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World Heritage Convention

Panel of experts
in relation to Decision 44 COM 7C
concerning Climate Change and World Heritage

30 March - 1 April 2022

(Online meeting)

REPORT

Contents

I. BACKGROUND

1. An updated *Policy Document on Climate Action for World Heritage* was endorsed by the World Heritage Committee at its extended 44th session (Fuzhou/online, 2021) (see Decision **44 COM 7C**, available at https://whc.unesco.org/en/decisions/7917/ or in Annex 4). By the same Decision, the Committee requested that:

   a) the UNESCO World Heritage Centre, in consultation with the Advisory Bodies, revise the Policy Document by incorporating views expressed and amendments submitted during the extended 44th session;

   b) to consult World Heritage Committee members, especially concerning:

      i) the fundamental principle of common but differentiated responsibilities and respective capabilities (CBDR-RC),

      ii) the alignment of climate change mitigation actions with the CBDR-RC and the Nationally Determined Contributions accepted under the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, except on an entirely voluntary basis,

      iii) the need for support and capacity-building assistance, as well as the encouragement of technology transfer and financing from developed to developing countries.

2. The Committee also requested that the updated draft Policy Document be transmitted for review and adoption at the 23rd session of the General Assembly of States Parties to the World Heritage Convention, in November 2021.

3. Furthermore, the Committee also requested the World Heritage Centre to convene a Panel of experts, with experts drawn from the ad-hoc Working Group, the World Heritage Centre, the Advisory Bodies and other qualified experts in the field of climate science and heritage.

4. Following the Committee Decision, by a Circular Letter, States Parties members of the World Heritage Committee were invited to provide inputs and concrete proposals on the three specific points raised in Decision **44 COM 7C** to the UNESCO World Heritage Centre. All comments and inputs received were consolidated and reflected in Document WHC/21/23.GA/INF.11 (https://whc.unesco.org/document/190260) in view of its presentation to the General Assembly.

5. After having examined Documents WHC/21/23.GA/11 and WHC/21/23.GA/INF.11 (both available at https://whc.unesco.org/en/sessions/23ga/documents), and by Resolution **23 GA 11** (see https://whc.unesco.org/en/decisions/8026/ or Annex 5), the General Assembly of States Parties took note of the *Policy Document on Climate Action for World Heritage*, as endorsed by the World Heritage Committee. It however decided to establish an Open-ended Working Group of States Parties with the mandate to develop the final version of the Policy Document, taking into account Decision **44 COM 7C**, as well as proposals for the effective implementation of the policy. The General Assembly also requested that this final version of Policy Document be presented for consideration by its 24th session in 2023.

6. In addition, the General Assembly recommended that the Panel of experts requested by the Committee (see above) be convened with the mandate to consider revisions to the Policy Document and its unresolved policy matters, and report to the Open-ended Working Group established by the General Assembly, to inform its consideration of the Policy Document and proposals to implement it.

II. INTRODUCTION TO THE PANEL OF EXPERTS

7. The Panel of experts meeting took place online, from 30 March 2022 to 1 April 2022 and was organized by the UNESCO World Heritage Centre, with the assistance of the Advisory Bodies to the World Heritage Committee (ICCROM, ICOMOS and IUCN) and thanks to the generous financial support of the Governments of Australia, Azerbaijan and the Netherlands.

8. In order to ensure a geographically and gender-balanced group, and to ensure that the number of participating experts be limited to guarantee the full participation of each of them in constructive discussions, the participants of the Panel of experts were identified through consultation with UNESCO Electoral Groups and included 26 experts from all regions, from the Advisory Bodies and the UNESCO Secretariat, and 13 observers (see list of participants in Annex 3). Interpretation in both English and French was provided throughout the 3-day meeting. The Agenda of the meeting is included as Annex 2 of the present document.

9. This report provides a summary of the discussions and recommendations of the meeting of this Panel of experts.

III. METHODOLOGY OF WORK

10. In his welcome address, the Director of World Heritage, **Mr Lazare Eloundou Assomo**, shared with the participants some elements of reflection on the issue of the impact of climate change on culture and heritage, and UNESCO's action to this effect.

11. He recalled that this meeting represented an important step in the common will of the States Parties and the Secretariat to see the World Heritage Convention provided with the most up-to-date and effective *Policy Document on Climate Action for World Heritage*, thus contributing to ensuring the full integration of culture and heritage into the international climate agenda.

12. He stressed that collective actions for the protection of natural and cultural heritage impacted by climate change must be strengthened, especially in the most vulnerable countries and regions, such as small island developing states and on the African continent. In this regard, UNESCO, drawing on its specific mandate in the fields of culture, education, science and communication, has been, is and will be taking action to address this urgent challenge, together with its Member States, the Advisory Bodies and all stakeholders of the Convention.

13. He also reinforced the fact that culture is more than just an asset - it is a fundamental resource for responding to the global crisis caused by climate change. Culture contributes greatly to the well-being of people and helps shape a livable future, stressing that there is also much to learn for climate action from local and indigenous knowledge.

14. He concluded by highlighting the importance of the outcomes of this meeting to ensure that the updated Policy Document provides the much-needed high-level guidance to strengthen the protection and conservation of heritage of Outstanding Universal Value (OUV).

15. The Deputy Director of the World Heritage Centre, **Ms Jyoti Hosagrahar**, presented background information on the reflection and process that led to the establishment of the Panel of experts, including the successive revisions of the Policy Document and the contributions of Committee members following its session in July 2021.

16. She recalled Decision **44 COM 7C** and Resolution **23 GA 11**, adopted respectively by the World Heritage Committee at its extended 44th session (Fuzhou/online, 2021) and by the General Assembly of States Parties at its 23rd session (UNESCO, 2021), and the

interrelationships between the work of the Panel of experts requested by the Committee and the Open-ended Working Group established by the General Assembly.

17. Concerning the mandate of the Panel of experts, participants were reminded that the World Heritage Committee, at its 44th session in July 2021, had endorsed the draft *Policy Document on Climate Action for World Heritage* and therefore, its overall structure, and that the General Assembly had recommended that the Panel of experts be convened with the responsibility to consider the revisions to the Policy Document as presented in the Document WHC/21/23.GA/INF.11, as well as its unresolved policy matters. It was recalled that the latter Document contains amendments proposed by the members of the World Heritage Committee as well as comments by the World Heritage Centre and the Advisory Bodies on the proposed amendments to provide some indications on their potential implications.

18. More specifically, the amendments were arranged into three categories:

Firstly, paragraphs for which no amendment was proposed by the Committee members, and which were therefore considered as fully relevant
Secondly, the amendments with yellow highlights, which were considered relevant as addressing the Committee's request and improving the overall text of the *Policy Document*
Thirdly, the amendments with grey highlights, which were considered to have potentially significant implications, and therefore required the experts to discuss them

19. The methodology approved by the participants at the start of the meeting was to consider only the 30 amendments with grey highlights for discussion over this three-day meeting, all the other paragraphs being *de facto* considered as acceptable as proposed, including as amended for those with yellow highlights. The Policy Document was reviewed by the experts, section by section, starting from Section I to Section II, Section III and the Annexes.

20. The unresolved policy matters were discussed as they were encountered during the review of the Policy Document. This was notably the case for the issues identified in Paragraph 36, which were reviewed while addressing Section II of the Policy Document, through an open discussion. Unresolved matters, including Paragraph 36, were again discussed on the last day of the meeting (see Section IV below).

21. Before starting the review of the Policy Document, the experts were invited to designate a Rapporteur, among the participants. In this regard, **Ms. Abena White**, Saint Vincent and the Grenadines, was elected Rapporteur of the Panel of experts meeting.

22. The meeting was moderated by the Deputy Director of the World Heritage Centre, **Ms. Jyoti Hosagrahar**. To facilitate the work of the members of the Panel, the text of the revised Policy Document was displayed on their screens, both in English and French, as they reviewed it and was modified in real time. The draft Policy Document with the amendments in English and French had been shared with the Expert Panel in advance of the meeting for all of them to thoroughly prepare.

IV. DISCUSSION ON UNRESOLVED POLICY MATTERS

23. As mentioned above, the unresolved policy matters were discussed and reviewed as they were encountered during the examination of the Policy Document as well as on the third day of the discussion.

24. The panel was also requested to identify any unresolved matters for discussion on Day 3 of the meeting. The main unresolved policy matters identified and addressed during this Panel of experts meeting referred to the three questions, which were originally posed

in Annex 2 of the 2007 Policy Document, and which were reiterated in Paragraph 36 of the updated Policy Document with the intention that the updated Policy Document doesn't provide responses to those, but rather calls for a dialogue. The three questions are recalled below:

- "Whether a property should be inscribed on the World Heritage List while knowing that its potential Outstanding Universal Value may disappear due to climate change impacts;"
- "Whether a property should be inscribed on the List of World Heritage in Danger or deleted from the World Heritage List due to impacts beyond the sole control of the concerned State Party (i.e., threats and/or the detrimental impacts on the integrity of World Heritage properties associated with the global impacts of warming from anthropogenic GHG emissions);"
- "The reality that for some natural and cultural properties, it will be impossible to maintain the "original" Outstanding Universal Value for which they were originally inscribed on the World Heritage List, even if effective adaptation and mitigation strategies are applied, and this may require an "evolving" assessment of Outstanding Universal Value."

25. These three questions were discussed by the participants during their review of Section II of the updated Policy Document, as well as on the last day of the meeting in an open debate covering broader issues arising from these specific questions. The discussion was open and free flowing as its stated purpose was to inform the deliberations of the Open-ended Working Group. The outcomes of this rich exchange of views can be summarized as follows, based on the main topics addressed:

Inscription on the World Heritage List

26. Reflecting on the issue of climate change impacts on heritage, participants were of the view that, should the "climate change" threat be substituted with others, like "earthquakes", "tsunamis", "hurricanes" or "tornadoes", the sites would most probably be inscribed on the World Heritage List anyway. Otherwise, this could be perceived as contravening to the intention of the World Heritage Convention. The example of Lake Tchad was stressed as a case where the issue of climate change has motivated the authorities to discuss the possibility of using the World Heritage Convention as a tool in their efforts to safeguard the property through its inscription on the World Heritage List.

27. Experts identified two different issues:

a) Firstly, the issue of assessing whether sites are under threat by climate change before they are inscribed; and

b) Secondly, the possible response to such threat, even if it is known that there are sites that may be threatened significantly by climate change.

28. Participants agreed that there is uncertainty about future climate change impacts to heritage sites and that some standards for addressing such uncertainties in the nomination dossiers for potential World Heritage properties might be required. They noted that the current processes in the Operational Guidelines addressed this matter to a certain extent but that, to date, this has not been given due consideration. Indeed, too few States Parties address climate change as a major issue in their nomination dossiers, and whenever they do, it is often in a superficial manner.

29. Clearer guidelines should be defined about how climate change needs to be considered in respect to its potential impact on OUV in the nomination dossiers. At present, States Parties do not have adequate advice on how to address that in a satisfactorily manner. Experts felt that States Parties are not sufficiently supported for such difficult assessment.

30. The experts wondered whether States Parties should be asked to provide a list of the threats that the nominated property is facing due to climate change, as well as a list of solutions to address them. They also wondered why the nominated property should not be inscribed on the World Heritage List if the corrective measures are considered appropriate by the relevant Advisory Bodies in the evaluation. If the Advisory Bodies assess that, given the extent of the impacts of climate change on the OUV, the effects are irreversible and that there is really no solution to address them, then it is up to the World Heritage Committee to take the final decision to inscribe the property on the World Heritage List or not. The evaluation and assessment of such sites and their OUV would be as per the regular processes of the World Heritage inscription.

31. It was highlighted that Climate Vulnerability Assessments are being applied to an increasing number of inscribed properties and that such assessments could probably also be used to assess the potential impact of climate change on nominated properties. Taking into account the urgency of the climate change threat, experts also estimated that there was no real need to wait for the updated Policy Document to be adopted to implement climate vulnerability assessments in a more global way. It was also suggested that assessments of projected climate change impacts should not be based solely on past and present climates but also on future projections, highlighting the issue of the availability of such downscaled projections, which can be used effectively at site-level, but are unfortunately not available everywhere.

32. Experts recalled that the impacts of climate change on the OUV can be assessed in the nomination dossier under the examination of "*Integrity*", but also under "*Factors affecting the property*".

33. Experts also stressed that a distinction should be made between the legal processes already in place and the need for guidance, capacity building, knowledge sharing, etc. in relation to addressing climate change

34. An important element to take into account when considering whether a property should be inscribed on the World Heritage List while knowing that its potential OUV may disappear due to climate change impacts is the uncertainty surrounding such possible disappearance. Therefore, experts wondered about the timeframe which should be considered: should a period of 50 years or 100 years or less or more, be considered for the OUV to disappear, and how to establish such deadline? The experts were of the view that this issue of timeframe requires serious reflection.

35. In conclusion, the experts were, in general, of the view that being threatened by climate change should not prevent a site from being inscribed on the World Heritage List. Should the threat to the OUV to disappear be urgent and imminent, there are other tools offered by the World Heritage Convention to address it, such as to inscribe simultaneously the nominated property on both the World Heritage List and the List of World Heritage in Danger.

Inscription on the List of World Heritage in Danger and Deletion

36. Most participants wished to highlight that the inscription of a property on the List of World Heritage in Danger should not be seen as something negative nor as a punishment. It was recalled that, at the request of the World Heritage Committee itself, a study was ongoing on the negative perception of the List of World Heritage in Danger and to identify approaches to reverse it.

37. Experts added that Danger-listing can be beneficial to properties threatened by climate change, in the sense that this could provide them with strengthened monitoring, and that greater efforts could be made to address those impacts and to find suitable adaptation and mitigation strategies. Such listing could also mobilise all States Parties to safeguard and help recover the full OUV of the properties concerned and would put more emphasis

on the ideal of solidarity, enshrined in the Convention and in the draft Policy Document, both of which aim to foster mutual assistance.

38. Secondly, experts observed that sites were rarely inscribed on the World Heritage List in Danger for only one reason. They added that several reasons for sites to be inscribed on the List of World Heritage in Danger, such as earthquakes or tsunamis, were already beyond the sole control of States Parties and that this did not prevent properties from being inscribed on this List in the past. It was also stressed that there have been numerous cases where the World Heritage Committee decided to simultaneously inscribe sites on the World Heritage List and on the List of World Heritage in Danger due to such threats (e.g., in 1979, the Natural and Culturo-Historical Region of Kotor, Montenegro; or in 2004, Bam and its Cultural Landscape, Islamic Republic of Iran).

