and multi-sectoral approach. Part of joint programs and projects is building this network of possible collaborators and/or experts in the field as pointed out by ISCCSG, EPWG, Austria, Macedonia, and Panama. Russia and EPWG specifically mentioned exploring collaborations with students/young specialists or Emerging/Young Professionals, respectively and their role in climate change and cultural heritage action. Committees like SDGsWG, ISCEAH, Ireland, India, New Zealand, Portugal, and Slovenia have started or plan to begin identifying these networks and contacts within and outside the heritage

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sector for possible partnerships. At the same time, **Saudi Arabia** "will establish a team of experts to support the government in this subject of academic fields of climate change." **ICAHM** states that it will support "general information flows to encourage more collaborative action."

Some committees have identified and suggested inter-ICOMOS committees or specific external institutions for collaborative activities. For external collaborations, this may include decision-makers, as pointed out by the **Estonia** or government or non-government organizations and the academic institutions.

Committee	Specific institutions mentioned	Remarks
ISC20C	Include climate change as an integral part of our programmatic activities.	
ІРНС	POLAR Cultural Heritage and Environmental Studies research program: University of Cambridge and University of Tromsø	Current engagement
ICIP	ICOMOS ISC, WG, NCs, and CCHWG	
EPWG	Climate Heritage Network	Prospective involvement in Pre-COP 25
SDGsWG	UN-Habitat Global Heritage Fund United Cities and Local Governments (UCLG)	Current engagement
Armenia	The University of Göttingen in Germany and The Armenian National University of Architecture and Construction	Past research on "The Impact of climate change on heritage"
Austria	TU Wien	Joint projects with TU Wien have been applied for funding and if granted will start work in the second half of 2021.
Honduras	Department of Architecture and the Department of Anthropology of the Honduras National University	Current engagement
Mexico	IUCN	
Nepal	WWF and ICIMOD	
Panama	Ciudad del Saber, Patronato Panamá Viejo, Asociación de Antropología e Historia de Panamá, Red de Museos y Centros de Visitantes, universities, among others.	
Spain	Climate Heritage Network	Current, there are 5 subgroups working on different aspects

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Table 1: Specific committees and institutions or groups mentioned for collaborative action

Case Studies

Several committees mentioned collaborative activities that can be examined further for 'best' practice reference, replicability, or analysis.

The **IPHC's** partnership with the University of Cambridge and University of Tromsø on the POLAR Cultural Heritage and Environmental Studies (POLAR CHESS) research programme aims to "develop a close relationship between cultural heritage practitioners, conservation specialists, and other environmental scientists and could provide a valuable platform for the study of climate change impacts and responses."

Sweden sees the ICOMOS collaboration with the IUCN (International Union for Conservation of Nature) on the Culture - Nature Journey as highly relevant "to be a driving force in increasing national cooperation within the Water History Network and contribute to the newly formed International Committee for Water and Heritage."

Although these projects were not elaborated in the responses, they are also worthy of note:

- Armenia's research collaboration with The University of Göttingen in Germany and The Armenian National University of Architecture and Construction;
- Austria's joint project with TU Wien; and
- **Honduras'** partnership with the Department of Architecture and the Department of Anthropology of the Honduras National University
- Spain and the EPWG have on-going dealings with the Climate Heritage Network. For Spain, 5 subgroups are working on different aspects while the EPWG has a prospective involvement in the upcoming Pre-COP26 activities. In the case of the SDGsWG, the group has established an MoU with UN-Habitat, which will look at issues of urban planning and SDGs. Recently the group had a partnership with the Global Heritage Fund, which will look at understanding how policy and heritage practice can come together to link heritage and sustainable development. Lastly, the partnership with the UCLG is also being pursued which will also encourage the role of heritage in cities, towns and villages. In all these partnerships, engagements to climate action

can be integrated. Together with CCHWG and UN-Habitat, the working group have identified a potential project to review the New Urban Agenda for 2022 (Quito+6). Selected members of the Working Group have also been selected to be part of the International Co-Sponsored Meeting on Culture, Heritage and Climate Change for December 2021".

3. Research and Policy

While only a few committees have specifically identified or mentioned Research and Policy as an action point in relation to strategic stakeholders, parallel responses to the Collaborations category are those committees that intend to create a network list of potential allies that can be considered as research-related. Creating a network list was still considered under the Collaborations category.

Committees like CIAV, Columbia, US and Italy, recognize lessons, production of scientific knowledge in different sectors, and case studies will be useful to comprehend issues and action points better. ISCES asked that given the diverse professional backgrounds of its members, "if ICOMOS can pave the way for their committee to be direct partners for international projects and provide the ISC with the necessary legal framework." ICAHM also suggested ICOMOS explore and investigate "bright spots' and community strategies to promote climate change resilience, whether connected to World Heritage sites or perhaps just emerging from regional assessments of significant heritage sites in the nation.

Case Studies

Past and on-going research and policy-related action points were listed under this category's case studies. Some of these examples were also categorized under collaborations as these specific activities have/had partnerships with academic institutions.

IPHC collaborates with the University of Cambridge and University of Tromsø in a research programme on POLAR Cultural Heritage and Environmental Studies (POLAR CHESS). Besides the aim to engage climate scientists and heritage practitioners, this research also "focuses on Arctic and Antarctic material culture's potential to be utilised as environmental datum points, indicators of rates of change, and to better understand related physical, chemical and biological activity".

The **SDGWG** is embarking on a long term internship programme that will tackle various links of heritage and the SDGs, which will include climate action. It is aimed at identifying best practices, developing meaningful indicators and testing out principles that highlight the bigger issues need to

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look that impacts the environmental, social and economic dimensions of sites. We will dedicate one or two research internships that will look at the intersection of climate change in heritage policies. For 2021, the SDGWG has dedicated a research internship that will be looking at the intersection of climate change and sustainable development in World Heritage Sites. This internship is led by Focal Point, Gabriel Caballero and members of Task Team 4 (World Heritage and HUL) will be providing inputs to the intern. Various stakeholders including members of ICOMOS, UNESCO WHC and world heritage site managers will be engaged in the process of the research. Further research is expected to be developed in 2022 and 2023.

Armenia has undertaken research on "The impact of climate change on heritage" framed within the cooperation between ICOMOS Armenia, The University of Göttingen in Germany, and The Armenian National University of Architecture and Construction.

Meanwhile, **Colombia** plans that each of its technical committee "will have to undertake work to review and assess the production of scientific knowledge in different sectors (not just the one that concerns the cultural), with this it is possible to articulate different perspectives to the management of the Cultural Heritage and bring it closer to the cultural communities that inhabit different regions. Each committee must demonstrate the link between the various sectors on cultural rights issues and how heritage will strengthen these links".

4. Capacity Building

ICTC mentioned joint educational activities could be organized and **IcoFort** "plans to set up and offer workshops to public managers, fortification managers, and universities where climate change issues can be addressed".

5. Traditional Knowledge

No Committee responses to this question related to engaging with Traditional Knowledge. This is an issue to raise within ICOMOS more generally

From a total of 107 committees, 48 (44.86%) committees answered the question on 'what can your committee do to engage climate scientists in understanding *the role that cultural heritage plays in climate change responses and action.'* Specifically, 31 NCs, and 17 ISCs and WGs combined responded to this question. For each of the responses, these were classified according to the categories

assigned given the context of each of the committee replies. Some answers were also considered to be a combination of the different categories

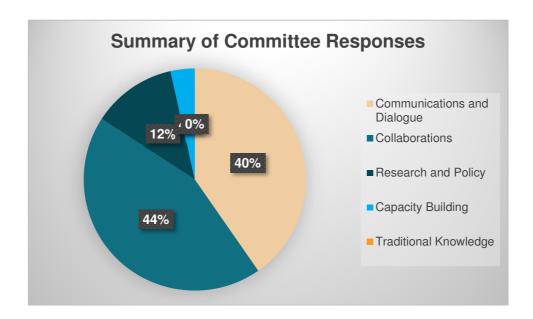


Fig. 1 Summary of committee responses per category in percentage form

Based on the results, 43% (Fig. 1) of the total committees that answered indicated Collaboration as the top action point to engage climate scientists in heritage work. It is followed by the need for Communications and Dialogue initiatives with 41% responses. 12% of the answers were considered under Research and Policy and 4% are Capacity Building-related responses. No committee related their answer to Traditional Knowledge.

