



ACTION ALERT

To: Members and Experts, Heritage Adapts to Climate Alliance

From: Andrew Potts, Preserving Legacies Director of Policy and Practice

Date: 31 March 2025 (updated 2 April)

Subject: Advancing the Coverage of Culture and Heritage as well as the Inclusion of Indigenous Knowledge and Local Knowledge in the IPCC's AR7 Reports

A decision taken last month by the Intergovernmental Panel on Climate Change (IPCC) all but assures that culture and heritage will receive unprecedented attention in an influential set of reports that the climate science body expects to produce over the next four years. Culture and heritage experts are now urgently needed to help guide and prepare these reports but nominations must be secured by **17 April 2025**.

Executive Summary

The IPCC is the UN body for assessing the science related to climate change. Their forthcoming cycle of assessments reports, known as the Seventh Assessment Report or AR7, will be extremely important as they will provide governments with the most comprehensive and authoritative scientific assessments of climate change, serving as a foundation for international policy and negotiations through the end of this decade.

In the past, culture and heritage have been poorly reflected in IPCC assessments, although coverage began to improve in the most recently completed assessment cycle (AR6). A breakthrough meeting convened by the IPCC, UNESCO and ICOMOS in 2021 known as the International Co-Sponsored Meeting on Culture, Heritage and Climate Change produced important recommendations for improving the coverage of culture and heritage in the AR7.

On 28 February 2025, the final outlines of the AR7 reports were agreed by the IPCC. These outlines track several of the Co-Sponsored Meeting's recommendations and suggest there will be a significant increase in the coverage of culture and heritage in the forthcoming assessments.

In order to maximize this opportunity for culture, relevant experts including those whose expertise is rooted in Indigenous Knowledge systems and local knowledge, are strongly encouraged to be among the hundreds of volunteer authors and review editors who will produce these reports. The deadline to be nominated for one of these roles is **Thursday 17 April 2025 (midnight CEST)**.

IPCC and its Assessment Reports -- Background

The IPCC is an intergovernmental and scientific body made up of 195 national governments that exists to assess, in a comprehensive, objective, open, and transparent manner, the scientific, technical, and socio-economic information relevant to understanding human-induced climate change, its potential impacts, and adaptation and mitigation options.

Since its inception in 1988, the IPCC has prepared six sets of assessment reports that provide scientific information on climate change to the international community. The sixth and most recent

of these (known as the Sixth Assessment Report or AR6) was completed in 2023. More recently the IPCC launched its newest cycle, the AR7. The reports making up the AR7 are expected to be released over the next four years, wrapping up in 2029.

The IPCC has three Working Groups (WGs), each of which will produce reports¹ as part of the AR7 cycle:

- WG I addresses the physical science basis of climate change;
- WG II addresses climate change impacts, adaptation, and vulnerability; and
- WG III addresses options for reducing GHG emissions and mitigating climate change.

In addition, the IPCC has committed to producing several other products as part of the AR7 cycle, including a Special Report on Cities and Climate Change² and an Update to the 1994 IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations.

The primary function of these IPCC reports is to assess the scientific literature on climate change, providing a comprehensive overview of the current state of knowledge. The AR7 reports will be extremely important as they will provide governments with the most comprehensive and authoritative scientific assessments of climate change, serving as a foundation for international policy and negotiations through the end of this crucial decade of action.

Coverage of Culture and Heritage in past IPCC Assessment Cycles

In the past, commentators have noted that “significant gaps exist in understanding the role of culture and heritage in global climate science and climate change responses.”³ Early IPCC assessments reports correspondingly addressed few culture and heritage topics and assessed very little culture-related knowledge. The IPCC itself, in its AR5 Summary for Policymakers report, recognized that cultural heritage was poorly reflected in key climate change assessments.⁴ This began to change with AR6, which saw greater attention paid to culture and heritage, first in a series of special reports produced as part of the AR6 cycle⁵ and then the underlying WG reports themselves. Nonetheless, gaps in AR6’s coverage of culture and heritage continue to be noted.⁶

¹ Each WG’s contribution comprises a comprehensive assessment report (the “underlying report”), a Technical Summary (TS), and a Summary for Policymakers (SPM). The report undergoes an exhaustive, three-stage review process by experts and governments consisting of a first review by experts, a second review by experts and governments, and a third review by governments of the SPM. The SPM is then approved line-by-line in plenary by the respective WG and the underlying report accepted by the IPCC. After the three WG reports are accepted and their SPMs approved, a Synthesis Report is produced to integrate the key findings from the three WG reports and any other reports from that assessment cycle, with the IPCC then undertaking a line-by-line approval of the SPM of the Synthesis Report.