39. Experts considered that it was necessary to use all the instruments of the Convention for the sites, including the recourse to the List of World Heritage in Danger, and that it would not be logical to prevent States Parties from asking for international assistance and support through this means. They also considered that it would be unfair to treat properties and States Parties differently depending on the types of factors impacting their properties.

40. Experts also concurred that the appropriateness / usefulness of the List of World Heritage in Danger should be considered on a case-by-case basis in terms of what it wishes to achieve, as each instance can be somehow different.

41. Experts observed also that Danger-listing has, in the past, helped to mobilize action and resources at the national level as well as garner international expertise and financial support.

42. Experts also drew attention to the fact that threats interact with each other and that their cumulative effects need to be taken into account also. When considering the List of World Heritage in Danger, it is very difficult to say that one factor impacts heritage more than another and it is difficult to be totally affirmative regarding whether global warming alone is affecting the property or in conjunction with other factors. It was recalled that the majority of climate change impacts on heritage are aggravating factors; therefore, addressing other pressures on the site could probably also reduce climate change impacts.

43. In conclusion, the experts generally agreed that in most cases, climate change will not result in the complete loss of OUV – nor will such loss happen suddenly. Much can still be done to address climate change, as well as many other pressures, without removing the responsibilities of States Parties to address global climate change through mitigation actions.

Maintenance of the "original" OUV and notion of evolving assessment of OUV

44. The experts found that the third unresolved policy matter - related to the maintenance of the "original" OUV for which properties were originally inscribed on the World Heritage List and the notion of a potentially evolving assessment of OUV - was problematic. Experts also stressed that the concept of an "evolving OUV" would not be feasible in the framework of the Convention.

45. It was also suggested that what should actually be considered is the evolving nature of the sites (for example, changes in the geographical distribution of specific species in a natural property), rather than the OUV *per se*.

46. Some experts considered that the reality was not that the OUV is frozen in time, but rather how to address issues that change site conditions. It was recalled at this point that the Convention is based on the fact that the OUV is determined at the time of inscription and that everything possible should be put in place to protect it. It is however clear and

almost inevitable that with climate change, there will be cases in the future where OUV will be seriously affected. Experts recalled that the Convention defines responsibilities for all States Parties to protect the sites inscribed, and that if they cannot do so because it exceeds their own capacities or resources, they should ask for international support; the List of World Heritage in Danger was created to assist in this regard.

47. It was noted that the OUV serves as the baseline for state of conservation monitoring and for periodic reporting. Hence, conservation being the goal of the World Heritage Convention, adopting the notion of "evolving OUV" would not be in line with the spirit of the Convention. Experts questioned how an evolving assessment of OUV could be helpful and they were of the view that the impact of climate change could simply be further included in the existing monitoring system.

48. Should the "original" OUV be lost, experts wondered whether, in some cases, important elements could still demonstrate some OUV. In such case, they recalled that the Convention already has the instruments that can be applied; indeed, if the OUV is lost, the Convention foresees for the property to be delisted, but also that a new nomination of the site, with a different OUV based on new values, can be submitted. A new evaluation process would therefore take place.

Integrity VS Climate Change

49. During the discussion, the experts touched upon the need to envision the integrity with regard to climate change. Rather than talking about the OUV in general, it was felt that it could be more appropriate to focus on OUV through the prism of integrity, as all properties nominated for inscription on the World Heritage List shall satisfy the conditions of integrity, this aspect being key as regards the existing processes of the Convention.

50. Regarding OUV, reshaping the interpretation of integrity was also mentioned as another way to look at the third unresolved policy matter. However, rather than developing concepts such as "evolving OUV", one could speak of changing and evolving integrity and interpret the concept of integrity in relation to climate change. It was suggested that in the future, for the specific cases of natural and mixed properties, it may be necessary to broaden the concept of integrity to ensure that certain elements are included within the boundaries of the site, even if at the time of inscription, they do not necessarily reflect the OUV, but will be important in the future, due to the possible evolution vegetation and biodiversity in the light of climate change.

Threats beyond the sole control of the State Party concerned

51. Experts were of the view that many of the threats impacting World Heritage properties are beyond the sole control of the States Parties concerned. There are indeed many global impacts that come from other sources and that are not controlled by States Parties, or by humankind in general (such as earthquakes, tsunamis, etc.). They stressed that many of the reasons why properties have been inscribed on the List in Danger are not under the sole control of the States Parties concerned themselves.

52. At the same time, experts acknowledged that multiple factors impact World Heritage properties. Indeed, on average, each property subject to a state of conservation report to the World Heritage Committee is affected by 4 to 5 different factors. This fact highlights that the cumulative effects of the threats should also be taken into account.

53. They suggested the need for a more proactive approach to design a global response to protect properties that are inscribed on the List of World Heritage in Danger because of the impact of climate change on their integrity. This is particularly important for the most vulnerable countries, that are not the root-cause of the problem but that are going to be disproportionality affected, risking creating an equity issue.

54. Participants also stressed that there was a distinction between local, regional and global impacts and what was experienced at site level. They added that although the causes may be local, national, regional andglobal, but the primary responsibility was with the sovereign State Party and insisted that the international community needed to step in support, as a shared global responsibility.

Additional points raised by experts

55. Experts also raised the issue of whether the current "World Heritage system" and the UNESCO World Heritage Centre would be in a position to cope, should there be a substantive increase of the number of properties inscribed on the List of World Heritage in Danger because of climate change, and with very little prospect for most of them of coming off this List, and whether there would be a risk of the Convention becoming unenforceable.

56. Experts were however of the view that, even though there is a risk that an increasing number of properties will be inscribed on the List of World Heritage in Danger because of climate change issues, there should not be any confusion between the capacity issues of the system and the objectives of the Convention. Such a growing number of sites in Danger could also send a strong message to the international community and national governments to step up climate action.

57. This will certainly lead to a situation where the Committee will have to discuss the delisting from the World Heritage List of the properties that have lost their OUV due to climate change. To a certain extent, it can be said that Danger-listing is appropriate for climate change issues, as it would also emphasize the joint responsibility of all States Parties to care for the conservation of these properties.

58. It was also recalled that Danger-listing can, and should, be a tool to encourage States Parties to address the impacts of climate change on World Heritage properties. What Danger-listing achieves in terms of response to climate change should be further examined, keeping in mind that each instance can be different, and that this would require a case-by-case approach, as it is currently the case.

59. It was also pointed out that 2022 being the year of the 50th anniversary of the Convention, it would be a good opportunity to start a strong and inclusive dialogue process, as climate change is one of the biggest challenges for World Heritage.

60. Recalling that this Panel has been tasked to provide some inputs on the unresolved policy matters to the Open-ended Working Group of States Parties, the experts expressed their readiness to take part in such dialogue, especially during the September 2022 meeting of the Open-ended Working Group.

Guidance to improve the future implementation of the Policy Document

61. The experts wished to highlight that, even though they recommended the deletion of some of the amendments proposed, this should not hide the fact that what was proposed in some instances regarding the future implementation of the Policy Document has to be given very careful consideration (with specific reference to the debates around Paragraph 36).

62. It was also stressed that, as climate change will present challenges to all site managers, it will definitely be a particular challenge for the properties in the most vulnerable countries. Some of the matters raised in the Policy Document are crucial, including policy matters, and more work will be required about their implementation, rather than working on the Policy Document itself.

63. Indeed, once all States Parties have, in principle, adopted the updated Policy Document during the 24th session of the General Assembly in 2023, there will certainly be more work to be done to mainstream it into all the World Heritage processes.

64. The experts also stressed the critical importance of raising awareness about the updated Policy Document, once adopted, in particular the awareness of local communities and Indigenous Peoples, so that they are aware of its provisions and can fully take part in its implementation.

V. RECOMMENDATIONS OF THE PANEL ON THE TEXT OF THE POLICY DOCUMENT

65. As a preliminary remark, the Panel of experts wished to express its gratitude to all Committee members who actively contributed to this work, either by sharing some general comments on the Policy Document or by submitting concrete amendments to improve the content of the Policy Document. The Panel of experts was also very appreciative of the work achieved over the past years to update the Policy Document, including through the work of the international Technical Advisory Group of experts which met several times in 2020.

66. It is to be noted that in a general manner, the Panel of experts was in strong support of the text, as proposed to the 23rd session of the General Assembly in 2021, and appreciated the information provided by the World Heritage Centre and the Advisory Bodies on the possible implications of specific amendments, as reflected in Document WHC/21/23.GA/INF.11.

67. A very large support was given to the 28 amendments proposed by Committee members, which had been highlighted in yellow, and the Panel has recommended that they be accepted in their vast majority. In a few instances, when amendments were not recommended to be retained, the Panel has tried to capture the spirit of the amendment and has made an alternative proposal.

68. In addition, the Panel of experts recommends that all 69 paragraphs for which no amendment was proposed by the Committee members be kept as they are.

69. As above-mentioned, the Panel of experts carefully reviewed the 30 amendments with grey highlights during this three-day meeting. After having shared their views on the basis of their experience and diverse expertise in the fields of climate change and heritage, the experts have made specific recommendations for each of these paragraphs. Throughout the meeting, the Panel of experts has worked on a consensus basis.

70. With the intention of not encroaching on the mandate of the Open-ended Working Group established by the 23rd session of the General Assembly, which will need to finalize the updated Policy Document, the Panel of experts decided to incorporate its recommendations into the Policy Document in a format that would allow them to be easily identified.

71. Its recommendations are therefore inserted with green highlights in the full text of the *Policy Document on Climate Action for World Heritage* presented thereafter (such as: [Panel: add]; [Panel: delete]) and decided to include the rationale for each recommendation in a textbox, immediately below the amended paragraph, for ease of reference.

72. In addition, for ease of use, a cleaned-up version of the Policy Document, as recommended by the Panel of experts, is also provided in Annex 1 of the present report. Paragraphs which include recommendations by the Panel of experts are flagged with the sign below:

Panel of experts
in relation to Decision 44 COM 7C
concerning Climate Change and World Heritage

30 March - 1 April 2022
Online meeting

RESULTS OF THE WORK

Specific proposals to the text of the Policy Document submitted by World Heritage Committee members

All concrete proposals submitted by Committee members to amend the text of the draft Policy Document on Climate Action for World Heritage have been consolidated and reflected in this section of the present document, in track-changes, with indication of the submitting State Party.

When several States Parties were proposing modifications of a same sentence, the different options were reflected separated by : …. // or //….. (such as for Paragraph 21).

A text box has been added following each modified paragraph, to present the recommendation of the Panel of experts on the changes proposed.

Key:

Blue bold	Additions proposed by Committee members
~~Red strikethrough~~	Deletions proposed by Committee members
Yellow highlights	Amendments proposed by Committee members considered as answering the request of the Committee and enriching the *Policy Document*
Grey highlights	Amendments proposed by Committee members for which a discussion by the Panel of experts was required due to their potential significant implications
Green highlights	Recommendations of the Panel of experts established in conformity with Decision **44 COM 7C** of the World Heritage Committee

UPDATING OF THE 2007 POLICY DOCUMENT
ON THE IMPACTS OF CLIMATE CHANGE
ON WORLD HERITAGE PROPERTIES

Photo by Ricardo Gomez Angelon Unsplash

POLICY DOCUMENT ON CLIMATE ACTION FOR WORLD HERITAGE

(PANEL OF EXPERTS - APRIL 2022)

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I. PREAMBLE

A. Overview

1. Climate change has become one of the most significant threats to World Heritage, impacting the Outstanding Universal Values (OUV), including integrity and authenticity, of many properties, as well as the economic and social development and quality of life of communities connected with World Heritage properties.

2. The issue of the impacts of climate change on World Heritage was brought to the attention of the World Heritage Committee in 2005 by a group of concerned organisations and individuals. Subsequently, UNESCO has been at the forefront of exploring and managing the impacts of climate change on World Heritage. [Panel: delete] **[Brazil**: add**] This work has been done in full recognition of the principles of the UNFCCC and the Paris Agreement and their centrality as the privileged fora to discuss climate-related international issues.** In 2006, under the guidance of the World Heritage Committee, and along with the Advisory Bodies (ICCROM, ICOMOS, IUCN) to the World Heritage Committee and a broad working group of experts, a report on 'Predicting and Managing the effects of Climate Change on World Heritage' as well as a 'Strategy to Assist States Parties to the *Convention* to Implement Appropriate Management Responses' was prepared by the UNESCO World Heritage Centre. This was followed by a compilation of case studies on climate change and World Heritage, prepared by UNESCO. This process led to the adoption in 2007 by the General Assembly of States Parties to the 1972 Convention concerning the protection of the World Cultural and Natural Heritage (hereinafter called the World Heritage Convention or the Convention) of a Policy Document on the impacts of Climate Change on World Heritage properties thereinafter called the 2007 Policy Document).

> ***Recommendation of the Panel of experts:***
>
> The Panel of Experts recommends that the suggested added text be deleted. The Panel is of the view that the text proposed is factually incorrect, noting that the Paris Agreement was not adopted at the time that the issue of climate change on World Heritage was introduced to the World Heritage Committee in 2005. Also, the Panel of Experts believe that no mention should be made of the UNFCCC as "privileged fora". Indeed, the Panel of experts agreed that matters related to climate change and World Heritage must be discussed under the framework of the World Heritage Convention, and hence, preferred not to refer to the UNFCCC and its Paris Agreement as "privileged fora".

3. Since the adoption of the 2007 Policy Document, science has continued to provide evidence of the magnitude of this threat, its causes and consequences. Unprecedented atmospheric concentrations of greenhouse gases (GHG), [Panel: delete and replace] ~~resulting from human activities~~ **[Brazil]** ~~such as~~**mostly with the** ~~burning of fossil fuels and~~ **[Brazil]**~~and deforestation~~ resulting from human activities, particularly the burning of fossil fuels, but also deforestation and other forms of land use change, unsustainable use of natural resources, which in combination are estimated to have caused an increase in global warming by one (1) degree Celsius (°C) above pre-industrial times. This warming has caused and continues to cause long-term changes in the climate system with resulting changes in the dynamics of rain patterns, sea level rise, ocean warming and acidification; and also increased the risk of extreme events such as hurricanes, storms, bushfires, floods, and droughts. According to the Intergovernmental Panel on Climate Change (IPCC), "*some impacts may be long-lasting or irreversible*."[1]

[1] IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of Climate Change, sustainable development, and efforts

Recommendation of the Panel of experts:

In a general manner, the experts agreed that although deforestation is a significant one, it is not the sole nor the main contributing factor to the increase in GHG emissions and that a mention of other factors, such as fossil fuels extraction and land use change, etc., would be appropriate in this context. The Panel of experts therefore recommends that the word "deforestation" remain in the text of the Policy Document. Following a discussion on the inclusion of the term "*forest management*", the Panel of experts decided to rather refer to the unsustainable use of natural resources, which is more encompassing. The Panel of experts recommends that the original sentence should be replaced by the following one: "*resulting from human activities, particularly the burning of fossil fuels, but also deforestation and other forms of land use change, unsustainable use of natural resources, which in combination are estimated".*

4. World Heritage is immersed in unprecedented global change: a rapidly changing climate and the progressive loss of global biodiversity are **[Russian Federation]** ~~perhaps~~ **examples of** the most prominent indicators of how rapidly humans are negatively transforming the planet. Climate change accelerates the destruction of ecosystems, while the loss and unsustainable use of nature are in turn, key drivers of climate change.