Extracts from Responses of National Committees

Armenia	"The impact of climate change on heritage" research made within the framework of cooperation between ICOMOS Armenia, The University of Göttingen in Germany and The Armenian National University of Architecture and Construction. It can be a good example in this sphere.
Australia	Dialogue with government (political and administration) Involve climate scientists in discussions for risk plans for heritage places - utilise their expertise
Austria	collaborating in the above mentioned activities provides the base to engage with experts in this field. Joint projects with TU Wien have been applied for funding and if granted will start work in the second half of 2021.

Colombia	Each technical committee that is part of ICOMOS in Colombia, will have to undertake work to review and assess the production of scientific knowledge in different sectors (not just the one that concerns the cultural), with this it is possible to articulate different perspectives to the management of the Cultural Heritage and bring it closer to the cultural communities that inhabit different regions. Each committee must demonstrate the link between the various sectors on cultural rights issues and how heritage will strengthen these links.
Estonia	Collaborative events with decision makers
France	In progress
Honduras	Our committee is collaborating with the Department of Architecture and the Department of Anthropology of the Honduras National University to strengthen awareness on climate change.
India	Create a directory of Climate professionals - Identify and create a network of key climate scientists and stakeholders working in various parts of India
Ireland	With the ambition of highlighting Climate-change mitigating actions and financial support initiatives (programmes, grants, etc), initiate a series of key, high-profile public lectures in the form of webinars and town-hall gatherings; Disseminate best international practice to heritage practitioners in Ireland - with our NSCs/WGs which include EPs. Develop working links and collaborations with relevant organisations within and outside the standard cultural heritage sector
Italy	ICOMOS Italy will start by proposing some seminar of data acquisition and data quality assessment to allow a correct comprehension of the Climate Change actions on CH and to allow the plan of possible actions at a theoretical level and also by considering practical case studies.
Korea	Building networks
Latvia	As mentioned in Question 1 we will work to disseminate Green Paper using the process as a platform for awareness-raising and debate.
Lebanon	Establish a working group or NSC in our NC dedicated to climate change issues.
Lithuania	In Lithuania, the confluence of climate change and heritage has not been well analyzed and understood yet. ICOMOS LITHUANIA, as a NC, is planning to start raising this issue and aims to promote information about this.
Macedonia	New partnerships could be forged between ICOMOS Macedonia and the relevant environment/climate institutions and specialists since so far such communication and/or collaboration had not taken place.
Malaysia	Focus on developing a wider network
Mexico	Mainly to establish a very close collaborative relationship between ICOMOS and IUCN.
Nepal	Collaboration would be sought with relevant government agencies, as well as INGOs such as WWF and ICIMOD.
New-Zealand	Identify new collaborators and foster relationships
Norway	We can invite climate scientists as contributors into our open thematic meetings.

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Panama	Network of collaboration with: Ciudad del Saber, Patronato Panamá Viejo, Asociación de Antropología e Historia de Panamá, Red de Museos y Centros de Visitantes, universities, among others.
Philippines	ally with climate scientists who are interested in heritage.
Portugal	We are developing contacts with research groups from different universities that are working on climate change and on cultural heritage in order to create a multidisciplinary working group. ICOMOS PT will do the coordination of this working group.
Russia	We consider the possibility of attracting the potential of young specialists/students with a natural-geographical profile for cooperation.
Saudi Arabia	Refer to 1: Saudi ICOMOS will established a team of experts to support the government in this subject of academic fields of climate change
Slovenia	Identifying possible new collaborations and to start networking with interesting professionals.
Spain	In the Climate Heritage Network; we have five subgroups working on different aspects.
Sweden	ICOMOS has a collaboration with the IUCN (International Union for Conservation of Nature) under the name Culture - Nature Journey. This initiative is highly relevant for Sweden. In this context, ICOMOS Sweden aims to be a driving force in increasing national cooperation within the Water History Network and contribute to the newly formed International Committee for Water and Heritage.
Switzerland	Technical meetings, exchange of experience, networking
Tunisie	Circulation of all available information to key stakeholders (government and NGOs) on national and international impact studies and case studies, as well as recommendations from these studies and actions to be taken to reduce these impacts.
Turkey	Our Committee can establish new networks with different stakeholders such as local NGOs working on preservation of cultural heritage and natural sites, as well as Ministry of Culture and Tourism, Ministry of Environment and Urbanism
USA	US/ICOMOS convened the first Nature-Culture Journey event in 2016 and has followed up with our US/ICOMOS Annual International Conference and Seminar "Forward Together" that featured many Nature-Culture Journey sessions. Papers from those sessions will be published by Routledge in a book in 2021. We also understand that we must broaden our membership and leadership to include those who have worked in fields that have been associated with the natural sciences and are working to do this.

Responses of International Scientific Committees and Working Groups

ISC20C	Share knowledge and information, be vocal, walk the talk daily.

ICAHM: International committee on Archaeological Heritage Management	In addition to the networking recommended above, ICAHM and ICOMOS should focus on the individual sites, landscapes, and communities already inscribed and in the upstream process. Further, ICOMOS should explore and investigate "bright spots" and community strategies to promote climate change resilience, whether connected to world heritage or perhaps just emerging from regional assessments of significant heritage sites in the nation. Brief accounts of the properties and the communities should be compiled and released as a series of Press Releases by ICOMOS in the media to draw attention to heritage and climate change. This is a similar goal to the Panorama perspective and approach for the Nature-Culture process but featuring specifically climate change stories and remedies for sites and communities. ICAHM can also support general information flows to
CIIC: International committee on Cultural Routes	encourage more collaborative action. The Climate Change Group will have representatives of our committee at scheduled events.
ICTC: International committee on Cultural Tourism	The ICTC can: • Engage with different partners at UNESCO, UNWWTO, GSTC and others on cultural heritage and climate change matters to encourage dialogue and action related to existing and emerging sustainability and climate change issues. • Determine where there may be joint opportunities for publications, webinars and other educational activities to promote these events.
ISCEAH : International committee on Earthen Architectural Heritage	Identify collaborations and networks
ISCES: International committee on Energy and sustainability	ISCES members, with their very different professional backgrounds (universities, research institutes, architects and consultants, regional and national authorities), are involved in a whole range of research projects. Nevertheless, it would be much more valuable for us as ISCs to be able to be direct partners in such international projects - we would very much welcome it if ICOMOS could pave the way for this and provide the ISCs with the necessary legal framework.
IcoFort : International committee on Fortifications and Military Heritage	We plan to set up and offer workshops to public managers, fortification managers, and universities where climate change issues can be addressed
CIPA: International committee on Heritage Documentation	By identifying experts in Climate Change to be invited to explain which are the consequences on different CH objects: buildings, historical centres, natural sites.
CIVVIH: International committee on Historic Cities, Towns and Villages	CIVVIH members participate in the ICOMOS Climate Change Heritage Working Group (CCHWG). Claus-Peter Echter was one of the authors of the WUC "Call to climate action". Together with Eric Huybrechts he is preparing a UTC

	on Climate Climate Heritage Planning with Andrew Potts. Climate Change is the main topic of the WUC in 2021.
ICIP: International committee on Interpretation and Presentation of Cultural Heritage Sites	President Sue Hodges represents ICIP in the Climate Change Heritage Working Group (CCHWG). Collaboration with the WG will be further explored to include options for ICIP's Expert Members in achieving the goals of the CCHWG. - ICIP has established a Climate Change Working Group and will ensure its members effectively examine the possibilities for collaborations with other ICOMOS ISCs, NCs, WGs and institutions/organisations outside ICOMOS to develop activities and projects. - ICIP could further its initial conversations with the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the auspices of UNESCO. Its expertise in promoting, testing and demonstrating the applications of space technologies (namely remote sensing, GIS, GPS and other technologies) for the conservation, management and sustainable development of globally significant natural and cultural heritage, biosphere reserves and geoparks would be a valuable resource in recording and mapping cultural heritage sites and traditional practices/diverse cultures that would be affected by the climate change.
IPHC: International Polar Heritage Committee	The IPHC is engaging with POLAR Cultural Heritage and Environmental Studies (POLAR CHESS) research programme: University of Cambridge and University of Tromsø. This new initiative focuses on Arctic and Antarctic material culture's potential to be utilised as environmental datum points, indicators of rates of change, and to better understand related physical, chemical and biological activity. This is aimed to develop closer relationships between cultural heritage conservation specialists and other environmental scientists and could provide a valuable platform for the study of climate change impacts and responses.
ISCV: International committee on Stained Glass (ISCCSG: International committee for the Conservation of Stained Glass)	Collaboration and dissemination of specific knowledge of stained glass
CIF: International committee on Training	We are taking any opportunity to engage and are intending to prepare a CIF activity during COP26 in Glasgow.
ICUCH: International committee on Underwater Cultural Heritage	Publish our concerns, challenges, synergies and solutions widely, preferably in marine science journals/publications as well as in more traditional heritage outlets.