² The outline for the Special Report on Cities was agreed to by the IPCC at IPCC-61 in July 2024. Disappointingly, this outline completely omits culture and heritage (although Indigenous Knowledge, local knowledge and values are referenced). https://www.ipcc.ch/site/assets/uploads/2024/08/Decision_Cities.pdf.

³ Morel, Hana, Megarry, William, Potts, Andrew, Hosagrahar, Jyoti, Roberts, Debra, Arian, Yunus, Brondizio, Eduardo, Cassar, May, Flato, Greg, Forcasson, Sarah, Masson-Delmotte, Valérie, Jigyasu, Rohit, Oumarou Ibrahim, Hindou, Pörtner, Hans-Otto, Sengupta, Sandeep, Sherpa, Pasang Dolma and Veillon, Richard (2022) *Global research and action agenda on culture, heritage and climate change*. Project Report. ICOMOS & ISCM CHC, Charenton-le-Pont, France & Paris, France, 69p. ISBN 978-2-918086-69-7 (PDF) - 978-2-918086-70-3. (print). (<https://openarchive.icomos.org/id/eprint/2716/>). Page 2.

⁴ IPCC, 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32. (footnote 59).

⁵ These special reports include Global Warming of 1.5°C (SR1.5), which was approved by IPCC-48 in October 2018; Climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (SRCCL), which was approved by IPCC-50 in August 2019; and Ocean and Cryosphere in a Changing Climate (SROCC), which was approved by IPCC-51 in September 2019. For a survey of the treatment of culture and heritage in these reports see Tweets. Masson-Delmotte, Valérie @valmasdel, Twitter on December 12, 2019 at 9:18 AM, collected by Potts, Andrew (2025) and available here: <https://docs.google.com/document/d/1qWaVJF5uZwHEz-ulJRS8nDo6MK3oBkv-/edit?usp=sharing&oid=11716668181077255982&rtpof=true&sd=true>.

⁶ See, e.g., Potts, Andrew (2021) “The Role of Culture in Climate Resilient Development”, UCLG Committee on Culture

Proposals for Improving Coverage of Culture and Heritage in AR7: The 2021 IPCC-ICOMOS-UNESCO International Co-Sponsored Meeting on Culture, Heritage and Climate Change

Towards the end of the AR6 cycle, a proposal was developed to look at these “culture gap” issues more systemically. The result was the International Co-Sponsored Meeting on Culture, Heritage and Climate Change (the “Meeting”) cosponsored by the IPCC, ICOMOS and UNESCO.⁷ The proposal for the Meeting, first put forward by ICOMOS, was agreed by the Co-Chairs of the IPCC Working Groups, endorsed by the IPCC Executive Committee in June 2020, and co-sponsorship confirmed by UNESCO in July 2020. The Meeting was planned in partnership with the International Union for the Conservation of Nature (IUCN) and Local Governments for Sustainability (ICLEI).

The aim of the Meeting was to take stock of the state of knowledge regarding connections of culture and heritage with human induced climate change and to identify gaps in knowledge regarding these connections. The overall objectives were to:

- Consider the state of knowledge and practice in connecting culture, heritage and climate change;
- Identify key research and knowledge gaps with regard to connections between culture, heritage and climate change;
- Catalyse research and collaborations that will lead to peer-reviewed scientific publications and other appropriate literature and documentation including on local and Indigenous ways of knowing; and
- Expand global capacity in connecting culture, heritage and climate over the course of and beyond the AR7 cycle.

Following almost a year of planning that included the commissioning of three “White Papers,”⁸ the Meeting was held virtually over five days from 6–10 December 2021. Approximately 100 participants from a wide range of backgrounds attended. Meeting participants represented 40 countries across all six continents, with 40 per cent of the participants coming from the Global South and 61 per cent of the participants being women. Researchers and practitioners were present, consisting of 13 Climate Scientists, 78 Culture/Heritage practitioners and seven Natural Science practitioners. Participants included members and representatives from Indigenous Peoples and Local Communities

A Progress Report⁹ prepared by the Co-Chairs of the Meeting’s Scientific Steering Committee was submitted by the Secretary of the IPCC to the IPCC at its 60th session, held in Istanbul, Türkiye, 16–19 January 2024. In the Progress Report, the Co-Chairs reported several recommendations proposed by the members of the Meeting’s Scientific Steering Committee to be taken note of by the IPCC. These included recommendations that the IPCC:

Reports, n°10, and Climate Heritage Network (Working Group 5), Barcelona, 2021 (contrasting the attention paid to culture with that of other recognized enabling condition in the IPCC’s Special Report on Global Warming of 1.5°C.).