5. By representing some of the world's most outstanding natural ecosystems, natural World Heritage properties also serve as natural buffers against climate impacts and other disasters, providing space for floodwaters to disperse, stabilizing soil against landslides and blocking storm surges. They further contribute to healthy, resilient ecosystems that might withstand impacts of climate change and continue to provide the food, clean water, shelter and income communities rely upon for survival.

6. Cultural World Heritage properties represented by cultural landscapes, historic cities, archaeological sites and vernacular architecture also demonstrate various locally developed strategies for mitigation against climate change through energy efficient built form and sustainable use of local resources. Climate change may also affect Indigenous Peoples' and local communities' cultural heritage, landscapes and traditional practices due to changes in the distribution of flora and fauna. **[Thailand]** ~~Moreover, resulting l~~Loss of livelihoods of communities living in and around the sites may also impact their **[Thailand] livelihood,** knowledge systems and their capacity to maintain the site. **[Thailand] In addition, local knowledge and wisdom and traditional practice represent different knowledge system that are key source of information to inform mitigation and adaptation options needed to prepare communities for future climate risks.**

7. Our understanding of the impacts of climate change increased considerably since 2007, and so has knowledge related to climate adaptation and mitigation measures. As the globe continues to warm, the IPCC has projected that the impacts of climate change on biodiversity, ecosystems and a variety of human systems would be lower at 1.5°C of global warming compared to those at 2°C. **[Thailand] The report highlights the need for a low GHG emission and climate resilient development pathways that will strengthen sustainable development and also poverty eradication, while addressing the threat of climate change through ambitious mitigation and adaptation.** Analyses by the IPCC indicate that limiting global warming to 1.5°C (with no or limited overshoot) would require rapid and far-reaching transitions in energy, land use, urban areas, infrastructure (including transport and buildings) and industrial systems.

8. This **[Thailand] fair and equitable** transition needed is unprecedented in breadth and scale, and requires significant greenhouse gas emissions reductions [Panel: delete] **[Thailand**: add**] and climate-resilient building** in all sectors, including manufacturing,

to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press. [hereinafter, the 'IPCC Report'].

transport, tourism, construction and infrastructure development**, [Thailand]**~~;~~ **forestry, health, water management, and agriculture;** a wide portfolio of mitigation and adaptation options; as well as a significant upscaling of investments in those options. Taken together, they invite a programme of climate action designed to bring about 'transformative change'[2]. In the context of the World Heritage Convention, transformative change would be exemplified by decisions that contribute towards making World Heritage properties carbon neutral, as much as possible, and more resilient and better adapted to a changing climate, while safeguarding their Outstanding Universal Value. By acting as exemplars of climate action, World Heritage properties may serve as catalysts for change in the wider policy, economic, environment and social sectors for the benefit of present and future generations. World Heritage properties can embrace transformative change to become demonstration cases of the change the world needs.

> ***Recommendation of the Panel of experts:***
>
> The Panel of Experts recommends that the text "*climate-resilient building*" be removed from the paragraph since no clarification can be made in this context.

9. World Heritage properties are part of physical and social processes and are strongly connected to surrounding areas, ecosystems, communities and societies. They are not isolated areas, their safeguard depends on the support of communities. For World Heritage stakeholders, it is therefore fundamental to increase the awareness of connectivity of climate change and interactions between decision makers, communities, and natural and cultural heritage to support transformative change. In the context of this Policy Document, transformative change should integrate cross-sectoral thinking and approaches that account for direct, indirect, and cumulative impacts on World Heritage properties [Panel: keep] **[Australia**: delete**]**~~, and offer opportunities to reconcile multiple interests~~.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts is well aware that there are often antagonistic interests from the various stakeholders of the World Heritage Convention and that it is important to try by all means to reconcile these interests. The experts considered that calling all actors to reconcile the multiple interests is fundamental and therefore, recommend to keep the original text "offering opportunities to reconcile multiple interests".

10. Since the adoption of the 2007 Policy Document, an important number of reports on the state of conservation of World Heritage properties affected by climate change have been presented to the World Heritage Committee. Following the adoption of the 2030 UN Agenda for Sustainable Development, in 2015, outlining 17 Sustainable Development Goals (SDGs), the World Heritage Committee in the same year adopted the 'Policy for the Integration of a Sustainable Development Perspective into the Processes of the *World Heritage Convention*' (the '2015 Sustainable Development Policy') with a view of ensuring policy coherence between the Convention and the SDGs [Panel: delete] **[Australia**: add**] to enhance safeguarding the Outstanding Universal Value of World Heritage properties**. The 2015 Sustainable Development Policy expressly recognises the linkages between climate change and sustainable development, noting that "*[i]n the face of increasing disaster risks and the impact of climate change, States Parties should recognise that World Heritage represents both an asset to be protected and a resource to strengthen the ability of communities and their properties to resist, absorb, and recover*". In addressing climate governance challenges that are common to many sectors and policy domains and creating conditions for implementing transformative change,

[2] Defined by the IPCC as a system-wide change that requires more than technological change through consideration of social and economic factors that, with technology, can bring about rapid change in the fundamental attributes of natural and human systems at scale.

World Heritage can also contribute to the implementation of the SDGs in line with the 2015 Sustainable Development Policy.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recommends that the sentence *"to enhance safeguarding the Outstanding Universal Value of World Heritage Properties"* is not retained since the SDGs go beyond safeguarding the Outstanding Universal Value and address for example social well-being of local communities, etc. The Panel of experts felt that with this addition, the paragraph would also be too limited in conveying the mandate of the World Heritage Convention.

11. In 2017, the World Heritage Committee stated that "*the growing evidence of climate impacts across World Heritage properties confirm that urgent and rapid action to reduce global warming is essential and the highest degree of ambition and leadership by all countries is needed to secure the full implementation of the 2015 Paris Agreement adopted under the United Nations Framework Convention on Climate Change (UNFCCC).*" The Paris Agreement **[Brazil] adopted under the UNFCCC,** aims to strengthen the global response to climate change **[Thailand] in the context of sustainable development and efforts to eradicate poverty and reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.** ~~and~~ **C**~~c~~ountries have committed to climate action through their **[Australia**: add**] successive** Nationally Determined Contributions [Panel: delete] **[Australia**: add**] reflecting their highest possible ambition and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances**. International action on climate change must be consistent with the Paris Agreement**, [Thailand] including its principles,** and **responding to** national climate **policies and** priorities for Parties to that Agreement. **[Brazil]**~~However, it must be recognised that the Paris Agreement is an independent legal agreement.~~

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recommends the removal of the second proposed text: *"reflecting their highest possible ambition and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances"* and to retain the first amendment of proposed text "*in the context of sustainable development and efforts to eradicate poverty and reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances",* as it is consistent with what has been agreed to by Parties under the Paris agreement:. The Panel of experts considered this a duplication of the same idea.

12. The Paris Agreement noted the importance of ensuring the integrity of all ecosystems and the protection of biodiversity when taking action to address climate change (Preamble). Future scientific understanding led by the IPCC and IPBES (the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) has deepened knowledge on the role of nature, including natural heritage sites, in climate mitigation and adaptation. **[Brazil]**~~Research [3] suggests that ecosystem-based approaches, sometimes referred to as nature-based solutions, could deliver more than one-third of the climate mitigation needed by mid-century to keep warming below 2°C.~~ Cultural World Heritage properties similarly may embody both past carbon investments

~~[3] IUCN French Committee (2019). Nature-based Solutions for climate change adaptation and disaster risk reduction. Paris, France.~~
~~Griscom, B. et al. We need both natural and energy solutions to stabilize our climate - Griscom - 2019 - Global Change Biology - Wiley Online Library. https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.14612.~~

and also traditional practices, knowledge, and experience handed down through time that must be part of the solution to climate change[4].

13. Considering their stature and visibility, there is an enormous benefit to World Heritage properties sharing their experiences, tools, methodologies and approaches more broadly. For example, World Heritage properties can play an exemplary role in implementing integrated approaches that link both cultural and natural heritage in climate action and demonstrate how transformative change can help in strengthening resilience and achieving sustainable development. A two-pronged approach is therefore needed, recognising that World Heritage properties represent both an asset to be protected from climate impacts and a resource to strengthen the ability of communities to pursue transformative change [Panel: keep original] **[Australia**: delete and replace**]**. ~~In any case,~~**that will safeguard** Outstanding Universal Value **[Australia** delete and replace**]** ~~must be safeguarded, and~~**alongside** climate action **[Australia**: delete**]**~~must be pursued~~.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts was of the view that linking this provision to Outstanding Universal Value would exclude work under Article 5 of the World Heritage Convention to adopt general policies which aim to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes – both of which have key roles in climate action. The Panel of experts therefore recommends keeping the original text considering that through climate action, the Outstanding Universal Value would be safeguarded, as follows: "*In any case, Outstanding Universal Value must be safeguarded, and climate action must be pursued.*"

14. Ultimately, World Heritage properties cannot be safeguarded from climate change in isolation because climate change is a global problem. However, many properties have already demonstrated how management systems that engage with local communities can strengthen natural, cultural and social resilience [Panel: keep] **[Australia**: delete**]** ~~and offer sustainable futures~~. In order to better respond to climate change, these approaches should be expanded to ensure that [Panel: delete] **[Australia**: add**]** **the management of** all properties [Panel: keep] **[Australia**: delete and add**]** ~~are linked to their wider~~ [Panel: replace] settings ~~territories and efforts are linked to~~ [Panel: delete] **[Australia**: add**]** **is aligned with** wider national and international ~~climate change~~ [Panel: ok with Australia] **[Australia]** ~~processes~~**efforts** [Panel : added in English for consistency with French] to combat climate change, while protecting Outstanding Universal Value. Approaches and communities especially those living in or around the properties must be brought together through integrated, inclusive, informed and adaptive governance that will facilitate the transformative change needed for addressing climate change.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts acknowledged that the World Heritage Convention and the World Heritage List are instruments primarily aimed at conservation, but not limited to that. It therefore recommends retaining the mention of "*sustainable futures*" in this paragraph, as it is relevant in this context. The Panel of experts recommends the deletion of *"the management of"* and to include in the sentence for consistency with the French version of the text *"to combat climate change"*. In addition, the experts recalled that World Heritage properties should always be considered in their wider setting and therefore stressed that the text proposed for deletion should be fully retained.
>
> Furthermore, during the discussion, it has been suggested by a participant that the inclusion of the word "economic" be added to the second sentence of the paragraph *"can*

[4] The ICOMOS Report "The Future of Our Pasts: Engaging Cultural Heritage in Climate Action" (2019) identifies a variety of traditional practices with relevance to contemporary greenhouse gas mitigation strategies including the inherently sustainable, passive features of traditional architecture (e.g., eaves, verandas, shutters, shading devices); traditional urban land-use patterns (dense, walkable, mixed-use space); and the knowledge embedded in low carbon agricultural heritage systems. Many traditional cultural systems also epitomize circular economy models that emphasize stewardship, reuse and resource efficiency.

strengthen natural, cultural, social and economic resilience", but the Panel felt that this sentence having been unchanged by Committee members during the revision process, adding this word would be out of its mandate.

15. Over and above all of this, collective action is needed, as envisaged in the Convention, which sees the international community as a whole participating in the protection of the cultural and natural heritage of Outstanding Universal Value, by the granting of collective assistance as an efficient complement to the actions of States Parties. In the face of climate change, this responsibility must be called upon in support, **[Thailand] in the form of finance, technology, and capacity-building**, **to enable** ~~of the~~ **necessary** transformative change needed to protect the Outstanding Universal Value of World Heritage properties.

B. Purpose and Scope

16. The purpose of this Policy Document is to provide high-level guidance on enhancing the protection and conservation of heritage of Outstanding Universal Value through comprehensive adoption of climate action measures, including climate adaptation, mitigation, resilience building, innovation and research, and in so doing, to create coherence with, and take advantage of synergies between, the objectives and processes of the World Heritage Convention and those of the **[Brazil] UNFCCC** Paris Agreement and related multilateral agreements, processes and instruments, including but not limited to the 2030 Agenda for Sustainable Development, the 2015 Sendai Framework on Disaster Risk Reduction, the 2016 New Urban Agenda, the Small Island Developing States Accelerated Modalities of Action ("Samoa Pathway") [Panel: keep] **[Russian Federation**: delete**]**~~and the Post-2020 Global Biodiversity Framework~~.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recalled that the World Heritage Convention is one of the biodiversity multilateral agreements and is a full-fledged member of the Biodiversity Liaison Group due to its importance for biodiversity conservation. Therefore, even if the adoption of the Post-2020 Global Biodiversity Framework (GBF) is only foreseen in May 2022, the Panel of experts recommends that the original text be retained.

17. The Policy Document provides [Panel: delete] **[Brazil**: add**]** a~~n~~ **voluntary** outcome-oriented policy framework for the development of goals and targets at national and heritage site levels, updating of national heritage management tools and action plans, and facilitating regular monitoring of the implementation and subsequent review of this Policy Document.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recalled that, as set in Paragraph 16 of the Policy Document, this text is meant to provide high-level guidance, and is not legally-binding. In order to avoid any redundance on this point, the Panel of experts recommends that the word *"voluntary"* be deleted. Reference can be made to support the statement in Paragraph 20 of the Policy Document.

18. This Policy Document aims to galvanise urgent action in support of transformative change by States Parties to the Convention, which can reflect its aims in their own national policies that guide the implementation of the Convention at the World Heritage property level. While this Policy Document is aimed primarily at States Parties to the Convention and managers of World Heritage properties, the implementation of its provisions will often require the contribution and support of the UNESCO World Heritage Centre, the Advisory Bodies and other relevant bodies.

19. The Policy Document is also intended to be of relevance to all stakeholders and rights holders, including Indigenous Peoples and local communities, civil society, and the private sector. Moreover, while the Policy Document is specifically aimed at World

Heritage properties, its principles are relevant to cultural and natural heritage in general, in the spirit of Article 5 of the World Heritage Convention.