CIAV: International committee on Vernacular Architecture	The identification and propagation of lessons learned from the vernacular-built heritage that could be employed in new constructions and invite climate relevant stakeholders to benefit from them.
ISC20C: International committee	Share knowledge and information, be vocal, walk the walk
on 20th Century Heritage	daily.
EPWG: Emerging Professionals Working Group	Specifically explore new collaborations with Emerging/Young Professional peer organisations (i.e. reach across Climate Heritage Network and beyond) to establish joint programs and projects; Prospective involvement with upcoming Pre-COP26 Event with Climate Heritage Network and associated organisations.
SDGsWG: Sustainable Development Working Group	We currently have established an MoU with UN-Habitat, which will look at issues of urban planning and SDGs and we recently had a partnership with the Global Heritage Fund, which will look at understanding how policy and heritage practice can come together to link heritage and sustainable development. A partnership with the United Cities and Local Governments (UCLG) will also encourage the role of heritage in cities, towns and villages. Together with CCHWG and UN-Habitat, we have identified a potential project to review the New Urban Agenda for 2022 (Quito+6). Selected members of the Working Group will be part of the International Co-Sponsored Meeting on Culture, Heritage and Climate Change for December 2021.

Annex D

Q4. What can your committee do to understand the repercussions of climate change in heritage conservation processes and policies, and to adapt practice to the changing situation?

Analysis of Committee Responses

The 2020 Committee annual report survey indicated that committees are looking to ICOMOS to provide central leadership to support committees which are working to raise awareness by public engagement and to extend recognition and integration through sharing climate change policies promoting research tools, criteria, risk data and networks to build committee capacity (32%).

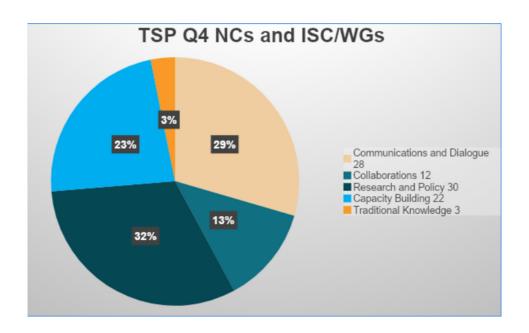
Many committees identified that they must reinforce the active dissemination of the climate change agenda and improve understanding, supported through specific talks, dialogues, seminars, congress

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and webinars (29%). Other committees identified that they would be working to share and develop knowledge, recognizing the need to build their own technical capacity and seeking access to training tools and workshops to upskill (22%). Some committees have established internal work groups on climate change collaborating within ICOMOS and with external institutions (12%).

Unfortunately, very few committees have yet engaged with the importance of traditional knowledge and climate, and this is identified as a significant knowledge gap which deserves prioritization by ICOMOS organizationally.

The Annual Report survey on which this analysis is based did not receive responses from all committees and it is anticipated that more committee initiatives and actions will join the TSP 2021-2024 structure and be included at each review period of the triennium, nonetheless, the responses give examples of valuable initiatives.



I. Communications: Raising Public Awareness and Engagement

Most NCs and ISCs are working on raising awareness, using their own websites, webinars and in the case of CIF, utilizing its current review of doctrine to disseminate good practice for climate change action and inform relevant policies.

ICAHM is taking the approach of looking for good news climate action stories- working on the Identification of bright spots and practices like: World Concert of good stories in Philippines https://chairpeace.hypotheses.org/1587 which it may adapt; as well as working with its members to help to identify any gaps or points of weakness in current work and to assist in defining necessary focus for future work.

Other NCs such as **Ireland and Mexico** are taking a broad view politically, with Ireland asking to extend solutions for zero carbon, sustainable strategies nationally **and the Mexico NC** asking for the consideration of Climate change in urban, landscape and heritage planning, to prevent the disappearance of cultural assets as well as regulation and standards to avoid risks.

NCs and ISCs are working on talks, seminars, webinars, discussions and congress. CIF will use its own web site, webinars and other activities to disseminate good practice and policies. **CIPA** is organizing specific seminars and promoting specific studies on the topic and is participating in an open interdisciplinary debate as is **EPWG** via a webinar interdisciplinary debate series.

Austria NC is in cooperation with "Netzwerk Lehm" as well as **Chile** NC with a range of public and academic institutions. **Italy, Latvia and Slovenia NC**s are all working on the organization of Climate change symposia as their first NC step. The **Turkey** NC is organizing "heritage at risk" events focusing on climate change risks (seminars, social media campaigns, etc.) for public involvement

NCs and ISCs are working on raising presentations on things to consider heritage protection practice due to climate change. Latvia (Baltics) and Russia NC are defining the results of their 2020-23 research, an assessment of the negative impact of the natural and climatic factors, an analysis of the materials received and proposals of specific methodologies will be made.

2. Collaborations

Organizations External to ICOMOS

The ICOMOS committees are seizing on the improvement of access to digital communications during the Covid pandemic to initiate collaborative work through diverse locations, with **Armenia NC** jointly working with **Germany NC**

Nepal, Nigeria, Sweden NCs want to strengthen cooperation within ICOMOS and are already investigating exchanges with other committees and organizations. The **Panama** NC wants to share

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experiences in specific research and good practices. **Philippines** NC is also working on the dissemination data from ICOMOS international to their own national CC agencies, **Russia** is promoting an international project «Platform» for development of proposals on preservation of cultural and geological heritage objects, with case studies underway.

Slovenia is working on an intensive dissemination of the research results within the professional and general public. **US/ICOMOS** is proposing to engage with the U.S. National Park Service on climate change impacts and management in World Heritage sites.

Collaborations within ISC/ICOMOS

In the triennium 2021-24, the topic of climate change has initiated a wide range of collaborations in ISC and NC annual conferencing and meetings, with **CIAV's** annual conference in 2021 to be held jointly with **ISC** on Earthen Heritage, ISC on Wood Heritage, and **ISC** on Energy, Sustainability and Climate Change. **ISCES** is planning various activities to also contribute to IPCC report related with the lack of reliable data for the historic building stock in particular with regard to sustainability and the impact of climate change.

The **Australia - New Zealand** Joint Scientific Committee on **Risk Preparedness** is undertaking a series of collaborations and research with the national committees of Australia and New Zealand, and ICOMOS Pacifica. **Turkey NC** that is working on vulnerability assessment defining pilot area(s) (such as WH sites of Turkey or other listed cultural heritage sites).

3. Research and Policy Development

Increasing state of the art knowledge about climate change

ISCES is working to contribute to the IPCC report and **CIF** also is upgrading doctrine to include CC. Several National ICOMOS Committees including **Spain and Ireland**, are working on developing **or collaborating on** climate change policy and climate-change actions.

Nigeria NC is working in change management processes in the light of the current and anticipated impacts of climate change and natural disasters.

Saudia Arabia NC working with the Saudi crown prince ambitious programs that will reduce carbon emissions by 60 percent in the region and plant 50 billion trees in the world's biggest afforestation project, leading the coming green era.

US/ICOMOS is working to engage with the U.S. National Park Service on climate change impacts and management in World Heritage sites.

Raising Awareness By Public Engagement

CIF will use its own web site, webinars and other activities to disseminate good practice and inform policies. ICAHM is working in the Identification of bright spots and Comparable practices: World Concert of good stories in Philippines as well as the adoption of this and other approaches to its members and help to identify any gaps or points of weakness in current work and to assist in defining necessary focus for future work.