⁷ “The proposal for the Co-Sponsored Meeting was a response to growing calls for international attention to culture, heritage, and climate change ... These calls were a recognition that there exist significant gaps in understanding the many connections between culture, the human past and climate change, as well as a need to advance the contributions of culture and heritage to climate change mitigation and adaptation.” J. Hosagrahar, D.R. Roberts, W. Megarry, International Co-Sponsored Meeting on Culture, Heritage and Climate Change (Prepared by the Co-Chairs of the Scientific Steering Committee), *Progress Report* (15 January 2024), <https://apps.ipcc.ch/eventmanager/documents/83/170120240554-INF.%2013%20-%20AOB%20-%20International%20Co-Sponsored%20Meeting%20on%20Culture.%20Heritage%20and%20Climate%20Change.pdf>.

⁸ For a complete listing of these White Papers, see Annex 2 infra.

⁹ Progress Report, supra note 7. These recommendations address procedural matters within the control of the IPCC. A wide-ranging set of recommendations addressed to all relevant actors can be found in the Meeting’s *Global research and action agenda on culture, heritage and climate change*, supra note 3.

- Invite those scoping the reports in the AR7 cycle to consider including culture and heritage as a crosscutting topic across products in the cycle, including chapters in WGI, WGII and WGIII products, as well as the Special Report on Cities. “Co-Sponsored Meeting participants expressed overwhelming support for the IPCC’s increased focus on culture and heritage during the AR7 cycle.”
- Invite those scoping the WGII contribution to AR7 products to include a specific chapter on culture and heritage, including a focus on Indigenous and traditional knowledge. This chapter would look at how these areas inform narratives of change and evolution and are enablers or barriers to change. The chapter would assess how culture and heritage inform understandings of risk, vulnerability, and loss as well as the acceptability of systems change. It could also assess impacts on culture and heritage and how these impacts in turn affect the resilience of affected communities.
- Consider holding an expert meeting early in the AR7 cycle, with the goal of developing new guidelines for accessing and incorporating Indigenous Knowledge and the knowledge of local communities throughout the AR7 cycles. This expert meeting could also consider the current emphasis of the IPCC on English language research and look at ways to expand efforts to assess non-English literature and practice, including “grey” and Indigenous and non-traditional knowledge.
- Consider targeted and enhanced efforts to invite nominations for participation in scoping meetings and for positions in the preparation of AR7 reports (e.g., Coordinating Lead Authors, Lead Authors, and Review Editors) of individuals with culture or heritage-related expertise, relevant social science disciplines and diverse knowledge systems, including Indigenous and traditional knowledge holders.

The Scope of Culture and Heritage in AR7 Report Outlines Adopted In February 2025

From 24-28 February 2025, delegates to the 62nd session of the IPCC (IPCC-62) met in Hangzhou, China to consider **Outlines of reports that will be produced by each of the three IPCC Working Groups for the AR7**.¹⁰ By the end of the meeting they were able to reach consensus and adopt a final decision.¹¹ Proposals¹² for a **Workshop on Engaging Diverse Knowledge Systems** and a Workshop on Methods of Assessment were also adopted as was the outline for an **Expert Meeting on the Methodologies, Metrics and Indicators for Assessing Climate Change Impacts and Adaptation**.¹³ The February decision built on the work done by over 230 experts who gathered in Kuala Lumpur, Malaysia, in December 2024 to draft the outlines of each Working Group’s contribution to AR7.

The Outlines adopted at Hangzhou reflect a marked expansion in the coverage of culture and heritage as compared to past Assessment Report scopings. By way of example, the word “heritage,” which was nowhere to be found in the AR6 scoping, appears four (4) times in the AR7 outlines. More generally, culture and related concepts like values and diverse knowledge systems are not only more prevalent but more systemically integrated in the Outlines. **Highlights of the inclusion of culture in WGI, WGII and WGIII report Outlines as well as in the outline for the**

¹⁰ Proposed Chapter Outlines going into IPCC62 can be found here: <https://www.ipcc.ch/meeting-doc/ipcc-62/>.

¹¹ Decision IPCC-LXII-8. Scoping of the IPCC Seventh Assessment Report (AR7) taken at SIXTY-SECOND SESSION OF THE IPCC 24 – 28 February 2025, Hangzhou, China <https://www.ipcc.ch/site/assets/uploads/2025/03/IPCC-62-Decisions.pdf>.

¹² <https://www.ipcc.ch/site/assets/uploads/2025/03/Doc-7-Rev-1-Proposals-for-EM-Workshops-engaging-and-methods-of-assessment.pdf>.