20. The Policy Document is intended to be embedded in the existing processes of the World Heritage Convention and does not impose any new legal obligations on States Parties. It is intended to operate within the mandate of the World Heritage Convention and does not aim to duplicate the mandate of any other multilateral agreements, processes and instruments.

C. Guiding Principles

21. **Adopt a precautionary approach aimed at minimising the risks associated with climate change.** The risks associated with climate change depend, among other factors, on the magnitude and rate of warming, geographic location, levels of adaptive capacity that all together determine specific conditions of climate vulnerability. Moreover, for many natural and cultural systems, adaptation in the face of these risks is expected to be more challenging at 2°C of global warming than at 1.5°C**, [Brazil] especially in developing countries**. In view of this, the implementation by all States Parties of a precautionary approach…

> **Option 1:** [Panel: keep] **[Australia**: delete**]**…~~that pursues pathways limiting global warming to 1.5°C, with no or limited overshoot~~**,** [Panel: keep] **[Australia**: add**]** **consistent with commitments to implement the Paris Agreement,**…
>
> ~~// or //~~
>
> **Option 2:** [Panel: delete all] **[Brazil**: keep**]** that pursues pathways limiting global warming to 1.5°C, with no or limited overshoot, **[Brazil**: add**]** **taking into account the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC),** …

…..is the most effective approach for the protection, conservation and management of the cultural and natural heritage. Uncertainty (i.e., lack of scientific certainty) should not be used as a reason for not implementing such a precautionary approach to address the causes and minimise the risks associated with climate change.

Recommendation of the Panel of experts:

The Panel of experts stressed that this paragraph concerned the precautionary principle. It also recalled that in its Decision **41 COM 7**, the World Heritage Committee had already reiterated the importance of States Parties undertaking the most ambitious implementation of the Paris Agreement of the UNFCCC by holding the increase in the global average temperature to well below 2°C above pre-industrial levels and by pursuing efforts to limit the global average temperature increase to 1.5°C; this being also referred to in Paragraph 94 below. The Panel of experts therefore recommends that the sentence "*that pursues pathways limiting the global average temperature increase to 1.5°C with no or limited overshoot"* be retained, with the following addition: *"consistent with commitments to implement the Paris Agreement".*

The Panel of experts discussed at length the need to include a reference to the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) in this paragraph as suggested in option 2. It felt however that this CBDR-RC principle was already sufficiently captured in other and more relevant parts of the Policy Document (Paragraphs 11, 25, 58 for example) and that the request made by the World Heritage Committee to include the CBDR-RC principle in the Policy Document was therefore satisfactorily fulfilled. Hence, the Panel recommends that option 2 be fully deleted.

The Panel of experts also stressed that the mention of the Paris Agreement in this context should be understood as only referring to its precautionary principle and not to its full implementation.

22. **Anticipate, avoid and minimise harm to protect the heritage of Outstanding Universal Value.** Considering that climate change threatens both World Heritage properties and the future well-being of people through harmful and negative consequences, some of which are potentially irreversible, States Parties to the Convention and all World Heritage stakeholders and rights holders are urged to take appropriate measures, within their powers, to anticipate, avoid and minimise harm, consistent with their obligations under the World Heritage Convention [Panel: delete] **[Brazil**: add**] and environmental agreements** to protect the world's natural and cultural heritage considered to be of Outstanding Universal Value.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts highlighted that the World Heritage Convention sets the obligations to protect heritage of Outstanding Universal Value and that those other environmental agreements have other mandates and different Parties. It therefore recommends the deletion of the words *"and environmental agreements"*.

23. **Use best available knowledge, generated through disciplinary, interdisciplinary and transdisciplinary processes, including from scientists, researchers, site managers, Indigenous Peoples and local communities.** Proposed actions should be based on, and guided by, the best available disciplinary, interdisciplinary and transdisciplinary knowledge, that is developed by researchers, practitioners and Indigenous Peoples and local communities, working together to address climate change as a persistent problem. The heritage management decision-making process should be informed by this 'best available knowledge' approach and the different types of knowledge generated. They also should meet the highest standards of research integrity and be rigorous and transparent in their analysis of the climate risks including estimates of uncertainty, and undertake rigorous impact assessments on potential threats to Outstanding Universal Value to provide decision-makers with insight into, and understanding of, the underlying risks as well as opportunities, and guidance for the formulation of long-term strategies.

24. **Integrate a Sustainable Development perspective.** Actions taken by States Parties to address climate change impacts can also contribute to the implementation of the Sustainable Development Goals (SDGs), in line with the 2015 Sustainable Development Policy through adoption of mutually reinforcing, inclusive and adaptive approaches. Those approaches can help to reflect a wider range of heritage values and knowledge systems beyond Outstanding Universal Value, [Panel: keep] **[Russian Federation**: delete**]** ~~and support equity,~~ including through equitable sharing of heritage-benefits arising from their use and rights-based approaches. Adaptive approaches, including learning from heritage experience, monitoring and feedback loops, contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recommends that the original text be kept as the issue of equity is appropriate in this context. The Panel of experts indeed recalled that the issue of "equity" is further covered and defined in the 2015 Policy on World Heritage and Sustainable Development, which does make equity an aim. For example, section 18 of the 2015 Policy recognizes that the promotion of equity is a goal. It also recalled the importance of integrating the sustainable development perspective into the Policy Document.

25. **Promote global partnership, inclusion and solidarity, [China] emphasizing common but differentiated responsibilities and that developed countries provide necessary financial and technical support to developing countries.** In addressing climate change **[Australia] impacts on World Heritage properties**, and particularly in the implementation of this Policy Document, relevant stakeholders and rights holders at all levels should work together in a spirit of global partnership, inclusion, and in solidarity

with the poorest and most vulnerable people [Panel: keep] **[Australia: delete until the end]**, who are in the front lines of climate change impacts [Panel: delete] **[Thailand**: add**] and in accordance with the principle of principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances**. Climate change does not stop at borders. It conjoins the safeguarding of World Heritage properties with larger sustainability challenges, spatial, social, economic and cultural ones in the surroundings of the properties. Solutions for the safeguarding of the properties can only be found if they are connected to spatial, social and cultural transformations beyond the site. Strategies need to be developed that provide solutions for sustainable development beyond the borders of the World Heritage property.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recommends that the original text at the end of the paragraph be kept highlighting the important information regarding safeguarding World Heritage properties. Indeed, the Panel was of the view that deleting the end of the paragraph would remove the mention of the important fact that the protection of World Heritage properties contributes both to addressing global challenges and to sustainable development. It also recommends that the text *"and in accordance with the principle of common but differentiated responsibilities and respective capabilities in the light of the different national circumstances"* be deleted since this could be regarded as being redundant or repetitive with the new title of this Guiding Principle as updated by China.

II. THE POLICY FRAMEWORK

A. Long-Term Vision

26. The vision of the Policy Document is that each State Party understands the current and future potential impacts of climate change on the Outstanding Universal Value of the World Heritage properties situated on their territory, and undertakes climate action in an effective, ambitious, cooperative and active way. This is undertaken consistent with States Parties' obligations under the World Heritage Convention [Panel: delete] **[Brazil**: add**] and the environmental agreements** to ensure the protection, conservation and management of their cultural and natural heritage to the utmost of its own capacities and resources and, where appropriate, with international assistance and co-operation.

> ***Recommendation of the Panel of experts:***
>
> As was the case for Paragraph 22 above, the Panel of experts was of the opinion that the World Heritage Convention sets the obligations to protect heritage of Outstanding Universal Value and that other environmental agreements have other mandates and different Parties. It therefore recommends the deletion of the words *"and environmental agreements".*

B. World Heritage Climate Action Goals

27. The Policy Document establishes the following set of World Heritage Climate Action Goals towards 2030, to guide how World Heritage processes can effectively contribute to the transformative change needed to halt and reverse the negative trends associated with climate change causes and effects, through enhanced and improved collaboration, and [Panel: keep original] **[Australia**: replace**]** ~~effective and synergistic implementation~~**the alignment** of local, national and international climate **[Australia**: replace**]** polici**es**~~y instruments~~. While the goals are targeted primarily at States Parties to the Convention, they require the contribution and support of the World Heritage Committee, Advisory Bodies, site managers and civil society. These goals should be viewed in light of national circumstances.

Recommendation of the Panel of experts:

The Panel of experts recommends to keep the original text in accordance with one of the stated aims of the Policy Document, which is "to create coherence with, and take advantage of synergies between, the objectives and processes of the World Heritage Convention and those of the Paris Agreement and related multilateral agreements, processes and instruments."

- **Goal 1 (Climate risk assessment):** By 2030, States Parties should develop **[Brazil] and share** tools and build capacity needed to assess climate risks and identify potential reversible or irreversible damage to attributes carrying the Outstanding Universal Value associated with current and projected impacts of climate hazards, and to report the resulting climate risks assessments through World Heritage processes such as Periodic Reporting and state of conservation reports (see Section D.1 below);

  Goal 2 (Climate Adaptation): By 2030, States Parties should [Panel: keep original] **[Brazil**: delete]~~establish~~ [Panel: add] and develop, ~~at the~~ [Panel: add] international, ~~national and/or other~~ [Panel: ok to delete] ~~appropriate~~ [Panel: keep original] ~~levels, and implement at the site level,~~ [Panel: delete] **[Brazil**: add] **develop,** [Panel: add] **[Brazil**: add] **as appropriate,** robust climate adaptation frameworks **[Brazil] for their cultural and natural heritage** that can demonstrate measurable progress on monitoring of climate hazards, assessing and reducing climate risks and vulnerabilities, and in doing so enhancing adaptive capacity and building climate resilience for all World Heritage properties (see Section D.2 below);

Recommendation of the Panel of experts:

The Panel of experts considered that the original text, which provided for States Parties to develop frameworks "*at national and/or other appropriate levels*", was appropriate. It also found the deletion of the element "*and implement at the site level*" to be problematic.

Considering that all States Parties may not already have such frameworks, the Panel suggested adding "*and develop*" after "*States Parties should establish*".

The Panel of experts was of the view that the international level was missing from the text and suggested that robust climate adaptation frameworks should also be established and developed at the international level.

Finally, the Panel of experts highlighted that all States Parties may not need such frameworks at all the levels referred to in this Paragraph and therefore, even though the "*and/or*" already capture this nuance, recommends for the sake of clarity that the word "*as appropriate*" be rather added after "*at the site level*".

The recommended text reads as follows: "***Goal 2 (Climate Adaptation):*** *By 2030, States Parties should establish and develop at the international, national and/or other levels, and implement at the site level, as appropriate, robust climate adaptation frameworks for their cultural and natural heritage that can demonstrate measurable progress on monitoring of climate hazards, assessing and reducing climate risks and vulnerabilities, and in doing so enhancing adaptive capacity and building climate resilience for all World Heritage properties (see Section D.2 below);"*

- **Goal 3 (Climate Mitigation):** By 2030, States Parties**,** [Panel : delete] **[Brazil**: add] **in accordance with their national commitments and taking into account the common but differentiated responsibilities,** [Panel: add] in accordance with nationally determined contributions, and in line with principles established under the UNFCCC and the Paris Agreement, should [Panel : keep all] **[Brazil**: delete]~~implement at~~ [Panel: add] international ~~national and/or other appropriate levels, comprehensive climate mitigation frameworks that~~ [Panel: ok to replace] **[Brazil**: replace] ~~guide~~ **strengthen the capacity of** mitigation action **[Brazil]**~~for~~ **of their** cultural, natural and mixed properties [Panel: keep "and"] ~~that~~ **and** encourage

the reduction of net greenhouse gas emissions associated with World Heritage properties, including, where appropriate, actions to safeguard natural ecosystems that are carbon sinks (see Section D.3 below);

Recommendation of the Panel of experts:

Recognizing that the national mitigation targets are interpreted in the framework of the UNFCCC, the Panel of experts was of the view that the Policy Document aims at strengthening the contribution of World Heritage properties to climate change mitigation, and that the commitment to environmental sustainability by the States Parties has also been included in Policy Document for the integration of a sustainable development perspective into the processes of the World Heritage Convention (2015).

The Panel of experts therefore suggested to keep the original text but to include the following wording instead of the text proposed by Brazil: "…*in accordance with nationally determined contributions, and in line with principles established under the UNFCCC and the Paris Agreement, should…"*

In addition, as for Goal 2 above, considering that all States Parties may not already have such comprehensive climate mitigation frameworks, the Panel suggested adding "*develop and*" before "*implement*". The Panel of experts was also of the view that the international level was missing from the text and suggested that it be added to the sentence.

The Panel also suggested two editorial corrections: one to replace "*strengthen the capacity **of** mitigation action*" by "*strengthen the capacity **for** mitigation action*", and a second to align with the original French version of Goal 3 to read "***and** encourage*" instead of "***that** encourage*". Although not insisting on this change to be made, some participants however highlighted that in their opinion, the key message was better conveyed with the word "that" to highlight the cause and effect in the statement.

The recommended text reads as follows: "***Goal 3 (Climate Mitigation):** By 2030, States Parties, in accordance with nationally determined contributions, and in line with principles established under the UNFCCC and the Paris Agreement, should develop and implement at international, national and/or other appropriate levels, comprehensive climate mitigation frameworks that strengthen the capacity for mitigation action of their cultural, natural and mixed properties and encourage the reduction of net greenhouse gas emissions associated with World Heritage properties, including, where appropriate, actions to safeguard natural ecosystems that are carbon sinks (see Section D.3 below);*"

- **Goal 4 (Knowledge sharing, capacity building and awareness):** By 2030, States Parties should have developed and implemented activities aimed at improving education, awareness raising, and human and institutional capacity in relation to the risks and responses related to climate change impacts on World Heritage properties, including programmes **[Brazil] of knowledge-sharing and those** designed to promote these properties as exemplars of climate action (see Section D.4 below).

C. Legal framework

28. The World Heritage Convention and the Operational Guidelines for its implementation provide the legal and administrative framework respectively within which this Policy Document is to be applied. Key duties and obligations of States Parties under the Convention are set out in Articles 4, 5 and 6.

29. Article 4 establishes the basis for States Parties to do all that they can to ensure the conservation, protection, presentation and transmission to future generations of World Heritage properties situated on their territories.

30. Climate change is recognised among the most significant threats to World Heritage properties and is growing. As per Article 5(d), to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party to the Convention shall

endeavour, in so far as possible, and as appropriate for each country, to "*take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage"*.

31. Under Article 6(1), "…*the States Parties to this Convention recognise that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate*". Under Article 6(3), States Parties undertake "*not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage on the territory of other States Parties*". Article 7 enables establishment of a system of international co-operation and assistance designed to support States Parties in their efforts to conserve heritage.