NCs such as **Ireland** are asking to extend solutions for zero carbon, sustainable strategies. **Mexico NC** is asking for the consideration of Climate change in urban, landscape and heritage planning, to prevent the disappearance of cultural assets as well as regulation and standards to avoid risks.

Producing Toolkits, Indicators And Data Analysis

CIF will encourage collaboration and more multidisciplinary research. ICTC will participate fully in the 6 ISC Risk management for a Shared Future process to address climate change and tourism issues as part of the interdisciplinary approach with ICORP, ISCARSAH, ISCEAH, ICTC, ISCES+CC and CIPA.

CHC is monitoring to identify risks and vulnerable parts of cultural itineraries and define some risk management indicators **CIVVIH** will collect case studies on climate change in historic cities and find examples: "Future of our Past", "The Green Paper" and "The ICOMOS SDG Goals Policy Guidance for Heritage and Development Actors".

ICOFORT is studying the indicators they have created, carrying out the application and monitoring in pilot projects.

ISCCSG is working on Specific research on exemplary sites.

ISCEAH is working on case studies and preparing materials on the use of traditional earthen architectural technologies.

ISCEAH is collecting climate change action case studies.

ISCES will be examining the lack of reliable data for the historic building stock in particular with regard to sustainability and the impact of climate change.

EPWG is participating in analysis, national surveys of climate change action.

Armenia NC with Germany NC. New Zealand with Australia NC.

Italy is also working in research in different actions on HC assets.

Lebanon, Malaysia, Nepal and Panama NC are working with universities and public research institutions, including different research areas such as climate science, history, biology, architecture, and others.

Portugal NC is also working on a survey addressed to the municipalities / local authorities.

The Nigeria NC is investigating the time-critical need to put cultural heritage into a new pathway for longer term resilience building.

Russia NC had developed the "Model of buried relief of ancient Pskov", in which data on paleo and modern: landscape, climate, engineering and geological conditions of the terrain were drawn.

Slovenia is promoting specific research with the professional and general public.

Switzerland and **Tunisia** NC are developing collaboration networks between scientists working in heritage, risk management meteorologists.

Turkey NC is working on vulnerability assessment defining pilot area(s) (such as WH sites of Turkey or other listed cultural heritage sites)

Heritage practice and Climate Change

Latvia (Baltics) and **Russia** NC are defining the results of 2020-23 research, an assessment of the negative impact of the natural and climatic factor, an analysis of the materials received and proposals of specific methodologies.

Ireland continues to advocate for the role of cultural heritage in climate policy and raising awareness by public engagement- for example recognition of solutions for zero carbon, sustainable strategies.

Toolkits & Frameworks For Mitigative Measures In Heritage Management

ISCEAH is preparing materials on the use of traditional earthen architectural technologies.

India, Switzerland and Turkey NCs are working on vulnerability assessment of heritage sites (targeting ICOMOS TR members, young professionals, heritage professionals, government officers related with heritage preservation).

Publications

CIAV annual conference in 2021 will be held jointly with **ISC** on Earthen Heritage and the proceedings will be published.

Georgia NC is also working on an E-publication in order to disseminate the results of ongoing study of traditional knowledge.

Local Involvement

Australia NC is recording climate risks to support community discussion with ICOMOS Pacifica **Norway** NC is trying to involve more people in climate related activities

Nigeria NC is focused on improving preparedness measures for African cultural heritage sites and communities **Tunisia** NC is developing collaboration with different actors of the protection and management of heritage facing CC.

Scientific research case studies and surveys such as:

CIF will encourage collaboration and more multidisciplinary research as well as **ICTC** Participates fully in the 6ISC Risk management for a Shared Future process to address climate change and tourism issues as part of the interdisciplinary approach.

CIIC is monitoring to identify risks and vulnerable parts of cultural itineraries and define some risk management indicators as well as CIVVIH that will collect case studies on climate change in historic cities and find examples: "Future of our Past", "The Green Paper" and "The ICOMOS SDG Goals Policy Guidance for Heritage and Development Actors" are implemented. ISCV is working with

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specific research on exemplary sites. **ICOFORT** is working on studies on the indicators they have created, carrying out the application and monitoring in pilot projects. **ISCCSG** is working on Specific research on exemplary sites. **ISCEAH** is working on case studies and preparing materials on the use of traditional earthen architectural technologies as well as **ISCEAH** collecting case studies. **ISCES** will be considered in the future the lack of reliable data for the historic building stock in particular with regard to sustainability and the impact of climate change and **EPWG is** participating in analysis, national surveys.

Italy is also working on research about the impacts of CC on heritage assets, Lebanon, Malaysia, Nepal and Panama NCs are looking at research collaborations with universities and public research institutions, including different research areas including climate science, history, biology, architecture. Portugal NC is working on a Survey addressed to the municipalities / local authorities about CC. The Nigeria NC is investigating the time-critical need to put cultural heritage into a new pathway for longer term resilience building. Russia NC had developed the "Model of buried relief of ancient Pskov", in which data on paleo and modern: landscape, climate, engineering and geological conditions of the terrain were drawn. Slovenia NC is promoting specific research with the professional and general public. Switzerland and Tunisia NCs are developing collaboration networks between scientists working in heritage, risk management and meteorologists.

Toolkits & Frameworks For Mitigative Measures In Heritage Management

India, Switzerland and Turkey NCs are working on vulnerability assessment of heritage sites (targeting ICOMOS TR members, young professionals, government officers).

4. Capacity Building

Specialist Training

ISCCSG will be promoting training for students in stained glass conservation during the next triennium. The **OCDI RBA** will continue its training on rights-based / people-centered approaches, engaging with the way in which just transitions and benefits from heritage knowledge of communities can be supported. **EPWG** is intending to organize training in climate change action during the triennium but other committees are at the threshold of identifying how they may develop training and capacity building initiatives **ICUCH** noting that there is a gaping hole in the science that is required to enable management actions to be prioritized

Joint Training With Other National Committees

Ireland, Norway, Lebanon, Nepal, Panama NCs all reported that they will be working on training courses and there may be options to integrate actions with the New Zealand NC to reinforce training opportunities, or alternatively to pursue regional training.

Workshops

USA/ICOMOS is developing a workshop to publicly share results of ongoing climate research in NPS or a pilot workshop for the Climate Vulnerability Index and training in a U.S. National Park.

5. Respecting Traditional Knowledge

OCD-RBA will continue training on people-centred approaches thus assisting in just transitions and benefits from heritage knowledge communities.

Austria and Georgia NCs are looking for the use of traditional, organic, and natural building material / techniques.

Australia ICOMOS Working Group IS developing an international webinar series on Caring for Country which includes a webinar on Climate Change Adaptation for Aboriginal Cultural Heritage.

Electronic Links:

- 1. https://www.icomos.org/images/DOCUMENTS/Secretariat/2020/GA2020/Working_Docs/GA2020_6-3-6_TriennialScientificPlanReboot.pdf)
- 2. <u>ICOMOS Action Plan for Cultural Heritage and Localizing the Sustainable Development Goals</u> (SDGs).
- 3. "The Future of Our Pasts: Engaging Cultural Heritage in Climate Action
- **4.** <u>More information:</u> Website: http://www.icomos.org/en/what-we-do/involvement-in-international-conventions/un-sustainable-development-goals-2
- 5. "World Concert of Good Stories"
- **6.** The Panorama nature-culture initiative: https://panorama.solutions/en/portal/nature-culture
- 7. "The Green Paper"

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8. Major Impacts of Climate Change on Cultural Heritage: https://www.nps.gov/subjects/climatechange/upload/NPS-2016 Cultural-Resoures-Climate-Change-Strategy.pdf