¹³ Decision IPCC-LXII- 4. Proposals for Expert Meetings and Workshop for the seventh assessment cycle. <https://www.ipcc.ch/site/assets/uploads/2025/03/IPCC-62-Decisions.pdf>.

update to the IPCC's Technical Guidelines can be found in Annex I.

What follows here is a brief comparison between the International Co-Sponsored Meeting recommendations and the outcomes achieved in these new Outlines:

ICSM CHC Recommendation	AR7 Outlines Decision
Including culture and heritage as a crosscutting topic across products in the cycle	The prevalence of attention to culture and heritage across the AR7 outlines holds at hope that their treatment will hold the prominence of a crosscutting topic: • As expected, the WGI outline on physical science basis holds the fewest references but the integration of Indigenous Peoples' knowledge and local knowledge, and paleo archives is referenced in multiple places. • WGII – see below • The WGIII outline includes a significant expansion of the culture and heritage-related assessments. These range from (1) attention to the social drivers of behavioural change, such as lifestyles, culture, value systems, Indigenous knowledge systems, and social trust, to (2) the socio-cultural feasibility of CDR. Several sectoral chapters call out issues closely aligned with heritage including the chapter on Transport (socioeconomic, geographic-related context circumstances; spatial planning) and Buildings and Human Settlements (spatial planning and land use, design, retrofitting and renovation technologies, behaviour—as well as cultural barriers and opportunities).
Include a specific chapter on culture and heritage in the WGII report, including	The WGII outline does not call for a specific chapter on culture and heritage rather they are incorporated into virtually every chapter.
• A focus on Indigenous and traditional knowledge.	Each regional and thematic chapter is to address “Role of diverse knowledge systems including Indigenous Knowledge, local knowledge and experiential learning.”
• How culture and heritage inform understandings of risk, vulnerability, and loss as well as the acceptability of systems change.	Each regional and thematic chapter to address “Perception, beliefs, values, behavioural aspects and cultural practices of adaptation, including locally led adaptation and community-based responses”. The chapter on loss and damage will address “drivers of decision-making including values, perceptions.”
• Assess impacts on culture and heritage and how these impacts in turn affect the resilience of affected communities.	Chapters on (1) Terrestrial, freshwater and cryospheric biodiversity, ecosystems and their services; (2) Ocean, coastal and cryospheric biodiversity, ecosystems and their services; (3) Agriculture, food, forestry, fibre and fisheries, are each to address “Emerging threats, challenges and management of risk ... related cultural heritage”
Hold an expert meeting with the goal of developing new guidelines for accessing and incorporating Indigenous Knowledge and the knowledge of local communities throughout the AR7 cycles	The IPCC decided to hold a “Workshop on Engaging Diverse Knowledge Systems,” building on experience built up in other fora as appropriate, with objectives such as to address how: • IK systems could be accessed and assessed by the IPCC, in particular considering effective and equitable engagement of IK holders; • IPCC could assess local knowledge; • ex-post evaluation evidence could be assessed by the IPCC. The Co-Sponsored Meeting and its White Paper I: Intangible Cultural Heritage, Diverse Knowledge Systems and Climate Change is expressly referenced in the decision.

Culture and Heritage Experts Needed to Help Produce AR7 Reports

IPCC62 also decided to invite the Working Groups to start their work on AR7 by initiating the call for nominations for authors, and convening the first Lead Author Meeting (LAM1) in 2025. The reports making up the IPCC's AR7 will be prepared by hundreds of volunteer experts around the world reflecting a range of scientific, technical and socio-economic expertise. **Coordinating Lead Authors** (CLAs) and **Lead Authors** (LAs) are responsible for drafting the different chapters of the Working Group contributions to the AR7 and, with the help of the **Review Editors** (REs), revising those based on comments submitted during the two rounds of reviews by experts and governments.

According to the IPCC, author teams will include a mix of experts from different regions. The IPCC also seeks a balance in gender, as well as between those experienced with working on IPCC reports and those new to the process, **including younger scientists**.

In order to become a Coordinating Lead Author, a Lead Author or a Review Editor, an individual must be nominated. Nominations may be submitted by IPCC member governments, accredited Observers organizations, or IPCC Bureau Members. A list of Focal Points for IPCC member governments and Observer organizations is available [here](#).

Nominations are submitted through a dedicated online nomination tool and must be submitted by Thursday 17 April 2025 (midnight CEST).

The IPCC call is available [here](#), information on the nomination process [here](#), and details on the IPCC author selection process [here](#). A special window for USA experts seeking nomination has been opened here: <https://www.agu.org/ipcc-nominations>.