32. While the enumeration of "*serious and specific dangers*" under Article 11 (4) of the Convention concerning the inclusion of properties on the List of World Heritage in Danger does not specifically refer to climate change (which was not under the same scrutiny in the early 1970s as it is now), the provision is clearly sufficiently broad to [Panel: add] include the impacts of climate change as a serious and specific danger to properties. [Panel: delete until end] ~~its~~ **[the] [Australia]**~~effects~~**impacts of climate change on Outstanding Universal Value**.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts was of the view that making the change proposed by Australia would not be recommended, and rather proposed, in order to provide more precision on the impacts of climate change to Word Heritage properties, the addition of a new text, which would read as follows: "…*to include the impacts of climate change as a serious and specific danger to properties*", at the end of the Paragraph. The issue of climate change impacts and the specific dangers to World Heritage properties can be better captured in this sentence.

33. The Operational Guidelines, in paragraphs 179 and 180, set out the criteria for placing cultural and natural properties on the List of World Heritage in Danger for both ascertained and potential dangers. Currently, only Paragraph 179 (b) and Paragraph 180 (b) refer to "*threatening impacts of climatic, geological or other environmental factors*" as a potential danger. Paragraph 181 provides that the "*factor or factors which are threatening the integrity of the property must be those which are amenable to correction by human action*".

34. It is also recommended that climate change be considered in the nomination of properties for inscription on the World Heritage List. Each nominated property should have a management plan or other documented management system (Paragraph 108 of the Operational Guidelines). The nomination dossier (Paragraph 132(4)) should address the state of conservation and a description of the factors affecting the property, including threats. The format for the nomination of properties is included in Annex 5 of the Operational Guidelines and refers to "*environmental pressures*" as factors affecting the property and lists, as an example, climate change (Section 4a(ii) of the format).

35. Current management and protection requirements (paragraphs 111, 118, 118bis) address climate change impacts and identify the assessment of vulnerabilities of the nominated site to actual and potential social, economic, environmental and other pressures and changes, including climate change, as a common element any effective management system could include. Impact assessments must also be carried out as a pre-requisite for adaptation and mitigation responses within or around a World Heritage property to ensure that the Outstanding Universal Value is not negatively impacted.

36. This Policy Document foresees that over the coming decade and beyond, climate change will negatively impact the Outstanding Universal Value of World Heritage properties and also the potential Outstanding Universal Value of many places proposed for inscription on the World Heritage List. This **[Australia**: delete and replace**]**~~may call for the~~

~~establishment of a dialogue,~~ **will call for ongoing dialogue** [Panel: delete] **(which in and of itself would not be legally binding),** inclusive of States Parties, the UNESCO World Heritage Centre, the Advisory Bodies, and civil society, to address significant legal and interpretative questions raised by climate change with respect to the Convention, based on the line of questioning first proposed in Annex 2 of the 2007 Policy Document, as follows:

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recalled that the inscription of a property on the List of World Heritage in Danger on account of climate change had been discussed at length during the Technical Advisory Group meetings (April-September 2020), and that its members were of the view that this may call for the establishment of a dialogue, inclusive of States Parties, the World Heritage Centre, the Advisory Bodies and civil society. The Panel of experts however considered that each paragraph of the Policy Document should not be commented or interpreted individually and therefore recommends that the second part of the proposed amendment (i.e., the bracketed text) be deleted since the Policy Document is not legally binding.

- Whether a property should be inscribed on the World Heritage List while knowing that its potential Outstanding Universal Value may disappear due to climate change impacts;
- Whether a property should be inscribed on the List of World Heritage in Danger or deleted from the World Heritage List due to impacts beyond the sole control of the concerned State Party (i.e., threats and/or the detrimental impacts on the integrity of World Heritage properties associated with the global impacts of warming from anthropogenic GHG emissions);
- The reality that for some natural and cultural properties, it will be impossible to maintain the “original” Outstanding Universal Value for which they were originally inscribed on the World Heritage List, even if effective adaptation and mitigation strategies are applied, and this may require an “evolving” assessment of Outstanding Universal Value.

[Panel: delete] **[Australia**: add**] Resolving the above issues and having procedures that deal with them implemented in the Operational Guidelines, are critical and necessary steps to underpin decisions relating to the global effects of climate-change on specific World Heritage sites. Such decisions should be deferred until these procedures are in place, so they are made with clarity and certainty as to how to manage the inherent tensions between a site-based Convention and a global threat to World Heritage requiring collective action.**

> ***Recommendation of the Panel of experts:***
>
> After having considered this proposed new paragraph, the Panel of experts was of the view that a procedure was already in place in the Operational Guidelines for the inscription of a property on the List of World Heritage in Danger on the basis of climatic factors, and that these matters had been handled appropriately on a case-by-case basis, within the framework of the Operational Guidelines. The Panel shared the view that it would not be acceptable to suspend the Operational Guidelines and tools, such as the Reactive Monitoring or In-danger listing, pending the global resolution of all the unresolved policy issues referred to in this paragraph. Indeed, the Panel of experts agreed that such deferral would negatively impact the implementation of the Convention, as action is needed without delays.
>
> On this basis, the Panel of experts recommends not to retain the additional sentence proposed.

D. Climate action

37. Climate actions include **[Brazil]** ***inter alia*** responses within the framework of the World Heritage Convention to the threat of climate change, based on the most recent scientific and political developments. Key categories of climate action with respect to World Heritage properties are: (i) Assessing climate **[Thailand: English only]** **change** risks (ii) Climate **[Thailand: English only]** **change** adaptation (iii) Climate **[Thailand: English only]** **change** mitigation and (iv) Knowledge sharing, capacity building and awareness. These responses take advantage of better coordination and effective implementation of the local, subnational, national and international developments since the adoption of the Paris Agreement.

38. Latest scientific findings, especially those documented in IPCC reports, indicate that both mitigation and adaptation options are specific to national contexts, and if carefully selected together with enabling conditions [Panel: delete] **[Brazil**: add**] including/and means of implementation**, can be mutually reinforcing. However, mitigation and adaptation can also have adverse impacts on Outstanding Universal Value, if these are poorly designed or implemented. Even with best efforts, real and perceived tensions may develop between proposed climate action pathways and the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of World Heritage properties, including the conditions of integrity and/or authenticity at the time of inscription.

> ***Recommendation of the Panel of experts:***
>
> With the understanding that "means of implementation" is already encompassed within the "enabling conditions", as outlined in Section III A. of the Policy Document, the Panel of experts recommends keeping the original text.

39. Climate-related risks to World Heritage properties depend on the rate, peak and duration of global warming. Risks are generally higher for warming of 1.5°C above pre-industrial levels than at present, but lower than at 2°C. Adaptation is correspondingly expected to be more challenging for some World Heritage properties at 2°C of global warming than for 1.5°C**, [Brazil] especially in developing countries**. This underscores the importance of considering both adaptation and mitigation approaches. In addition, adaptation options that also mitigate GHG emissions can provide synergies and cost savings.

D.1. Assessing climate [Thailand: English only] change risks to World Heritage properties

40. Improving capacity to assess climate change risks is the objective of World Heritage Climate Action Goal 1 (see Section II.B. above). This goal asks States Parties, in light of the national circumstances, to develop, by 2030, tools and build capacity needed to identify potential reversible or irreversible loss of attributes of Outstanding Universal Value associated with current and projected climate hazards including those that may exceed the adaptive capacity of relevant human or natural systems. Climate risk assessments are crucial for understanding and anticipating negative impacts and potential loss of Outstanding Universal Value and provide critical information to help determine how to manage them. It also asks States Parties to report the results thereof through World Heritage processes.

41. To design effective climate actions, including mitigation and adaptation strategies, the heritage community needs to have a good understanding of the climate risks involved. Correspondingly, there is a need for methodologies and mechanisms to systematically assess such risks. These methodologies should promote improved measurability of impacts and potential loss of heritage values and improved understanding of the economic, social, health, education, and environmental cost of such losses (including

effects on ecosystem and cultural services). Defining or clarifying risks to Outstanding Universal Value and other measurable, non-monetary values that support a given World Heritage property can also aid in determining the adaptation limits of that resource or system, including the acceptability or non-acceptability of levels of change and consequent perceptions of loss and irreplaceability. Although climate actions will often result in adjustments that are within a given heritage system's adaptive limits, completely preventing all projected impacts of climate change on every World Heritage property will not be possible with the result being damage to or loss of attributes of Outstanding Universal Value.

42. There exists a range of approaches and instruments to undertake risk assessments associated with the impacts of climate change. The challenge is to identify the more appropriate methodologies, not only to the type of hazard but also to the social, environmental, economic, geographical, landscape and institutional context of the properties for which the Outstanding Universal Value may be at risk of being irretrievably damaged or lost. Special consideration should also be included for populations at disproportionately higher risk of adverse consequences, for example disadvantaged and vulnerable populations, Indigenous Peoples, and local communities.

43. Managers of World Heritage properties require a clear understanding of the climate risks to which their properties are vulnerable, the capacity needed to prepare for and respond to those risks, and the residual risks afterwards. Within this context, the Policy Document encourages States Parties to the Convention to aim to integrate climate risk management for World Heritage properties within wider national approaches and frameworks for climate adaptation. As noted in this Policy Document, further dialogue is needed on how the impacts of climate change on Outstanding Universal Value are dealt with by the World Heritage system.

44. Sharing experiences of methods and results to assess climate hazards, vulnerabilities and risks across World Heritage properties can also help to build adaptive capacity and resilience. Cross-property actions such as promoting the development of climate risk assessment tools for regions, ecosystems or heritage typologies is encouraged. Transboundary and transnational properties also present an important case where shared responses to common climate risks should be encouraged.

45. This Policy Document encourages the UNESCO World Heritage Centre, in collaboration with the Advisory Bodies, to find ways to integrate climate risk management mechanisms, including assessment and monitoring of climate hazards and the factors that cause or exacerbate them, into existing World Heritage processes. Mechanisms could include, but not limited to, making the consideration of climate change a requirement in the nomination process, Periodic Reporting, Reactive Monitoring, protective measures, and management systems, including management plans. Climate change considerations should similarly be incorporated into related World Heritage doctrines, policies and resource manuals. New tools might be needed to assess climate change impact on the state of conservation of World Heritage properties, as well as to identify factors that can become threats and that could ultimately impact on the Outstanding Universal Value of properties.

46. Further technical considerations in developing a climate risk management assessment and management strategies are presented in Annex II of this Policy Document.

D.2. Climate [Thailand: English only] change Adaptation

47. World Heritage Climate Action Goal 2 (see Section II.B above) refers to the necessary climate **[Thailand: English only] change** adaptation actions to avoid and minimise climate impacts on heritage values, consistent with the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of properties. According to IPCC, "*in human systems, climate adaptation is the process of adjustment*

to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, it is the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects".

48. Climate **[Thailand: English only]** **change** adaptation should relate to all hazards that are directly and indirectly attributed to climate change, exposure of various components of the World Heritage properties to these hazards and related vulnerability factors (physical, social, economic, institutional, etc.) This reflects not only the importance of addressing all components of climate risks (hazards, exposure, vulnerability), but also makes clear that climate change adaptation cannot be seen in isolation from other risk factors.

49. Climate change is a risk multiplier that can exacerbate current hazards, exposures and vulnerabilities including poverty, urbanisation, pollution [Panel: keep original] **[Russian Federation**: delete**]**~~, and insecurity, with potential implications for social conflict~~. World Heritage properties may also be impacted by improper adaptation or mitigation responses to climate change (i.e., maladaptation).

> ***Recommendation of the Panel of experts:***
>
> Taking into account that social conflict and human insecurity are referred to as an impact of climate change in the IPCC's Fifth Assessment Report and that the IPCC's Special Report: Global Warming of 1.5°C also recognizes that "*Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C*", the Panel of experts recommends keeping the original text.

50. Climate change may have positive impacts on the Outstanding Universal Value of some World Heritage properties. Therefore, climate **[Thailand: English only]** **change** adaptation strategies should consider whether there are opportunities to exploit these positive impacts, while also reducing the risks of the negative impacts of climate change. A lost opportunity may be as harmful as a negative impact.

51. The importance of addressing non-climate threats and pressures, in particular to natural and mixed World Heritage properties, is emphasised because doing so effectively can help build their resilience to climate change and improve their adaptive capacity. In circumstances where the impacts of climate are intensifying and increasing in frequency, action on other pressures will become increasingly important to sustaining the resilience of World Heritage properties and protecting their Outstanding Universal Value.

52. The impacts of climate change can also exacerbate the many drivers of human mobility (migration, planned relocation and displacement). Communities associated with some World Heritage properties are already experiencing climate change impacts that could ultimately induce migration and/or displacement of people and impact Outstanding Universal Value, particularly for those properties for which Outstanding Universal Value depends on cultural continuity. This Policy Document emphasises that adequate support be given to States Parties who face not only the potential loss of World Heritage properties, but the displacement of communities associated with them. Clear guidance needs to be developed on how such eventualities will be considered and evaluated by the World Heritage Committee and on how implementation strategies might be framed. A useful starting point would be to create methodologies for identifying World Heritage properties associated with communities at greater risk for displacement.

53. The Policy Document also recognises that adaptation is a global challenge faced at local, subnational, national, regional and international levels. World Heritage properties can support wider adaptation efforts at all levels. World Heritage properties and the values they embody have the potential to contribute to social resilience and the recovery from climate change losses by providing a common framework for identifying potential loss

and by supporting a sense of place, continuity and identity. World Heritage properties can also serve an educational and communication function by highlighting the links between nature and culture, and the sustainability of many historic, traditional and indigenous practices. Heritage values can support social cohesion, which is an important element of adaptive capacity, which in turn can be fostered through participatory approaches to heritage management.

54. **[Australia]** In ~~the Preamble and~~ Article 7.5 of the Paris Agreement, its Parties acknowledge that adaptation action should follow "a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate". World Heritage properties should seek to exemplify this approach. The importance of Indigenous Peoples' and local communities' knowledge for understanding impacts and designing and implementing appropriate adaptation actions should be valued and appropriately utilised via a participatory process characterised by respect for the diversity of cultural expressions[5]. The use of traditional practices in climate adaptation should be supported by practical training for local experts and communities in order to support dynamism, internal creativity and experimentation in such knowledge systems.

55. [Panel: delete] **[Australia**: delete all**]**~~This Policy Document also acknowledges that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems.~~ [Panel: delete]~~Adaptation actions at World Heritage properties should also contribute towards increasing the resilience of indigenous peoples and local communities~~. [Panel: add] This Policy Document acknowledges that adaptation actions at World Heritage properties should also contribute towards increasing the resilience of indigenous peoples and local communities.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts shared the view that the first sentence of this paragraph was redundant with the Paragraph 54 above and recommends that it be deleted from Paragraph 55, as proposed.
>
> However, the Panel of experts considered that the contribution of adaptation actions at World Heritage properties to increase the resilience of indigenous peoples and local communities was of utmost importance. The Panel of experts hence recommends replacing the second sentence of the original paragraph with the sentence highlighted in green above.
>
> During the discussion, it was highlighted that the resilience of indigenous peoples and local communities should be understood in its wider scope to also encompass resilience to the indirect effects of climate change.