Extracts from Responses of Scientific Committees

Q5. What can your NC do to understand the repercussions of climate change in heritage conservation processes and policies, and to adapt practice to the changing situation?	Name of Committee
ISCs	
CIAV annual conference in 2021 will be held jointly with ISC on Earthen Heritage, ISC on Wood Heritage, and ISC on Energy, Sustainability and Climate Change. The proceedings will be published.	CIAV
We will encourage collaboration and more multidisciplinary research and we will use our web site, webinars and other activities to disseminate good practice and inform policies.	CIF
Monitoring to identify risks and vulnerable parts of cultural itineraries and define some risk management indicators.	CIIC
Organising specific seminars and promoting specific studies on the topic	CIPA
CIVVIH will collect case studies on climate change in historic cities and find examples where thoughts of the reports "Future of our Past"., "The Green Paper" and "The ICOMOS Action Plan for Cultural Heritage and Localizing the Sustainable Development Goals (SDGs)" are implemented.	CIVVIH
The identification of "bright spots" follows practice developed by the US NOAA and USGS in their climate change programs. A comparable practice in the Philippines is the "World Concert of Good Stories" initiated by Atty. Antonio Oposa jr. The Panorama nature-culture initiative in ICOMOS provides a platform where ICOMOS Philippines can display our success stories and can learn from international successes (https://panorama.solutions/en/portal/nature-culture). For example, from the Philippines: We can start with the many community-based mangrove restoration projects; decentralized energy (geothermal in Negros, etc.); solar projects; marine sanctuaries nationwide (National fisheries now promoting these despite quite heated earlier objections and resistance); reforestation of diptocarp forests in the central cordillera of Cebu; promotion of dawa (millet) swidden farming in the hills above Catmon, Cebu; eco-tourism in communities like Alguinsan Cebu where the community manages and tasks the marine and forest experience and sustainable tourism enterprise; bird sanctuaries like in Olango with the first RAMSAR designated wetland in the Philippines; northeastern Sierra Madre conservation programs; Ifugao rice terraces community enterprise and heritage preservation; Iglit-Baco Tamaraw habitat conservation in Mangyan ancestral domain; etc. ICOMOS should identify these projects through the ICOMOS Philippines climate change network and publish online "solutions" comparable to the Panorama	
program. ICAHM can encourage the adoption of this and other approaches to its members and help to identify any gaps or points of weakness in current work and to assist in defining necessary focus for future work.	ICAHM

-ICIP is planning to update the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites to include issues of sustainability, climate change and disaster risk management. - We will encourage our members to share their experience in the ways they have implemented interpretation of cultural heritage sites within the climate change effected regions through the ICIP website and Facebook. - Collaborate with ISCs such as ICORP, ICICH, ICTC, CIVVIH, ISCCL and CIF in promoting the importance of interpretation in managing and mitigate the implications of climate change.	ICIP
Expand the studies on the indicators we have created, carrying out the application and monitoring in pilot projects.	ICOFORT
The ICTC can: - Participate fully in the ICOMOS 6 ISCs Risk Management for a Shared Future process to address climate change and tourism issues as part of the interdisciplinary approach with ICORP, ISCARSAH, ISCEAH, ICTC, ISCES+CC and CIPA - Develop a white paper on climate change implications on cultural tourism.	ICTC
Among ICUCH and other professional heritage bodies there is an understanding of the threats and consequences, but there is a gaping hole in the science that is required to enable management actions to be prioritized.	ICUCH
Specific research on exemplary sites, training for students in stained glass conservation.	ISCCSG
We had one representative on the CCHWG. We are now ready to perform the next steps by collecting case studies and preparing materials on the use of traditional earthen architectural technologies.	ISCEAH
Studies have shown that there is a lack of reliable data for the historic building stock in particular with regard to sustainability and the impact of climate change: the missing data range from the specification of historic building materials (e.g. Uvalues, ecological footprint) to the identification and quantification of particularly affected building typologies. So far, no concrete action plan has been established by ISCES, but it will be considered in the future. Various activities of the members are planned, to also contribute to the IPCC report.	ISCEC
Continued training on rights-based / people-centered approaches thus assisting in just transitions and benefits from heritage knowledge of communities.	OCDI RBA
Brainstorming sessions to discuss the challenges and opportunities for the topics related to the Climate Change Reaching out and growing the existing ICOMOS network of Emerging Professionals to organize training, participating in analysis, national surveys, open interdisciplinary debate.	EPWG
Studies have shown that there is a lack of reliable data for the historic building stock in particular with regard to sustainability and the impact of climate change:	ISCES:

the missing data range from the specification of historic building materials (e.g. U-values, ecological footprint) to the identification and quantification of particularly affected building typologies. So far, no concrete action plan has been established by ISCES, but it will be considered in the future. Various activities of the members are planned, to also contribute to the IPCC report.	
Specific research on exemplary sites, training for students in stained glass conservation.	ISCV
Invest time in developing informed positions related to 20th century heritage and contributing them to the larger ICOMOS and external discussions and efforts.	ISC20C
In 2021, the SDGWG supported the review of the toolkit being developed by UNESCO in reviewing the World Heritage Sustainable Development. Entitled "Preliminary Health Check" and "Project Sustainability Check" the document looks at all the aspects of sustainable development including environmental sustainability and climate change.	SDGWG
Extracts from Responses of National Committees	
ICOMOS Armenia can provide the results of studies implemented with the colleagues of Germany to relevant scientific committee of ICOMOS	Armenia
Record climate risks and provide commentary when events occur, to support community discussion	Australia
Continue to support Blue Shield Australia	
Continue to support the Australia New Zealand Joint Scientific Committee on Risk Preparedness	
Members of ICOMOS Austria are already fostering the use of traditional, organic and natural material and traditional techniques in talks and discussions in cooperation with "Netzwerk Lehm"	Austria
Encourage members to develop research focused on the impact of climate change on cultural heritage.	Chile
Promote the organization of seminars from public and academic institutions represented by our members.	
ICOMOS Georgia is planning to design a webinar series in order to disseminate the results of ongoing study of traditional knowledge. Issue of E-publication is also planned.	Georgia
The WG is trying to create a national database of impacts of climate change on Heritage sites. This helps us understand patterns and development of toolkits & frameworks for mitigating measures, heritage management.	India
All heritage plans to include a climate change policy and significant related climate-change actions	Ireland

Continue to advocate for a support a culture of interest cultural heritage and raise awareness by public engagement and to extend recognition and integration within solutions for zero carbon, sustainable strategies.	
Training - which may be something to undertake with other NCs/Regions	
Expand the ICOMOS Membership to ensure it includes the expanding areas of cultural heritage/climate action expertise	
Promote seminars and research activities and a strict check of the different actions on CH assets in Italy	Italy
As we plan this autumn/early winter seminar on heritage at risk to foster discussion on topical threats to the heritage we hope to have at least one presentation on things we have to consider heritage protection practice in Latvia (Baltics) due to climate change.	Latvia
Join specific research groups on climate change impact on National sites; exchange experience with regional NCs.	Lebanon
Since we are a newly-established committee, we are currently working on possible strategies of our NC for the next 2-5 years and trying to identify which are the most impactful areas of work that ICOMOS LITHUANIA could focus on.	Lithuania
National Surveys	Malaysia
The problem of climate change must be considered in urban, landscape and heritage planning, in order to prevent the disappearance of cultural assets, and it is also necessary to establish regulations and standards to avoid accentuating the risks caused by climate change.	Mexico
With collaboration with different organization	Nepal
ICOMOS Nepal can help in specific research and provide training.	•
National surveys would help us to understand what level of knowledge already exists,	New- Zealand
so that we could then target training opportunities in the right areas	
The Nigerian NC is currently addressing Climate change particularly as part of an international collaboration	Nigeria
index at the World Heritage site of Sukur Cultural Landscape	
The project seeks to improve preparedness measures for African cultural heritage sites and communities by investigating the time-critical need to put cultural heritage into a new pathway for longer term resilience-building and change management processes in the light of the current and anticipated impacts of climate change and natural disasters	
We will involve more people in climate change related activities, and support relevant capacity development.	Norway