In addition to the opportunity to help prepare AR7 Reports, a separate opportunity exists to participate in one or more workshops and experts meetings the IPCC will hold as part of the AR7 cycle. Of special interest to culture and heritage colleagues will be the:

- **Workshop on Engaging Diverse Knowledge Systems:** Workshop is proposed for October 2025. Participation would include scientists, practitioners and knowledge holders with the requisite expertise. A separate call for nominations will be issued for this Workshop. Nominations would be called from governments, Observer organisations, and Bureau members. The Chair would formally make the selection, but with advice from the Scientific Steering Committee which would review nominations.
- **Expert Meeting on the Methodologies, Metrics and Indicators for Assessing Climate Change Impacts and Adaptation:** Expert Meeting is proposed to take place in the first quarter of 2026. About 60 participants in total, drawn from academia as well as from relevant stakeholder and user groups, including practitioners, representatives from the private sector, intergovernmental and non-governmental organisations, and governments. Their expertise includes methodologies to develop indicators for climate change impacts, evaluation of the effectiveness of adaptation measures, development of information or guidelines for adaptation policy planning, and the design and implementation of adaptation policy strategies at national and subnational levels. A Scientific Steering Committee comprising IPCC Bureau members and additional external experts will prepare a list of invited experts to the Expert Meeting for agreement by the WGII Bureau.

Annex 1

Culture and Heritage in the AR7 Outlines

This Annex **highlights** excerpts of the Outlines of AR7 Reports adopted at IPCC62 that address culture and heritage, as well as the closely linked concepts of values, livelihoods and Indigenous Knowledge and local knowledge. Author's notes have been provided to spotlight other topics included in the Outlines that may present additional entry points for the assessment of culture and heritage-related matters. The complete Outlines as adopted by IPCC62 may be found in Annex 1 of this document: <https://www.ipcc.ch/site/assets/uploads/2025/03/IPCC-62-Decisions.pdf>.

Chapter Outlines of the Working Group I Contribution to AR7

[Physical science basis of climate change]

Chapter 3: Changes in regional climate and extremes, and their causes

- Disparities in regional information availability, accessibility and gaps, **and integration of multiple information sources, including Indigenous Peoples' knowledge and local knowledge, and paleo archives**

Chapter 8: Abrupt changes, low-likelihood high impact events and critical thresholds, including tipping points, in the Earth system

- Evidence from and limitations of observations, models, **paleoclimate and Indigenous Peoples' knowledge and local knowledge**

Chapter 10: Climate information and services

- Usage of climate information from multiple lines of evidence and **knowledge sources, including Indigenous Peoples' knowledge and local knowledge**, for public awareness, impact and risk assessment, **losses and damages**, adaptation and mitigation

[Author's Note: Chapter 10 is also to include a section on methodologies to develop climate information, including co-design and co-production, to support impact and risk assessment, losses and damages, adaptation and mitigation.]

Chapter Outlines of the Working Group II Contribution to AR7

[Title: Climate Change 202X: Impacts, Adaptation and Vulnerability]

Global Assessment Chapters

[Author's Note: These chapters are also to include "[l]essons from other approaches to risk assessment across scales"]

Chapter 3: Current adaptation progress, effectiveness and adequacy

[Author's Note: No specific sectors are referenced in the scoping of Chapter 3 but bullet points that invite inputs from culture and heritage include those on (1) Adaptation progress, gaps, limits

and barriers and capacity building; (2) Adequacy and effectiveness of support for adaptation and risk management; (3) Adaptation costs, trade-offs, benefits and co-benefits; (4) Evidence of effectiveness and scope of state and non-state actions at various scales]

[Author's Note: The chapter will also address "Indicators and metrics to measure adaptation." This invites linkage to the UNFCCC's UAE-Belem Work Programme on Adaptation Indicators which is expected to recommend indicators for measuring progress in adapting heritage sites and cultural practices consistent with paragraph 9(g) of the UAE Global Framework for Climate Resilience adopted at COP28.¹⁴]

Chapter 4: Adaptation options and conditions for accelerating action

- Enhancing agency and capacity of stakeholders and empowering Indigenous Peoples and local communities

[Author's Note: The Chapter is also to address "synergies, opportunities and trade-offs of adaptation such as with Disaster Risk Reduction, mitigation and sustainable development]

[Author's Note: The Chapter is also to address Approaches for adaptive and continuous learning, monitoring and evaluation to design better policies, options and actions, and to enhance implementation including to avoid adverse outcomes¹⁵]

Chapter 6: Finance

[Author's Note: The Chapter is also to address funding for adaptation –including gaps, effectiveness and access]