56. World Heritage processes need to be strengthened to support the expected climate adaptation outcomes. Areas for further focus on this topic to World Heritage properties and World Heritage Climate Action Goal 2 are set out in Annex II to the Policy Document.

D.3. Climate **[Thailand: English only]** change Mitigation

57. Aligning the management of World Heritage properties with the imperative of climate change mitigation through a comprehensive climate **[Thailand]** change mitigation framework is the objective of World Heritage Climate Action Goal 3 (see Section II.B

[5] See https://unfccc.int/LCIPP-FWG for more details on the UNFCCC's Facilitative Working Group of the Local Communities and Indigenous Peoples Platform

above). This goal asks States Parties to implement at national and/or other appropriate levels, comprehensive climate **[Thailand: English only] change** mitigation frameworks that guide mitigation action for cultural sites and safeguard natural ecosystems that are carbon sinks. It also encourages the reduction of greenhouse gas emissions associated with World Heritage properties.

58. The IPCC defines mitigation as "*a human intervention to reduce emissions or enhance the sinks of greenhouse gases.*"[6] IPCC´s reports, and most notably the 1.5°C Special Report (2018), makes clear that limiting global warming to 1.5°C would require rapid and far-reaching transitions in the global economy, with deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options. Within this context, this Policy Document encourages States Parties to the Convention to aim for a transition towards low-carbon alternatives for World Heritage properties management as soon as possible**, [Thailand] in accordance with the equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances**.

59. Given the high profile, global reach, and a broad mix of heritage typologies included within the World Heritage List, States Parties are encouraged to maximise the 'signalling' value and inspirational power of World Heritage properties to showcase 'win-win' mitigation practices that both reduce greenhouse gases and safeguard Outstanding Universal Value, with the potential to set international standards in heritage management.

60. Noting that by representing some of the world´s most outstanding natural ecosystems and by their important role in the mitigation of climate change with the large amount of carbon they store, the protection of natural World Heritage properties is considered the Convention's most impactful contribution to addressing climate change mitigation.

61. World Heritage properties, especially natural, mixed and large-scale cultural landscapes, are among those places that might significantly contribute to climate mitigation by:

    - Safeguarding natural ecosystems that are carbon sinks;
    - When feasible and consistent with protecting Outstanding Universal Value, undertaking actions to enhance carbon sequestration in natural systems.

    Such approaches would need to adhere to strict environmental and social safeguards and consider carbon storage permanence.

62. In the context of cultural and mixed properties, and especially for cultural landscapes, mitigation actions based on enhanced land use management, should avoid and minimise impact on heritage values including customary land management practices, consider the concomitant impact on the livelihoods of Indigenous Peoples and local communities, and be consistent with the States Parties' obligations under the Convention to preserve the Outstanding Universal Value.

63. Among the options to consider are:

    - Use of traditional passive measures in historical buildings as strategies to reduce energy consumption;

[6] The word 'mitigation' is used in this Policy Document in the technical sense in which it is used by the IPCC: "*a human intervention to reduce emissions or enhance the sinks of greenhouse gases*." This is essentially the same sense in which the word was used in the 2007 Policy Document ("*Mitigation: an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases* (IPCC)"). Users of this Policy Document should not confuse this usage with the sense in which the word 'mitigation' is used in the heritage context (namely, measures to avoid, prevent, reduce or offset negative effects on Outstanding Universal Value or other values).

- Use of the Life cycle assessment (LCA) methodology for the selection of replacement materials requiring less energy to produce, and thus emitting less GHG;
- Promoting the critical role of routine maintenance and good conservation in reducing operational GHG.

64. Annex III to this Policy Document frames some key areas for additional focus of GHG emissions reduction efforts in the context of management of World Heritage properties, including: (a) Built environment; (b) Land use management; (c) Life cycle assessment; (d) Tourism management.

D.4. Knowledge Sharing, Capacity Building and Awareness

65. [Panel: keep original] **[Brazil**: add**]** **Article 11 of the**~~The~~ 2015 Paris Agreement recognises the importance of education and capacity building for [Panel: delete] **[Brazil**: add**]** ***"developing country Parties, in particular countries with the least capacity, such as the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States, to take effective climate change action"*** [Panel: keep] **[Brazil**: delete**]** ~~enhancing climate action~~. The World Heritage Convention and its processes also consider these factors as important for the effective management and conservation of World Heritage. [Panel: add] In addition, the evolution of the Paris Agreement implementation mechanisms is aiming to enact common and enhanced provisions while differentiating between developed and developing countries, especially for those who are particularly vulnerable to the adverse effects of climate change, such as small island developing States, and greater implementation-related capacity-building for developing countries through viable commitments from developed countries in terms of technology transfer and financing.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts considered that the text proposed to be added referring to Article 11 of the Paris Agreement was accurate and appropriate in this context. However, the Panel of experts was of the view that the Paris Agreement also contains provisions for education and capacity building located elsewhere than in Article 11, and that a more inclusive language should be used to highlight the importance of knowledge sharing, capacity building and awareness through the Policy Document, in alignment with the Paris Agreement. The Panel of experts agreed that the proposed text by Brazil in first sentence should not be retained in its current position but part of the proposal, which reads "*especially for those who are particularly vulnerable to the adverse effects of climate change, such as small island developing States",* be inserted in the last sentence of this paragraph.
>
> Therefore, the Panel of experts recommends keeping the original text, but adding a new sentence at the end of this paragraph, to highlight the need to enact common and enhanced provisions of the Paris Agreement while differentiating between developed and developing countries, especially for those who are particularly vulnerable to the adverse effects of climate change and to stress the commitments from developed countries in terms of technology transfer and financing. Such addition would also be perfectly in line with the request made by the World Heritage Committee in its Decision **44 COM 7C** to incorporate elements concerning "*the need for support and capacity-building assistance, as well as the encouragement of technology transfer and financing from developed to developing countries*" in the updated Policy Document.

66. In line with World Heritage Climate Action Goal 4 (see Section II.B above), States Parties are encouraged to build capacities of decision-makers, stakeholders, local communities, users and managers of the World Heritage properties, and other heritage specialists to upgrade their skills and knowledge about the impacts of climate change on properties, including the intrinsic link between nature loss and climate change, developing and

implementing appropriate climate actions, possible sources of technical and financial assistance, and engaging with climate change-related networks.

67. The vast majority of the climate-related issues that World Heritage properties are facing are persistent problems. Therefore, World Heritage needs interdisciplinary and transdisciplinary knowledge, that is created by researchers, practitioners, site managers and local communities and Indigenous Peoples, working together to address climate change that will influence heritage management for the decades to come.

68. In line with references to training and awareness-raising set out in the World Heritage Convention and the UNFCCC, national educational strategies should adequately address the intersections between heritage, in general, and World Heritage in particular, and climate change. Such approaches benefit from emphasising the importance of knowledge exchange across a wide range of stakeholders and rights holders including those from heritage management and climate science, encouraging research, recognising existing ways of learning about climate change, while encouraging the intergenerational exchange of knowledge.

69. States Parties and managers of World Heritage properties are encouraged to share with other managers their experience on dealing with climate change impacts on their properties by developing case studies on challenges and good practices and the lessons learnt. World Heritage properties should also be used, wherever appropriate and possible, as means to raise awareness about the impacts of climate change on heritage and should act as a catalyst in the international debate to obtain support for policies, and to communicate good practices of climate action.

70. Mobilising public and political support for climate action inside and outside World Heritage properties is essential. This can be achieved through workshops, exhibitions and expositions, site interpretation, media campaigns, audio-visual material and publications which link the impacts of the global phenomenon of climate change to national, local and property levels. This would require the development of tools to communicate effectively the impacts of climate change and implications of actions on World Heritage properties to various audiences, including civil society, with subsequent benefits for research, decision-making, planning and management.

71. World Heritage properties can serve as living laboratories, or platforms for knowledge and research, for monitoring change, linking policy and practice and fostering understanding of climate change and of the need for climate action. World Heritage properties should take advantage of the diverse fields of heritage research both in sciences and humanities, and World Heritage properties should be monitored to advance understanding of short-term and long-term environmental and global change on properties. This could include using science, traditional/indigenous and local knowledge (with free, prior and informed consent as appropriate) and the history of World Heritage properties to track past human interactions and their effects on environments, and to assess climatic, environmental and social baselines from where contemporary climate and society are shifting.

72. Areas for further focus regarding knowledge sharing, capacity building and awareness are set out in Annex IV to the Policy Document.

D.5. Transformative change

73. This transformative change section of the Policy Document highlights and synthetises the elements associated with the urgency and scale of action required by the World Heritage Convention to support bold decisions to transition to a carbon neutral and resilient world that can sustain World Heritage properties for future generations.

74. World Heritage is immersed in an unprecedented global change: a rapidly changing climate and the progressive loss of global biodiversity are perhaps the most prominent

indicators of how rapidly humans are negatively transforming the planet. The majority of direct drivers of those changes share common causes in that they are underpinned by societal values and behaviours that induce unsustainable production and consumption patterns.

75. Global initiatives, most notably led by IPCC and IPBES, are indicating the need for urgent and concerted efforts for a "fundamental, system-wide reorganisation across technological, economic and social factors, including paradigms, goals and values", that ultimately lead to a "*transformative change*" to address both nature loss and climate change. Both IPCC and IPBES indicate that except in scenarios that include transformative change, negative trends in climate and nature are projected to continue to 2050 and beyond.

76. In the short term (before 2030), all heritage decision-makers could contribute to that transformative change, through enhanced and improved implementation and enforcement of effective national and local climate policy. Additional measures are necessary to enable transformative change in the long term (**[Brazil]**~~up to 2050~~ **by mid-century**) to contribute to addressing the indirect drivers that are the root causes of climate change, including changes in social, economic and technological structures within and across nations.

77. In the context of climate adaptation, transformative change for limiting the risks from global warming of 1.5°C implies system transitions that can be enabled by an increase of adaptation investments, policy instruments, the acceleration of technological innovation and behaviour changes. For example, World Heritage can be safeguarded through enhanced international cooperation and linked locally relevant measures. The review and renewal of agreed climate-related international goals and targets based on the best available scientific knowledge and the widespread adoption and funding of transformative and resilient heritage management plans, are key to this safeguarding.

78. Another aspect of transformative change in the heritage sector, are the pathways undertaken by each country for limiting global warming to 1.5°C that should imply rapid and far-reaching transitions in many heritage-related sectors. These transitions are unprecedented in terms of scale, and imply deep GHG emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.

III. IMPLEMENTATION OF THE POLICY DOCUMENT

79. This section articulates recommendations for implementing the Policy Document at various levels, namely World Heritage Committee, States Parties and World Heritage property levels. The five key considerations for implementing the Policy Document are:

- Integrating measures to identify and manage climate related risks to the Outstanding Universal Value at the property level and in the processes of the Committee;
- Integrating [Panel: keep original] **[Australia**: delete**]** ~~World Heritage in~~ climate [Panel: adjust language] ~~change~~ action design, planning [Panel: add] and implementation [Panel: delete] **[Australia**: add**] in World Heritage property management** at the [Panel: add] international, national and local levels;

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts considered that the scope brought by the amendment proposed would be too narrow (i.e., site management) and recommends that the original text be retained. The Panel of experts therefore agreed to delete the text "*in World Heritage property management*". The Panel highlighted a typo in the original text, which read "*climate change*"

instead of "*climate action*". It also recommends including references to the international level and to the need for the implementation of such climate action, in order to align with the recommended text for World Heritage Climate Action Goals 2 and 3 (see Paragraph 27).

- Developing and sharing tools and methodologies to assess and manage the current and future impact of climate change with **[Brazil] and among Parties and** various stakeholders and rights holders, at the property, national and international levels (particularly through the process of establishing regional Action Plans);
- Enabling World Heritage properties to contribute to the transformative change that is necessary for low carbon **[Thailand] and climate-**resilient development;
- Utilising a place-based approach to contextualise climate action responses, integrating nature and culture in the management of all properties in response to climate change, and respecting the rights and interests of Indigenous Peoples and local communities.

80. To achieve these, various actions are recommended at World Heritage Committee, States Parties and World Heritage property levels. For the effective implementation of the Policy Document, an internationally collaborative approach is advocated through engagement of all the stakeholders and rights holders to develop and implement the tools and methodologies that can support climate action for World Heritage properties. This should utilise existing mechanisms where appropriate, including Reactive Monitoring and Periodic Reporting, to promote best practice and regional engagement opportunities for climate-related action concerning World Heritage protection.

A. Enabling conditions

81. Successful implementation of this Policy Document requires enabling conditions that support the feasibility of adaptation and mitigation options and can accelerate and scale-up systemic transitions and enhance capacities of systems and societies to adapt to climate change, while safeguarding the Outstanding Universal Value, achieving sustainable development, eradicating poverty and reducing inequalities. These include **[Brazil**: add**] the** [Panel: replace] ~~**provision**~~ transfer **and mobilization of** finance, technological innovation, institutional capacity, multi-level governance, and changes in human behaviour and lifestyles. They also include inclusive processes, attention to power asymmetries and unequal opportunities. States Parties will endeavour to enhance the feasibility of actions contemplated through this Policy Document by attention to the enabling conditions underpinning climate action in the World Heritage context. [Panel: keep original] **[Russian Federation**: delete**]**~~The World Heritage Committee will be an advocate for climate action and will work to support partners that are expected to carry out such action under this Policy Document.~~

Recommendation of the Panel of experts:

The Panel of experts suggests re-wording the original text to replace "the provision and mobilisation of" with "*the transfer and mobilisation of*" and suggested that this is by no means to change the meaning of the text but to simply clarify the language used, which also aligns with Section III.A.

The Panel of experts also suggests that the text proposed for deletion by the Russian Federation be retained, since the Policy Document notes the safeguarding of Outstanding Universal Values and the notion of the precautionary approach for climate change mitigation. It was also suggested that the text corresponds with the recommendations as outlined in Section III.B of the Policy Document.

Governance

82. Climate governance is key to creating the conditions for implementing transformative change in the World Heritage context. Such World Heritage climate governance systems should embrace inclusive approaches that accommodate a plurality of heritage values, beyond Outstanding Universal Value, and can ensure equitable sharing of heritage-benefits, including through rights-based approaches. Climate governance should encourage novel strategies for climate–related knowledge production and co-production that are inclusive of diverse values and knowledge systems. Local communities should be closely involved in the processes of investigation of the impacts of climate change and the development of climate action strategies. Adaptive approaches, including learning from heritage experiences, monitoring and feedback cycles, contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change. Governance systems should also link the management of natural and cultural values, including at a landscape scale, where possible.