We can map and be transparent of our carbon footprint (including travel activities) and how we seek to mitigate emissions.	
Share experiences in specific research and good practices.	Panama
Develop competencies through training.	
Encouraging new research lines about heritage and climate change, in universities and research public institutions, including different research areas such as climate science, history, biology, architecture, and others.	
Disseminate data from ICOMOS international to our national agencies; help in case study collection for ICOMOS International	Philippines
Survey addressed to the municipalities / local authorities	Portugal
Provision of monitoring equipment to monitor the state of monuments in the open air.	Russia
Research and publications.	
Realization of international project «Platform» for development of proposals on preservation of cultural and geological heritage objects.	
For example, since 1999 in Pskov, within the framework of the historical-archaeological approach, reconstruction (modeling) and analysis of the paleonatural conditions of the territory of ancient Pskov (X-XVIII centuries) are carried out in order to establish the relationship between the natural environment and human activities.	
At the current stage, a new source has been created on the topic "Model of buried relief of ancient Pskov", in which data on paleo and modern: landscape, climate, engineering and geological conditions of the terrain were drawn.	
The analysis of the results examines the preservation of cultural heritage in the light of the changing natural environment over the past 1,000 years. This work is continuing in the light of the problem identified. It is intended to continue research under the theme "Natural conditions of the territory of ancient Pskov and their impact on the preservation of cultural heritage", which also addresses climate change issues.	
On the basis of the results and the research conducted 2021-2023. An assessment of the negative impact of the natural and climatic factor, an analysis of the materials received and proposals of specific methodologies will be made.	
Saudi crown prince announces Green Saudi Initiative, Green Middle East Initiative	Saudi
The initiatives aim to clearly define a road map that will protect the planet	Arabia
Prince Mohammed said that the Kingdom and the region face significant climate challenges such as desertification	
JEDDAH: The Kingdom is opting for a more sustainable future with the launch of the Green Saudi and Green Middle East initiatives.	
Announced by Crown Prince Mohammed bin Salman, the initiatives are set to apply a number of ambitious programs that will reduce carbon emissions by 60	

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percent in the region and plant 50 billion trees in the world's biggest afforestation project.	
The tree-planting project will be double the size of the Great Green Wall in the Sahel region, the second-biggest regional reforestation initiative.	
Crown Prince Mohammed bin Salman said: "As a leading global oil producer, we are fully aware of our responsibility in advancing the fight against the climate crisis, and that just as we played a leading role in stabilizing energy markets during the oil and gas era, we will work to lead the coming green era." https://www.arabnews.com/node/1832861/saudi-arabia	
Involvement in specific research and intensive dissemination of the results within the professional and general public.	Slovenia
Organization of the symposium on the topic is our first step.	
This is an answer to be made in one-year time, when we will have the finished products	Spain
Share knowledge and experiences from the international network and from a global perspective.	Sweden
An important goal is to strengthen cooperation and exchange within ICOMOS and the exchanges with other organisations.	
Specific research, analysis, training	Switzerland
Set up and develop collaboration networks between scientists working in heritage, risk management, meteorologists as well as the different actors of the protection and management of heritage.	Tunisie
organize training courses with ICORP-Turkey areas on vulnerability assessment of heritage sites (targeting ICOMOS TR members, young professionals, heritage professionals, government officers related with heritage preservation); define pilot area(s) (such as WH sites of Turkey or other listed cultural heritage sites) and organize "heritage at risk" events focusing on climate change risks (seminars, social media campaigns, etc.) for public involvement	Turkey
US/ICOMOS could work to engage with the U.S. National Park Service on climate change impacts and management in World Heritage sites.	USA
This could include a possible workshop to publicly share results of ongoing climate research in NPS or a pilot workshop for the Climate Vulnerability Index and training in a U.S. National Park.	

Annex E

Q5. What can your committee do to improve policies and practice, to minimize the impacts of climate change on cultural heritage conservation?

Committee Response Analysis

Nearly every ISC and NC understands that **raising public awareness** by telling climate change stories - communication and dialogue - is central to improving policies and practice, to minimize the impact on cultural heritage conservation of climate change in the first place. ISC's and NC's are trying to achieve this by addressing the results of climate change on the field and by sharing experiences, best-practice examples as well as by seeking closer ties with political actors in order to involve ICOMOS's climate change topics in the national agendas.

Telling climate change stories is pursued with webinars, on Facebook pages, conferences, lectures, or by publishing guidelines and manuals.

Some ISC's and NC's are **collaborating** with each other to share experiences but many committees are seeking collaborations with policy decision makers and political leaders, e.g. to re-formulate management plans that include climate change risks and consequences.

Importantly, **research and policy development** takes place on different levels whether within the committees themselves (by adapting conservation policies) or by co-research with local management agencies, universities or local communities. Those newly developed or adapted guidelines might support capacity building to understand, educate, and train (future) experts to face challenges of climate change (e.g., through tool kits, dedicated working groups).

While traditional knowledge is widely accepted to be a rich source of inspiration for strategies facing climate change consequences on a local level, bottom-up perspectives are rarely taken into consideration by NC's or ISC's.

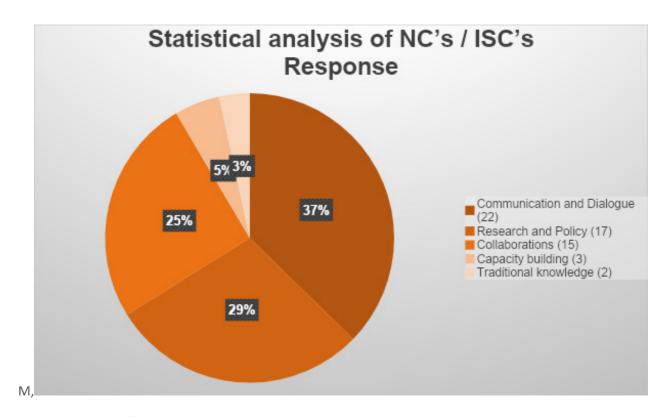


Fig. 1: Summary of committee responses per category in percentage form

I. Communication And Dialogue: Raising Awareness By Public Engagement/ Telling Climate Change Stories

Raising public awareness and telling climate change stories are central to many ISC's. CIF is highlighting in all of its projects and in public outreach the importance of addressing the results of climate change on the field, just as the NC's of Chile, Ireland, Korea, Norway are doing by sharing experiences as well as best-practice examples by telling climate change stories. ISC's like ISCES are encouraging its members to engage with decision makers and "to anchor cultural heritage" in national legislation. NC's like Armenia, Australia, Estonia, India, Latvia, New-Zealand, Panama, Slovenia and USA seek closer ties with political actors in order to involve ICOMOS's climate change topics in the national agenda, e.g. in the Australian government's "State of the Environment" report, the active participation in expert advisory government committees like the NC of Ireland or the contact to environmental initiatives like in the USA.

Since the global COVID 19 pandemic accelerated online tools and virtual meetings, committees including, for example CIIC, are focusing on the changes of new communication methods for public outreach, as ICIP is also doing (sharing knowledge via website and Facebook).

The NC of Australia publishes a "Sustainability Guide" for conferences and events on its website as well as holds on-line platforms for executive meetings and the NC of Ireland seeks funding for a national handbook "relative to all aspects of the intersection between climate change and cultural heritage". CIVVIH is organizing a webinar "Resilience of Historic Cities' ' and other joint events in collaboration, e.g., with OWHC or UN Habitat. ISCEAH will provide in the future automated forms to fill out as tools for mitigation. EPWG for example seeks to establish a mentorship platform to get in touch with other experts and learn from other case studies.

2. Collaboration With Organizations External To ICOMOS/ Working Together

CIPA works together with five other ISC's on the impact of climate change on cultural heritage conservation. Also, ICIP is collaborating with ICORP, ICICH, ICTC, CIVVIH, ISCCL and CIF in order to promote "the importance of interpretation in managing and mitigate the implications of climate change damage". The NC's of Australia, Tunisie, USA seek collaboration with national political leaders to encourage the discourse on the threads of climate change on cultural heritage on a high political level. Other forms of collaborations with political, academic and scientific institutions are pursued by the NC's of Austria (on legal aspects of national cultural heritage protection and management), Ireland (especially on a European level), Italy, New-Zealand (collaborations "also beyond the heritage industry"), Panama, Sweden and the USA (exploring ways to generate government support).

As for the monitoring of sites, the NC's of Honduras, Russia aim for the inclusion of climate change risks into management plans and Lebanon seeks cooperation with local institutions that are in charge of heritage management.

3. Research and Policy Development/ Developing Research and Policy

CIAV is adapting its conservation policies in order to mitigate / minimize climate change impacts. ICAHM will develop best practice guidance focusing on different audiences like heritage management agencies or local communities. An update of its own charter to include climate change challenges and site management is currently in preparation by ICIP. Also, ICTC will make an addition to the International Cultural Tourism Charter that addresses climate change. Elaborative analysis models and planning models to implement preventive and corrective solutions are developed by ICOFORT. And

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ICUCH, too, argues that a solid scientific basis is the foundation for side management strategies and needs therefore to be pushed forward.