Regional Assessment Chapters (Africa, Asia, Australasia, Central and South America, Europe, North America, Small Islands)

Common Bullets to all Regional Assessment Chapters

- Perception, beliefs, values, behavioural aspects and cultural practices of adaptation, including locally led adaptation and community-based responses
- Distributional nature of effects, including consideration of human rights, equity and justice, Indigenous Peoples, local communities, gender, disability, informality and intergenerational justice, and other vulnerable groups
- Role of diverse knowledge systems including Indigenous Knowledge, local knowledge and experiential learning

[Author's Note: The Chapter is also to include regional and local case studies and cross-chapter Papers: polar, dryland and deserts, high altitude and mountain regions, least

¹⁴ See Heritage Adapts to Climate Alliance, *Short Guide to Culture and Heritage in the Global Goal on Adaptation Framework* (2024), <https://docs.google.com/document/d/1VqZagBIT8Animz-qNa4FW5FIMeulkWm6/edit?usp=sharing&oid=117166681810772555982&rtpof=true&sd=true>.

¹⁵ In AR6 WGII found that "Inclusive planning initiatives informed by cultural values, Indigenous knowledge, local knowledge, and scientific knowledge can help prevent maladaptation." IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-33, doi:10.1017/9781009325844.001. (Section C.4.3)

developed countries, Mediterranean]

[Author's Note: Additional bullet points of relevance to culture include treatment of Adaptation progress, options, solutions, gaps, limits and barriers; barriers and enablers to climate action; Institutional and governance frameworks critical to planning and implementation, including social, economic and political considerations; and Linkages with sustainable development and climate resilient development,¹⁶ including co-benefits, synergies, trade-offs and opportunities for innovation and transformation]

Thematic Assessment Chapters

Common bullets to all thematic assessment chapters

- Perceptions, beliefs, values, behavioural aspects and cultural practices of adaptation, including locally led adaptation and community-based responses
- Range of adaptation options and responses to losses and damages, means of implementation, costs, benefits, effectiveness and feasibility of different options
- Distributional nature of effects including consideration of human rights, equity and justice, Indigenous Peoples, local communities, gender, disability, informality and intergenerational justice, and other vulnerable groups
- Role of diverse knowledge systems including Indigenous Knowledge and local knowledge and experiential learning

[Author's Note: The Chapter is also to include case studies of implementation]

[Author's Note: Additional bullet points of relevance to culture include treatment of Adaptation progress, options, solutions, gaps, limits and barriers; barriers and enablers to climate action; Institutional and governance frameworks critical to planning and implementation, including social, economic and political considerations; and Linkages with sustainable development and climate resilient development, including co-benefits, synergies, trade-offs and opportunities for innovation and transformation]

Chapter 14: Terrestrial, freshwater and cryospheric biodiversity, ecosystems and their services

- Emerging threats, challenges and management of risk to critical biodiversity, ecosystems, critical species and related cultural heritage

Chapter 15: Ocean, coastal and cryospheric biodiversity, ecosystems and their services

- Emerging threats, challenges and management of risk to critical biodiversity, ecosystems, critical species and related cultural heritage

Chapter 16: Water

- Water management across scales including non-economic and cultural values of water as appropriate

¹⁶ For an analysis of the role of culture and heritage in climate resilient development, including case studies of co-benefits, synergies and trade-offs, see *supra* note 6.

Chapter 17: Agriculture, food, forestry, fibre and fisheries

- Adaptation options for livelihoods, food supply chains, agricultural production and food and nutritional security, considering affordability, dietary diversity, accessibility, agency and sustainability
- Livelihood security, risks to cultural heritage and adaptation options for key vulnerable groups such as smallholder farmers, women farmers, pastoralists, forestry, artisanal and traditional fishing dependent communities

Chapter 18: Adaptation of human settlements, infrastructure and industry systems

- Supply chain risk, business risk, cascading impacts, risks of failure of infrastructure systems and risks to cultural heritage
- Adapting infrastructure, industry, energy systems and human settlements to reduce risk, enhance opportunities and build response capacity at multiple levels
- Adaptation solutions including new technologies, methods of construction, materials and innovations, green and grey and natural infrastructure, social and behavioural change, increasing energy access in the context of sustainable development

[Author's Note: The Chapter is also to include Relevant updates to Special Report on Climate Change and Cities]

[Author's Note: The Chapter is also to include attention to Developing and utilizing climate resilient infrastructure to build adaptive capacity and support sustainable development at multiple levels. This invites linkage to paragraph 9(g) of the UAE Global Framework for Climate Resilience which addresses designing climate-resilient infrastructure guided by traditional knowledge, Indigenous Peoples' knowledge, and local knowledge systems¹⁷]