83. The 2017 UNESCO Declaration of Ethical Principles in relation to climate change provides a useful framework for addressing justice and equity and the need for prioritising action in an equitable and transparent manner. The 2017 UNESCO Policy on engaging with Indigenous Peoples provides further useful references on participation and actions.

Finance

84. Transfer and mobilisation of finance are among the necessary enabling conditions to promote climate action for World Heritage properties, including investment in infrastructure for mitigation and adaptation. Adaptation needs have typically been supported by public sector sources such as national and subnational government budgets, and in developing countries together with support from **[Saint Kitts and Nevis] multilateral and bilateral** development assistance, multilateral development banks, ~~and~~ the UNFCCC **[Brazil] and its Paris Agreement**. In this aspect, World Heritage properties should be considered as part of the overall national and regional planning strategies to ensure that adequate financial resources are made available to support property-level climate action**, [Brazil] taking into account the developed countries' leading role in the provision and mobilization of such resources in support of developing countries**. Barriers include the scale of adaptation financing, limited **[Saint Kitts and Nevis] institutional and national financing** capacity and access to adaptation finance. The better incorporation of funding for World Heritage properties into global climate finance mechanisms is needed. International cooperation is a critical enabler for developing countries and vulnerable regions**, [Saint Kitts and Nevis] notably SIDS and LDCs,** to strengthen their action for the implementation of responses at World Heritage properties consistent with transformative change.

Technological Innovation

85. Climate technologies are technologies used to address climate change and include renewable energies such as wind energy, solar power and hydropower that help reduce GHG. [Panel: keep] **[Australia**: delete**]**~~Traditional knowledge and Indigenous science can also constitute climate technology with relevance to contemporary climate action.~~ Various climate technologies – such as drought-resistant crops, early warning systems and sea walls – can be used to adapt to the adverse effects of climate change at World Heritage properties. [Panel: delete and replace by sentence below] **[Australia**: delete**]**~~This is particularly useful for active cultural landscapes in which the strong human connections to the natural environment are key to the survival of such sites and to the conservation of the Outstanding Universal Value of such properties.~~ [Panel: add] These are key to the survival of many World Heritage properties and to the conservation of their

Outstanding Universal Value; this is particularly true for cultural landscapes where there is a strong and harmonious human connection to the natural environment.

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts initially recommended that the original text be kept. The Panel of experts felt that this text is important, as indigenous knowledge is important and can be used to combat climate change.
>
> The Panel of experts further suggested replacing the last sentence of the original paragraph with a revised formulation to emphasize the importance of cultural landscapes as illustrations of strong and harmonious human connection to the natural environment.

B. World Heritage Committee-level implementation

86. Implementation of climate actions related to the enabling conditions (see Section III.A above) at the World Heritage Committee-level could be supported by:

- Developing and implementing a funding strategy to attract public and private sector support for climate action and capacity building for World Heritage properties. Prioritisation process should be set up to provide financial support to the States Parties for carrying out various mitigation and adaptation measures for protecting, conserving and presenting the Outstanding Universal Value of World Heritage properties. Moreover, better incorporation of funding for World Heritage properties into global climate finance mechanisms is needed;
- Ensuring that basic documents of the World Heritage system, such as the Operational Guidelines and the Resource Manuals, adequately address climate change;
- Promoting climate action measures for properties that are on the frontlines of climate change impacts in order to express solidarity with them and encourage South-South collaboration.

87. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the World Heritage Committee-level could be supported by:

- Strengthening the link between the World Heritage Convention and UNFCCC in terms of monitoring and reporting mechanisms related to climate change and World Heritage properties;
- Promoting synergies with existing international policies and tools from various sectors including SDGs, Sendai framework, biodiversity conventions and agreements, Paris Agreement, New Urban Agenda, as well as the site-based instruments such as the 1971 Ramsar Convention of Wetlands of International Importance, the UNESCO Man and the Biosphere and Global Geoparks Programmes for a comprehensive approach towards climate change and its impact on World Heritage;
- Considering amendments to the formats of World Heritage Periodic Reporting and state of conservation reporting by including indicators that identify the impact of climate change on World Heritage properties and indicate site-specific adaption strategies based on the UNESCO's Culture|2030 Indicators;
- Identifying regional (across States Parties) or thematic actions such as promoting the development of risk and vulnerability maps for regions and sub-regions, which overlay climate data and World Heritage property locations and operationalise such initiatives.

88. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the World Heritage Committee-level could be supported by:

- Enhancing opportunities for collaboration and partnerships with key international organisations such as the World Bank, the United Nations Environment Programme (UNEP), the United Nations Office for Disaster Risk Reduction (UNDRR), the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC), the G20, etc. for various projects that promote climate action in World Heritage properties; In this regard, it should be recognised that the ability of the World Heritage Committee to interact with other international mechanisms will depend on, and be limited by, the respective mandates and responsibilities of each body.

89. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the World Heritage Committee-level could be supported by:

- Considering amendments to the formats of World Heritage Periodic Reporting and state of conservation reporting by including indicators that collect information on site-specific mitigation strategies being pursued.

90. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the World Heritage Committee-level could be supported by:

- Strengthening the links between the World Heritage Convention and UNFCCC **[Brazil] and its Paris Agreement** in terms of sharing of information and communication related to climate change and World Heritage properties;
- Developing, compiling and sharing good practice guidance and capacity building tools for climate vulnerability and risk assessment and developing and implementing climate mitigation and adaptation measures;
- Facilitating sharing of scientific information and experience across States Parties through setting up of an online platform for effective implementation, monitoring and review of implementation of the Policy Document;
- Identifying mechanisms to support needs and capacities of the Least Developed Countries (LDCs) and the Small Island Developing States (SIDS) to address climate change impacts.

C. National-level implementation

91. Implementation of climate actions related to the enabling conditions (see Section III.A above) at the national-level could be supported by:

- Identifying and accessing the resources needed from all sources through collaboration with government and corporate/private sectors;
- Achieving coherence with other national policies by building synergies between the heritage sector and other sectors such as environment, urban and disaster risk management. This may include identification and mapping of relevant sectors which can collaborate and creation of shared data sources and benchmark methodologies;
- Ensuring that national guidance on World Heritage and for cultural and natural heritage generally addresses climate change;
- Developing pilot projects that promote good practices in climate action for World Heritage properties that are inclusive of diverse values and knowledge systems

and disseminating these at international, national and property levels to demonstrate how World Heritage properties are assets to protect as well as resources to strengthen community adaptation, resilience and continuity.

92. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the national-level could be supported by:

- Standardising and sharing data gathering across various World Heritage properties to facilitate identification and analysis of common hazards and impacts of climate change at national level;
- Consistent with any World Heritage Committee standards and guidelines, developing effective processes for assessing the vulnerability of Outstanding Universal Value and other heritage values to climate change impacts, and evaluating the effectiveness of climate action measures implemented at the World Heritage properties in the Nomination process, Periodic Reports and the state of conservation reports;
- Developing climate vulnerability and risk indicators and establishing baseline data for World Heritage properties at national level to assess and track Climate risks, as the first step in strengthening capacity to manage climate risks at all World Heritage properties. These can include the Climate Adaptation and Resilience indicators (under the Environment and Resilience thematic dimension) of the UNESCO's Culture|2030 Indicators;
- Supporting reassessment and adjustments in all stages of heritage practice including inventorying, documentation and monitoring, impact assessments, conservation and management planning, and risk assessment in view of the unprecedented, systemic threat posed by climate change.

93. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the national level could be supported by:

- Recognising and including World Heritage in National Adaptation Frameworks and other national policies for climate action in order to strengthen actions to adapt and build resilience to climate change, and to promote collaboration to ensure that adequate financial resources are made available to support property-level climate action, including investment in infrastructure for adaptation;
- Working in partnership with relevant organisations, stakeholders and rightsholders in field activities to develop and implement adaptation strategies;
- Sharing methodologies and tools, respecting traditional knowledge and methods;
- Encouraging, relevant institutions to the extent possible and within the available resources, to monitor relevant climate parameters and contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change through various adaptation strategies.

94. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the national level could be supported by:

- Implementing precautionary approaches that pursue pathways that contribute to limiting global warming to 1.5°C, with no or limited overshoot **[Brazil] in light of the CBDR-RC principle**;
- Recognising and including World Heritage in national climate action plans and other national policies for climate action in order to strengthen actions to mitigate and to promote collaboration to ensure that adequate financial resources are made

available to support property-level climate action, including investment in infrastructure for mitigation;

- Working in partnership with relevant organisations, stakeholders and rightsholders in field activities to develop and implement mitigation strategies;
- Developing frameworks that identify and promote the co-benefits of climate action and heritage safeguarding and which reduce real and perceived tensions between climate action and safeguarding Outstanding Universal Value, for example through impact assessment tools, environmental and social standards and taxonomies which take into account the cultural and social dimension of climate action projects; as well as through planning processes and methodologies for proactively avoiding and mediating conflicts. Such frameworks may be particularly relevant in addressing proposed renewable energy projects (e.g. terrestrial and maritime "wind farms" energy infrastructure, transmission grids), carbon dioxide removal/capture projects, flood control schemes, changes in land-use, and the renovation of heritage buildings for energy efficiency.

95. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the national level could be supported by:

- Elaboration on the role of World Heritage in climate-resilient development pathways that strengthen sustainable development (including efforts to eradicate poverty and reduce inequalities) and promote mitigation of and adaptation to a changing climate.

D. World Heritage property-level implementation

96. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the World Heritage property level could be supported by:

- Undertaking climate vulnerability and risk assessments for World Heritage properties to assess potential impact on Outstanding Universal Value caused by projected climate change hazards and the impact on associated communities including:
    i) Acquiring data on climate related hazards, vulnerabilities and risks and other baseline information, including a current inventory of not only attributes of Outstanding Universal Value, but other relevant cultural and natural values,
    ii) Developing strategies to reduce non-climatic stress factors on properties to enhance resilience of the property to climate change impacts.

97. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the World Heritage property level could be supported by:

- Developing and implementing climate adaptation strategies consistent with climate adaptation frameworks developed at the national level including:
    i) Integrating climate action measures (mitigation and adaptation) in site management systems and management plans, and reporting, monitoring and evaluating the effectiveness of these measures,
    ii) Developing the capacity to access local climate scenarios (i.e. simulations of the future climate at local level) and incorporate the results into medium term planning and policy making for the property;

- Prioritising monitoring of climate hazards, assessing and reducing climate risks and enhancing adaptive capacity at the property;
- Implementing management practices that reduce the vulnerability and increase the resilience of World Heritage properties to existing non-climatic pressures and threats that will be exacerbated by climate change impacts, such as urbanisation and uncontrolled tourism;
- Engaging with traditional knowledge holders and local communities to appreciate and apply community and indigenous values and understanding of climate change and adaptation, when formulating and implementing climate actions and priorities.

98. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the World Heritage property level could be supported by:

- Contributing to the establishment of carbon footprint systems that demonstrate measurable progress on quantifying and, where appropriate, reducing or otherwise offsetting any net greenhouse gas emissions associated with the property, including by engaging with relevant stakeholders and service providers in order to monitor, measure and reduce the GHG emissions associated with the property, including from tourism, land use and buildings.

99. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the World Heritage property level could be supported by:

- Designed and implemented activities to improve diverse knowledge mobilisation, education, awareness raising, and human and institutional capacity in relation to the risks and responses arising from climate change impacts on World Heritage properties, including:
    i) Using properties as observatories of climate change to support climate science, Indigenous Peoples' knowledge systems and understanding of short-term and long-term environmental change,
    i) Increasing messaging on climate change matters,
    ii) Showcasing case studies and better conservation practices related to climate action and climate change,
    iii) Updating site interpretation by including climate change stories for increasing awareness and providing enhanced visitor experience of World Heritage;
- Enhancing climate action governance processes including by involving local communities closely in the processes of investigation of the impacts of climate change and the development of climate action strategies;
- Contributing knowledge, data and perspectives derived from the properties to broader climate policy processes through participation in appropriate local, regional and national climate planning processes and climate science initiatives, including interdisciplinary and transdisciplinary cooperation and knowledge co-production.

ANNEXES

ANNEX I - GLOSSARY

The glossary contains definitions of concepts that have been used in the Policy Document. These are drawn from IPCC reports (2012 – "Special report on Managing the risks of extreme events and disasters to advance Climate Change adaptation" – SREX; 2018 – "Special report on the impacts of global warming of 1.5°C"; 2019 – "Special report on Climate Change and land"). It is hoped that these terms will understood by heritage sector to enable better communication and coordination with environment sector. The discrepancy between some of the terms such as mitigation used in heritage and defined in the glossary based on IPCC reports also need to be recognised.