The NC's of Colombia, Mexico, Nepal create specific indicators "to measure and evaluate the impact of actions on the management" of sites under the conditions of climate change to influence public policies and Macedonia, Turkey are involved in the creation of national protection policies resp. guidelines and handbooks. ISCCSG in this matter is offering on-site specific research strategies to learn from for other endangered sites and OCDI RBA continues to contribute to the UN Special Rapporteur on Cultural Rights.

ISCES suggests, based on its own good experiences, to create "national mirror groups" on energy, sustainability, and climate change. Those can be connected to other NC's or ISC's. The NC of Austria works in a joint project with TU Wien and an Israeli university on "legal framework issues for the management of cultural heritage" and the implications of climate change for this kind of (national) laws. Newly established NC's like Lithuania work out strategies and policies to identify "the most impactful areas" for future projects while the NC of New-Zealand develops guidance notes for the ICOMOS NZ Charter for the conservation of Places of Cultural Heritage Value.

4. Capacity Building

ISC's like CIAV acknowledge that the education and training of (future) experts is key to face the challenges of climate change. The development of tool kits for the evaluation and registration of threats of climate change for cultural heritage is pushed forward by NC's like Chile. The NC of New-Zealand "established a working group to develop guidance notes" specifically on cultural heritage and climate change.

5. Respecting Traditional Knowledge/ Working with Local Communities

ICAHM collaborates with guide organizers and site managers to gain a bottom-up-perspective on the consequences of climate change and to collect data that will then be analyzed. A similar approach is advocated by the NC of Colombia: different perspectives and concepts contribute to the knowledge about a site and "links the cultural context" with socio-ecological aspects.

	Extracts from Responses of Committees
CIVVIH	CIVVIH conducted a webinar on "Resilience of Historic Cities" and will improve policies and practices to mitigate the impacts of climate change in joint webinars and fruitful co-operations with the OWHC, UN Habitat, possibly UCLG.
ICIP	 We are planning to update the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites to include issues of sustainability, climate change and disaster risk management. We will encourage our members to share their experience in the ways they have implemented interpretation of cultural heritage sites within the climate change affected regions through the ICIP website and Facebook. Collaborate with ISCs such as ICORP, ICICH, ICTC, CIVVIH, ISCCL and CIF in promoting the importance of interpretation in managing and mitigating the implications of climate change.
Colombia	ICOMOS' work should highlight the importance of including perspectives and concepts from the environmental, economic and social contexts that have enabled the formulation of planning and management tools for the territory. This knowledge will link the cultural context with the requirements in terms of Human Development from the different sectors, as well as enable the creation of indicators to measure and evaluate the impact of actions on the management of cultural heritage and will influence public policy in terms of climate change, impact assessment and protection of cultural rights.
Ireland	Prepare and publish a national handbook (digital & hard copy) - potentially in collaboration with other related organisations - relative to all aspects of the intersection between climate change and cultural heritage - to be funded; Continue to participate actively in the Expert Advisory government committees which ICOMOS is part of, and seek to be part of others' Continue to make submissions on policy. Through our own events, reach out to policy makers and invite them to participate in our events, so we can develop relationships and understanding. Continue to be active at the European level, in collaboration with our Europe Group NCs, as there is much policy here to influence and engage with.
Honduras	Our committee has been monitoring the proposal for the new regulations for the Historical Town of Tegucigalpa for the inclusion of a component for risk management of cultural heritage.
New Zealand	We have recently established a working group to develop guidance notes on the implementation of the ICOMOS NZ Charter for the Conservation of Places of Cultural Heritage Value. We could prepare a practice note that specifically relates to implementation of the Charter in the context of cultural heritage. Make submissions to local, regional and national governments on proposed climate change policies, and any policies that influence or fail to take appropriate account of climate change issues, or that neglect the connection between climate change and risks to heritage. Expand outreach and pursue collaboration with conservation organisations, but also beyond the heritage industry e.g. scientific/research, professional, and community networks, to help mainstream the use of cultural heritage as a tool in climate action.

Communication and Dialogue

Committee	Remarks
CIF	We will highlight in all our work the research, education and training necessary to
	create the experts needed (from conservation professionals to politicians) and to
	increase awareness in the wider public.
CIIC	The CIIC considers education to be the most powerful tool. The pandemic has
	accelerated online educational processes and raised awareness of the damage to the
	planet from adverse weather events. However, many communities that own this
	heritage do not yet have these benefits
ICIP	We will encourage our members to share their experience in the ways they have
	implemented interpretation of cultural heritage sites within the climate change
	affected regions through the ICIP website and Facebook.
ICTC	Incorporate principles addressing climate change issues into the updated International
	Cultural Tourism Charter
ISCEAH	We will propose assessments and create forms as a tool for mitigation
ISCES	ISC members are encouraged to engage with their national decision-makers, in
	particular to influence the writing of the National Climate Action Plans and to anchor
	cultural heritage in them. There are already good experiences from the ISCES
	membership that should be made useful for others. The establishment of national
	mirror groups on energy, sustainability and climate change has proved particularly
	effective, which is why this should also be promoted in other countries. Networking
	of the national groups is possible through the ISC.
EPWG	Seeking and enabling mentorship platform to encourage sustainable, continued
	dialogues concerning practices for minimizing and mitigating impacts of climate
	change (e.g., can include work to share notification of current events, integration of
	up-to-date heritage plans and policies into the work plans, participating in the work
	in progress).
Armenia	ICOMOS Armenia will try to cooperate closer with the RA Ministry of ecology and
	in the result of joint discussion to suit the programs of heritage preservation with the
A 4 70	state programs of climate change and to assess its vulnerability in this area.
Australia	Sustainability Guide for Australia ICOMOS Conferences and Events - available on
	the Australia ICOMOS website - use for all Australia ICOMOS events
Cl.:I.	Use on-line platforms for some Executive Committee meetings
Chile	It is important to start by making the issue visible at all levels, including public
	institutions. Likewise, it is important to share experiences on prevention or mitigation
Estonia	work carried out in other WHS.
	Consultations with policy makers
India	To undertake Climate Vulnerability assessments; to create a connect with policy & decision makers on ground
Ireland	
meianu	Prepare and publish a national handbook (digital & hard copy) - potentially in collaboration with other related organisations - relative to all aspects of the
	intersection between climate change and cultural heritage - to be funded Through our own events, reach out to policy makers and invite them to participate in
	Through our own events, reach out to policy makers and invite them to participate in
	our events, so we can develop relationships and understanding

Korea	Making issues among experts, policymakers, and the public about the multilateral
	impact of climate change on cultural heritage
Latvia	ICOMOS Latvia can inform Latvian policymakers on the role heritage plays in
	mitigating the repercussions of climate change.
New-	Make submissions to local, regional and national governments on proposed climate
Zealand	change policies, and any policies that influence or fail to take appropriate account of
	climate change issues, or that neglect the connection between climate change and
	risks to heritage.
Norway	We can promote identified good practice.
Panama	Reach out to different stakeholders through a network of collaboration in order to
	adapt the policies and the legislation framework.
Slovenia	We will organize consultations on the topics of climate changes and sustainability
	with the experts, the policy makers and the general public.
Tunisia	Push to implement the recommended actions.
USA	We are also working with agencies to advance the many Biden environmental
	initiatives.