Chapter 19: Health and well-being

- Intersection between climate change, health and wellbeing, and non-climatic drivers of health, and other health determining factors

Chapter 20: Poverty, livelihoods, mobility and fragility

- Livelihood options, households with low-income and social deprivations in rural and urban contexts, Indigenous Peoples, local communities, informal settlements, contexts of fragility, displaced, mobile and immobile populations
- Human mobility, including transhumance in the context of climate change
- Risks and adaptation in fragile contexts, and in contexts of social unrest and conflict
- Integrating adaptation and resilience into efforts towards poverty eradication, livelihood enhancement, formal and informal social protection mechanisms

¹⁷ See supra note 143.

[Author's Note: Loss and Damage is extensively covered in the WGII Outline, with multiple specific references to non-economic losses and damage. Loss to cultural heritage is expressly recognized as an element of non-economic losses and damages.¹⁸ As such, discussions of losses and damages and especially of non-economic losses and damages each presents an entry point for discussion of culture and heritage. These entry points in the WGII outline include:

- *Chapter 2: Assessment of methodologies and synthesis of observed and projected economic and non-economic losses and damages*
- *Chapter 5: Responses to losses and damages including (1) types of responses to economic and non-economic losses and damages by a diversity of actors at various scales and their interactions and (2) drivers of decision-making including values, perceptions, differential power and influence, behaviour, incentives and capacities.*
- *Regional Assessment Chapters including observed and projected impacts, including (1) economic and non-economic losses and damages; and (2) range of adaptation options and responses to losses and damages, means of implementation, costs, benefits, effectiveness and feasibility of different options.]*

Outline of the 202X IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptation Including Indicators, Metrics and Methodologies: Update to the 1994 IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations

Section 2: Adaptation in practice

- Adaptation in relation to societal development needs and values, and adaptation as both a stand-alone, iterative and continuous, mainstreamed activity

Section 3: Technical Guidelines

- **Scoping and goal setting** (analysis of current risk management capacities; and analysis of impact of adaptation measures on equity and justice outcomes; identification of risk distribution and risk tolerance across communities, regions and time scales; assessment of sectoral and development policies, data and knowledge sources, resources, enablers and barriers; identifying and addressing information gaps)
- **Impact, vulnerability and risk assessment** (analysis of climate impacts, including economic and non-economic losses and damages; relationship between global temperature goals and adapting to their impacts; assessment of climate risks, considering climatic and non-climatic risk drivers; identification of new and emerging risks; analysis of tolerance of residual risk; demand for adaptation; assessing uncertainty)
- **Planning** (identifying entry points for adaptation; participatory and inclusive planning processes;
- **Implementation** (identifying roles and responsibilities of relevant stakeholders; identifying and mobilizing resources; development of workflow and institutional collaboration mechanisms; development of communication channels)

¹⁸ UNFCCC, *Non-Economic Losses, Featuring loss of territory and habitability, ecosystem services and biodiversity, and cultural heritage* (2024), https://unfccc.int/sites/default/files/resource/nels_paper_2024.pdf.

- Learning, monitoring and evaluation

Section 4: Tools, building blocks and enablers

- Co-development principles and practices (stakeholder engagement; locally-led approaches; gender-responsive approaches; mutual learning with marginalized communities, Indigenous Peoples, non-governmental organizations, and technical and scientific communities; communication and outreach)
- Survey of governance and regulatory enablers (frameworks to accelerate implementation of adaptation; identifying approaches for integrating adaptation into national and sectoral policies, laws and regulations; frameworks for adaptive management)

Chapter Outlines of the Working Group III Contribution to AR7

[Options for reducing greenhouse gas (GHG) emissions and mitigating climate change]

Chapter 1: Introduction and framing

- Framing, in the context of AR7, providing overarching concepts related to mitigation, including equity within and between countries, just transitions in its broader sense, differentiation considering stages of development, and circumstances, regionalization, and considerations of Indigenous knowledges and local knowledge

Chapter 2: Past and current anthropogenic emissions and their drivers

- Assessment of a broad range of projected futures for socioeconomic development, scenarios, and their underlying assumptions and outcomes, including assessments of feasibility (geophysical, environmental-ecological, technological, economic, socio-cultural, and institutional)
- Economics of global and national mitigation and development pathways, including mitigation costs and benefits, investment needs, employment effects, co-benefits, and spillover effects