Collaborations

Committee	Remarks
CIPA	We created a collaboration with other 5 ICOMOS ISCs on this topic.
ICIP	Collaborate with ISCs such as ICORP, ICICH, ICTC, CIVVIH, ISCCL and CIF in
	promoting the importance of interpretation in managing and mitigating the
	implications of climate change.
EPWG	Seeking and enabling mentorship platform to encourage sustainable, continued
	dialogues concerning practices for minimizing and mitigating impacts of climate
	change (e.g., can include work to share notification of current events, integration of
	up-to-date heritage plans and policies into the work plans, participating in the work
	in progress).
Australia	Encourage Climate Change risk be a key consideration in Australian Government
	triannual 'State of the Environment' reporting
Austria	Activities within this framework again are planned in collaboration with universities
	and partners in projects applied. Especially experts in the legal system are working
	on stronger embedding of the importance of cultural heritage within Austrian law. A
	joint project of TU Wien an Israeli Universities in collaboration with ICOMOS Israel
	will work on legal framework issues for the management of cultural heritage with
	climate change being an important topic within this framework.
New	We have recently established a working group to develop guidance notes on the
Zealand	implementation of the ICOMOS NZ Charter for the Conservation of Places of
	Cultural Heritage Value. We could prepare a practice note that specifically relates to
	implementation of the Charter in the context of cultural heritage.
	Make submissions to local, regional and national governments on proposed climate
	change policies, and any policies that influence or fail to take appropriate account of
	climate change issues, or that neglect the connection between climate change and
	risks to heritage.
	Expand outreach and pursue collaboration with conservation organisations, but also
	beyond the heritage industry e.g., scientific/research, professional, and community
	networks, to help mainstream the use of cultural heritage as a tool in climate action.

Honduras	Our committee has been monitoring the proposal for the new regulations for the
	Historical Town of Tegucigalpa for the inclusion of a component for risk
	management of cultural heritage.
Ireland	Continue to be active at the European level, in collaboration with our Europe Group
	NCs, as there is much policy here to influence and engage with
Italy	Establish a link between ICOMOS Italy and Italian government bodies to ensure the adoption of correct practices and regulations
Lebanon	Coordinate the NC cooperation with local institutions in charge of the national heritage.
New-	Expand outreach and pursue collaboration with conservation organisations, but also
Zealand	beyond the heritage industry e.g., scientific/research, professional, and community
	networks, to help mainstream the use of cultural heritage as a tool in climate action.
Panama	Reach out to different stakeholders through a network of collaboration in order to adapt the policies and the legislation framework.
Russia	Ecological Vulnerability Assessment of Cultural Heritage Sites in a Changing Climate - with Climate and Cultural Landscape Specialists.
Sweden	Share knowledge and experiences from the international network and from a global perspective.
USA	US/ICOMOS is exploring ways to generate U.S. government support for IPCC-ICOMOS expert meetings and ongoing collaboration

Research and policy

Committee	Remarks
CIAV	Adapting policies for the conservation of vernacular built heritage to mitigate or
	minimize the impact of climate change on international, regional and national levels.
ICAHM	Develop/promulgate best practice guidance within the area of archaeological heritage
	management - this could be focussed on two main audiences: 1) heritage management
	agencies (distilling key elements of good practice from around the world); 2) local
	communities (helping local communities to identify simple and practical measures
	that can be implemented sustainably and cheaply).
ICIP	We are planning to update the ICOMOS Charter for the Interpretation and
	Presentation of Cultural Heritage Sites to include issues of sustainability, climate
	change and disaster risk management.
ICOFORT	Elaborate analysis models and planning models aimed at implementing preventive
	and corrective solutions to climate change damage.
ICTC	Participate fully in the 6ISC Risk management for a Shared Future process to address
	climate change and tourism issues as part of the interdisciplinary approach
ICUCH	Good management and policy will only be effective if there is a sound scientific basis
	on which to base management strategies. As repeatedly mentioned, science is
	currently lacking.
IS CCSG	specific research on exemplary sites, training for students in stained glass
	conservation
OCDI RBA	Continued contribution to the policy contributions the UN Special Rapporteur on
	Cultural Rights.
Austria	Activities within this framework again are planned in collaboration with universities
	and partners in projects applied. Especially experts in the legal system are working
	on stronger embedding of the importance of cultural heritage within Austrian law. A

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	joint project of TU Wien an Israeli Universities in collaboration with ICOMOS Israel
	will work on legal framework issues for the management of cultural heritage with
1	climate change being an important topic within this framework.
Colombia	ICOMOS' work should highlight the importance of including perspectives and concepts from the environmental, economic and social contexts that have enabled the formulation of planning and management tools for the territory. This knowledge will link the cultural context with the requirements in terms of Human Development from the different sectors, as well as enable the creation of indicators to measure and evaluate the impact of actions on the management of cultural heritage and will influence public policy in terms of climate change, impact assessment and protection of cultural rights.
Ireland	Continue to participate actively in the Expert Advisory government committees which ICOMOS is part of, and seek to be part of others'.
Lithuania	Since we are a newly-established committee, we are currently working on possible strategies of our NC for the next 2-5 years and trying to identify which are the most impactful areas of work that ICOMOS LITHUANIA could focus on.
Macedonia	Our NC can ask to be involved in the creation of the relevant national policies on heritage, environment and mitigation of climate related risks on heritage properties.
Mexico	Mainly to diagnose the vulnerability of the different heritage morphologies, according to the risk they are subject to, be it from flooding, earthquakes, wind, acid rain, etc.
Nepal	ICOMOS Nepal can perform vulnerability assessment, help in developing plans and policies, and identify hot spots.
New-	We have recently established a working group to develop guidance notes on the
Zealand	implementation of the ICOMOS NZ Charter for the Conservation of Places of
	Cultural Heritage Value. We could prepare a practice note that specifically relates to implementation of the Charter in the context of cultural heritage
Turkey	prepare a proposal (guideline) for involvement of cultural heritage in climate action plans of local and central government

Capacity Building

Committee	Remarks
CIF	We will highlight in all our work the research, education and training necessary to
	create the experts needed (from conservation professionals to politicians) and to
	increase awareness in the wider public.
ICIP	- We are planning to update the ICOMOS Charter for the Interpretation and
	Presentation of Cultural Heritage Sites to include issues of sustainability, climate
	change and disaster risk management.
	- We will encourage our members to share their experience in the ways they have
	implemented interpretation of cultural heritage sites within the climate change
	affected regions through the ICIP website and Facebook.
	- Collaborate with ISCs such as ICORP, ICICH, ICTC, CIVVIH, ISCCL and CIF in
	promoting the importance of interpretation in managing and mitigate the implications
	of climate change.
Chile	Develop a kit tool for the evaluation and registration of cultural heritage threatened
	by climate change
Ireland	Prepare and publish a national handbook (digital & hard copy) - potentially in
	collaboration with other related organisations - relative to all aspects of the
	intersection between climate change and cultural heritage - to be funded;

	Continue to participate actively in the Expert Advisory government committees
	which ICOMOS is part of, and seek to be part of others'
	Continue to make submissions on policy.
	Through our own events, reach out to policy makers and invite them to participate in
	our events, so we can develop relationships and understanding.
	Continue to be active at the European level, in collaboration with our Europe Group
	NCs, as there is much policy here to influence and engage with.
Honduras	Our committee has been monitoring the proposal for the new regulations for the
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	beyond the heritage industry e.g. scientific/research, professional, and community
	networks, to help mainstream the use of cultural heritage as a tool in climate action.

Traditional knowledge

Committee	Remarks
ICAHM	Real examples from the Ground level can guide organizers and managers to seek appropriate collaborations as needed to augment the vision from the locality, from bottom-up, not top-down. The experts can provide scientific data to plot climate trajectories in regions and localities to anticipate likely change while the community can consider remedies and adaptive measures; specific strategies can be compared from a world-wide database of such stories and knowledgeable practitioners sought if needed by local site managers.
Colombia	ICOMOS' work should highlight the importance of including perspectives and concepts from the environmental, economic and social contexts that have enabled the formulation of planning and management tools for the territory. This knowledge will link the cultural context with the requirements in terms of Human Development from the different sectors, as well as enable the creation of indicators to measure and evaluate the impact of actions on the management of cultural heritage and will influence public policy in terms of climate change, impact assessment and protection of cultural rights.
Ireland	Prepare and publish a national handbook (digital & hard copy) - potentially in collaboration with other related organisations - relative to all aspects of the intersection between climate change and cultural heritage - to be funded; Continue to participate actively in the Expert Advisory government committees which ICOMOS is part of, and seek to be part of others' Continue to make submissions on policy. Through our own events, reach out to policy makers and invite them to participate in our events, so we can develop relationships and understanding. Continue to be active at the European level, in collaboration with our Europe Group NCs, as there is much policy here to influence and engage with.

TRIENNIAL SCIENTIFIC PLAN 2021-24

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