Chapter 4: Sustainable development and mitigation

- Political economy of, co-benefits, adverse effects and livelihood and economic impacts of transitions related to mitigation
- Implications of climate change mitigation responses on biodiversity and ecosystems, conservation, and restoration

[Author's Note: The Chapter is also to include attention to Mitigation-adaptation interlinkages and other sustainable development objectives, including potential synergies and trade-offs]

Chapter 5: Enablers and barriers

- Social enablers, barriers, and impacts of mitigation, including public perception and support, lifestyles and behavior, production and consumption, communication, information, engagement, education, health and well-being
- Labor as enabler and barrier to mitigation, including supply, organization, wellbeing, skills
- Just transitions
- Indigenous rights, governance, and knowledge systems
- Political economy of mitigation including public preferences, interest groups, and political institutions

Chapter 6: Policies and governance and international cooperation

- Non-state actors' roles and efforts at different levels and contexts, including corporate and financial institutions, civil society, labor and informal economy, media, social, gender and youth movements, Indigenous Peoples and local communities

Chapter 7: Finance

- Gender, Indigenous Peoples and local communities climate finance

Common elements across Chapters 8-13

- Links to Indigenous Peoples, local communities and gender

[Author's Note: The Chapter is also to include key findings from the Special Report on Climate Change and Cities]

[Author's Note: Links to sustainable development and adaptation, including risks, co-benefits, synergies, tradeoffs, and spill-over effects, as appropriate]

Chapter 8: Services and demand

- Human needs, aspirations, inclusive well-being, and development
- Demand-side mitigation potential of different service provisioning options including at system scale
- Social drivers of behavioral change, such as lifestyles, culture, value systems, psychology, communications, education, Indigenous knowledge systems, capacity building, social trust, and governance
- Empirical evidence of the speed for diffusion of social innovations, including business model, behavioral, community based, and institutional innovations
- Synergies and co-benefits, including cross-sectoral implications for adaptation, health, energy security, inclusive development, and materials

Chapter 9: Energy systems

Chapter 10: Industry

- Impacts on and interactions with local communities and Indigenous Peoples

Chapter 11: Transport and mobility services and systems

- Socioeconomic, geographic-related context circumstances
- Spatial planning, infrastructure, and supply chains for mobility and energy carriers (passenger and freight; public transport, road, rail, micromobility, aviation, maritime, water-based, and multimodal transport)

Chapter 12: Buildings and human settlements¹⁹

- Potential mitigation options and strategies for buildings and human settlements (e.g., spatial planning and land use, design, construction, retrofitting and renovation technologies, behavior)
- Direct and embodied emissions reduction, including alternative building materials and material efficiency
- Interaction with adaptation, disaster risk and resilience, synergies and tradeoffs with sustainable development
- Distribution impacts under different urban, rural, and regional specificities/informal settlements, social vulnerability, and land use
- Barriers and opportunities (technological, physical, financial, institutional, governance, cultural, etc.)

¹⁹ See generally *Submission by ICOMOS on behalf of the Climate Heritage Network [Submission is made in response to the following Call for Submissions: Issue: Sharm el-Sheikh mitigation ambition and implementation work programme]* (1 April 2024)(addressing culture and heritage, mitigation, and “Cities: buildings and urban systems”), <https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202404012330---MWP%20Cities%20and%20Buildings%20Culture%20and%20Heritage.pdf>.

[Author's Note: The Chapter is also to include attention to infrastructure, systemic interactions, cross-sectoral benefits, circular economy, insights from life cycle assessment and material flow analysis]

Chapter 13: Agriculture, Forestry, and Other Land Uses (AFOLU)

- Projected mitigation pathways, including alternative demand scenarios, that assess the scale of land mitigation measures, impacts on gross and net land-use change across different ecosystems, and social and environmental contexts
- Effects of climate impacts on socio-ecological systems, responses, and consequences for mitigation potentials and scenarios
- Consideration of the role of Indigenous Peoples and local communities in codesigning and implementing mitigation measures

Chapter 14: Integration and interactions across sectors and systems

[Author's Note: The Chapter is also to include attention to system integration; the role of urban systems in mitigation; materials, circularity, and waste across sectors]

Chapter 15: Potentials, limits, and risks of Carbon Dioxide Removal (CDR)

- Co-benefits, opportunities, synergies, tradeoffs and adverse effects of different CDR approaches on land, biodiversity and ecosystems, energy, materials, food, and waterbodies
- Feasibility assessment of CDR approaches (including geophysical, environmental-ecological, technological, economic, institutional and sociocultural) reflecting different regional and sub-regional contexts and scales

Annex 2
International Co-Sponsored Meeting on Culture, Heritage and Climate Change
Outputs

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