Adaptation:

"In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects" (IPCC-2018)

Adaptation limits:

"The point at which an actor's objectives (or system needs) cannot be secured from intolerable risks through adaptive actions". (IPCC-2018)

Adaptive capacity:

"The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences". (IPCC-2018)

Baseline scenario:

"In much of the literature the term is also synonymous with the term business-as-usual (BAU) scenario, although the term BAU has fallen out of favour because the idea of business as usual in century-long socio-economic projections is hard to fathom. In the context of transformation pathways, the term baseline scenarios refers to scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted. Baseline scenarios are not intended to be predictions of the future, but rather counterfactual constructions that can serve to highlight the level of emissions that would occur without further policy effort. Typically, baseline scenarios are then compared to mitigation scenarios that are constructed to meet different goals for greenhouse gas (GHG) emissions, atmospheric concentrations or temperature change. The term baseline scenario is often used interchangeably with reference scenario and no policy scenario". (IPCC-2018)

Carbon budget:

"This term refers to three concepts in the literature: (1) an assessment of carbon cycle sources and sinks on a global level, through the synthesis of evidence for fossil-fuel and cement emissions, land- use change emissions, ocean and land CO2 sinks, and the resulting atmospheric CO2 growth rate. This is referred to as the global carbon budget; (2) the estimated cumulative amount of global carbon dioxide emissions that is estimated to limit global surface temperature to a given level above a reference period, taking into account global surface temperature contributions of other GHG and climate forcers; (3) the distribution of the carbon budget defined under (2) to the regional, national, or sub-national level based on considerations of equity, costs or efficiency". (IPCC-2018)

Carbon footprint:

"The process of storing carbon in a carbon pool" (IPCC-2018)

Carbon sink:

"A reservoir (natural or human, in soil, ocean, and plants) where a greenhouse gas, an aerosol or a precursor of a greenhouse gas is stored. Note that UNFCCC Article 1.8 refers to a sink as any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere". (IPCC-2018)

Climate change:

"Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: "*a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods*." The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes". (IPCC-2018)

Climate risk:

"In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation or mitigation responses to such a hazard, on lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Risk results from the interaction of vulnerability (of the affected system), its exposure over time (to the hazard), as well as the (climate-related) hazard and the likelihood of its occurrence". (IPCC-2018)

Co-benefits:

The positive effects that a policy or measure aimed at one objective might have on other objectives, thereby increasing the total benefits for society or the environment. Co-benefits are often subject to uncertainty and depend on local circumstances and implementation practices, among other factors. Co-benefits are also referred to as ancillary benefits. (IPCC-2018)

[Secretariat/Advisory Bodies] Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC):

"Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a key principle in the United Nations Framework Convention on Climate Change (UNFCCC) that recognises the different capabilities and differing responsibilities of individual countries in tacking climate change. The principle of CBDR– RC is embedded in the 1992 UNFCCC treaty. The convention states: "… the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions." Since then, the CBDR-RC principle has guided the UN climate negotiations." (IPCC-2018)

[Brazil] Ecosystem-based Approaches

"The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resource". (CBD, COP5 Decision V/6)

Enabling condition:

“Conditions that affect the feasibility of adaptation and mitigation options, and can accelerate and scale-up systemic transitions that would limit temperature increase to 1.5°C and enhance capacities of systems and societies to adapt to the associated climate change, while achieving sustainable development, eradicating poverty and reducing inequalities. Enabling conditions include finance, technological innovation, strengthening policy instruments, institutional capacity, multi-level governance, and changes in human behaviour and lifestyles. They also include inclusive processes, attention to power asymmetries and unequal opportunities for development and reconsideration of values”. (IPCC-2018).

Exposure:

“The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected”. (IPCC-2018)

Extreme weather event:

“An extreme weather event is an event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense. When a pattern of extreme weather persists for some time, such as a season, it may be classed as an extreme climate event, especially if it yields an average or total that is itself extreme (e.g., drought or heavy rainfall over a season)”. (IPCC-2018)

Land use, Land use change and Forestry (LULUCF):

“In the context of national greenhouse gas (GHG) inventories under the UNFCCC, LULUCF is a GHG inventory sector that covers anthropogenic emissions and removals of GHG from carbon pools in managed lands, excluding non-CO2 agricultural emissions.” (IPCC-2018)

Life Cycle Assessment (LCA):

A Life Cycle Assessment involves the investigation and evaluation of the environmental impacts of a given product or service, based on the identification of energy and materials inputs and emissions released to the environment. In LCA, the environmental impacts are calculated over the entire lifetime of the product ‘from cradle-to-grave’ – hence the name ‘life cycle’. In the context of carbon mitigation, is used to quantify the emissions of products or services along the supply chain of the product or service.

Maladaptation:

Maladaptive actions (maladaptation) are actions that may lead to increased risk of adverse climate-related outcomes, including increased vulnerability to climate change, or diminished welfare, now or in the future. Maladaptation is usually an unintended consequence.

Mitigation:

This report uses the IPCC definition of mitigation: “A human intervention to reduce emissions or enhance the sinks of greenhouse gases”. (IPCC 2018). This is essentially the same sense in which the word was used in the 2007 World Heritage Committee Policy (“Mitigation: an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC)”). Readers should not confuse this usage with the more general sense in which the word ‘mitigation’ is sometimes used in the heritage context (namely, measures to avoid, prevent, reduce or offset negative effects on Outstanding Universal Value or other values).

Nature-based solutions (NbS):

[Brazil] This report acknowledges that there still does not exist a multilaterally agreed definition on NbS. In the lack thereof, one of the possible definitions might be: “Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address

societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits". (IPBES-2019)

[Secretariat/Advisory Bodies] Nationally Determined Contributions (NDCs)

"A term used under the United Nations Framework Convention on Climate Change (UNFCCC) whereby a country that has joined the Paris Agreement outlines its plans for reducing its emissions. Some countries' NDCs also address how they will adapt to climate change impacts, and what support they need from, or will provide to, other countries to adopt low-carbon pathways and to build climate resilience. According to Article 4 paragraph 2 of the Paris Agreement, each Party shall prepare, communicate and maintain successive NDCs that it intends to achieve. In the lead up to 21st Conference of the Parties in Paris in 2015, countries submitted Intended Nationally Determined Contributions (INDCs). As countries join the Paris Agreement, unless they decide otherwise, this INDC becomes their first Nationally Determined Contribution (NDC)." (IPCC-2018)

Resilience:

"The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation". (IPCC-2018)

Risk:

"The potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain". (IPCC-2018)

Risk assessment:

"The qualitative and/or quantitative scientific estimation of risks". (IPCC-2018)

Risk management:

"Plans, actions, strategies or policies to reduce the likelihood and/or consequences of risks or to respond to consequences". (IPCC-2018)

Risk transfer:

"The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise, or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party". (IPCC-2013)

Safeguard:

In the context of the Policy Document, it refers to law, rules, or measures intended to prevent social and environmental systems from being harmed by climate mitigation and/or adaptation actions.

Transformation:

A change in the fundamental attributes of natural and human systems. Societal (social) transformation A profound and often deliberate shift initiated by communities toward sustainability, facilitated by changes in individual and collective values and behaviours, and a fairer balance of political, cultural, and institutional power in society. (IPCC-2018)

Transformative change:

"A system wide change. This requires more than technological change to consideration of social and economic factors that with technology can bring about rapid change at scale". (IPCC-2018)

Uncertainty:

A state of incomplete knowledge that can result from a lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from imprecision in the data to ambiguously defined concepts or terminology, incomplete understanding of critical processes, or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures (e.g. a probability density function) or by qualitative statements (e.g. reflecting the judgment of a team of experts). (IPCC-2018)

Vulnerability:

“The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt”. (IPCC-2018)

ANNEX II - AREAS FOR FURTHER FOCUS REGARDING ADAPTATION

Overview

1. This Policy Document recommends that each State Party implements at national and/or other appropriate levels, all the necessary actions to have in place a comprehensive climate risk management framework that fosters adaptation and resilience building actions, and that are also synergistic, better coordinated with the local, subnational, national and international climate adaptation developments (See World Heritage Climate Action Goals 1 and 2).

2. Adaptation actions should be based on and guided, as appropriate, by traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems. The importance of Indigenous Peoples' and local communities' knowledge for understanding impacts and designing and implementing appropriate adaptation action should be valued and utilised via a participatory process characterised by respect for the diversity of cultural expressions. Traditional methods and systems for preventing, conserving and addressing the negative impacts of climate change on World Heritage properties should be included in relevant climate policies.

3. States Parties are also encouraged to maximising the 'signalling' value and inspirational power of World Heritage properties to showcase effective adaptation practices.

A. Assessing climate risks

4. The Policy Document is inclusive to all hazards that are directly and indirectly attributed to climate change, and related vulnerability factors of the heritage properties (physical, social, economic, institutional, etc.).

5. Climate change will alter the severity, frequency and spatial distribution of many types of climate-related hazards. In consequence, climate risk assessments should be based on predictions of future climate change impacts developed using recent and current observations as proxies for future change, integrated with a range of local climate scenarios (i.e. simulations of the future climate at local level) (see Section II.D.1 above). While these simulations have considerable uncertainty (there are several sources of uncertainty: development patterns of society, population, wealth distribution and GHG emissions levels), current methodologies yield results that are useful to medium term planning and policy making for World Heritage properties.

6. Climate–related hazards also serving as multipliers of pre-existing threats and vulnerabilities, it is increasingly difficult to minimise the exposure of heritage sites to a dangerous climate, and the assessment of heritage-climate vulnerability and implementation of options to reduce it are central to adaptation planning.

7. Responding to the unprecedented and systemic threat of climate change calls for adjustments in all stages of heritage practice. Climate change will require reassessments of many heritage methodologies including inventorying, assessments, documentation and monitoring, impact assessments conservation management planning and risk assessment.

B. Climate risk management

8. Climate risk management incorporates all actions necessary to assess and manage the risks of a changing climate, considering:

    - The multiplicity of climate-related hazards, including both rapid and slow onset events:
        - 'Rapid-onset' events are short-lived, acute, intensive, recurrent, highly damaging and uncontrollable. They include extreme winds, hurricanes,

typhoons, storm surge, extreme precipitation, hailstorms, flash Floods, landslides, heat waves, and wildfires. Climate change is expected to increase the frequency and intensity of many of these types of events through much of the world,

- 'Slow-onset' events are long-lived, progressive and potentially permanent transitions that are less damaging in the short-term, but which may have profound consequences over the longer-term. They include Glacier melt, Sea Level Rise, acidification, desertification and changes in seasonality and species distribution;

- Differences in exposure of heritage sites to those climate-related hazards;
- How climate-related hazards exacerbate other hazards and stressors, often with negative outcomes for heritage sites;
- The multidimensional factors of climate vulnerability at the human-environment system level (exposure, sensitivity and adaptive capacity) - or the combination of elements that made a heritage site more susceptible to be negatively affected;
- The climate risks (or the combined likelihood and potential negative impacts to World Heritage properties) on attributes bearing the Outstanding Universal Value and local values, and including impacts on the economic, social, health, education, and well-being of associated communities (including effects on social cohesion);[7]
- Options for responding to climate-related risks, with continuing uncertainty about the severity and timing of climate-change impacts and with limits to the effectiveness of adaptation.

9. Climate risk management approaches can benefit from:

- Partnering with relevant organisations, stakeholders and local community groups in field activities to develop and implement adaptation strategies; sharing methodologies and tools, respecting traditional knowledge and methods;
- Pilot test and share good practices at regional, national and international levels to promote climate action at World Heritage properties through knowledge dissemination, networking and coordination;
- Identifying regional (cross-State Party)/thematic actions such as promoting the development of risk and vulnerability maps for regions and sub-regions which overlay climate data and World Heritage property locations and operationalise such initiatives;
- Developing frameworks for the successful negotiation of co-benefits and trade-offs of Climate adaptation and Outstanding Universal Value to identify and avoid potential maladaptation.

10. As it is fundamental to assess climate change impact in the state of conservation of the World Heritage property, new tools may be needed to address climate change preparedness, as well as identifying factors that can become threats that could ultimately impact on the Outstanding Universal Value of the property. World Heritage processes, such as Nomination, Periodic Reporting, Reactive Monitoring, need to be strengthened to support these outcomes, with special attention to the Operational Guidelines.

[7] The 2019 ICOMOS report "*The Future of Our Pasts: Engaging Cultural Heritage in Climate Action*" contains one matrix of climate drivers (e.g. temperature and precipitation changes, climate- influenced wildfires, changes in seasonality, etc) as well as some compounding related stressors (e.g. pollution and ocean acidification) correlated to resulting impacts on six major cultural heritage typologies.

11. The integration of World Heritage within national and regional climate risk management approaches can support all necessary actions to strengthen national and local capacities to manage climate-related risks for heritage, as they can be understood now, and the more complex climate risk expected in the future. Whether dealing with actual potential negative risks and its corresponding impacts or climate-related disaster contexts, or future impacts associated with climate variability, extreme weather events and climate change, the essential challenge is both climate risk reduction and the maintenance (with possibly increase) in human and ecosystem's resilience, including through the valorisation of traditional ecological knowledge.

12. States Parties are encouraged to promote a synergistic implementation of existing international policies and tools from various sectors like SDGs, Sendai framework, biodiversity conventions and agreements, Paris Agreement, New Urban Agenda etc. for a comprehensive approach towards climate adaptation and its mainstreaming on World Heritage processes.

13. Elements of adaptation planning relevant to World Heritage properties can include anticipatory risk management (ensuring that future heritage management reduces rather than increases climate risk), compensatory risk management (actions to mitigate the negative impacts associated with existing climate risk) and reactive climate risk management (ensuring that risk is not reconstructed after climate-related impacts, including disaster events). Moreover, measurers will need to consider both potential impacts on the Outstanding Universal Value of the properties, and, where relevant, the related socio-economic and environmental systems, before decisions are made.

14. At the national level, States Parties to the World Heritage Convention should develop and implement integrated climate risk management strategies, plans and programmes, as these can ultimately increase the coordination among the disparate institutional and administrative mechanisms, projects, human and financial resources currently applied to climate adaptation and disaster risk management.

C. Baseline information

15. Data on climate related hazards, vulnerabilities and risks should be acquired, managed and updated by the responsible agencies and consequently shared with those responsible for managing World Heritage properties. Managers of World Heritage properties must have access to relevant data and modelling, and the capacity to collect and process data so they can build climate risk models.

16. More appropriate adaptation actions can be selected and applied if there is baseline information, that includes:

- A current inventory of not only attributes of Outstanding Universal Value but other relevant cultural and natural values;
- Knowledge of current and projected climate related hazards;
- Understanding key social, physical, economic, environmental, and institutional and factors that all together determine the vulnerability of heritage properties to those hazards;
- Understanding of the potential direct and indirect Impacts (climate risks); and
- Understanding the type of heritage at risk (movable, immovable and intangible).

17. It is essential that heritage managers assess climate risks that adequately inform adaptation. These should be undertaken at macro-scale to gain a broad overview at a regional level, and micro-place level, which tends to be holistic and considers the site-specific dynamics of hazards, vulnerabilities and potential /observed negative impacts.

18. Considering that multiple resources will be required for adaptation activities, heritage property managers need to properly assess the costs, benefits of climate adaptation strategies and, to ensure resources are allocated responsibly.

19. A key complementary method that heritage sites managers can implement, are Adaptation Capacity Assessments. This type of assessment builds on the climate risk assessments and evaluates the existing capacity to address those risks. Depending on the context, it helps to identify gaps and strengths of existing heritage sites management to effectively implement climate adaptation strategies.

20. Recognition of diverse interests, circumstances, social-cultural contexts, and expectations can benefit climate risk based–decision making processes.

D. Damage and loss of Outstanding Universal Value

21. This Policy Document encourages every State Party to do all it can to implement site-based adaptation, to the utmost of its own resources and with any international assistance and co-operation which it may be able to obtain, including efforts of other States Parties to implement a precautionary approach.

22. Although adaptation to a changing climate will often result in adjustments that are within a given heritage system's adaptive limits, completely preventing all projected impacts of climate change on every World Heritage property may not be possible, and in some cases damage to and loss of attributes of Outstanding Universal Value as a result of climate change may still result.

23. Acknowledging that completely preventing all projected impacts of climate change on every World Heritage property may not be possible, the impact of such loss will need to be fully assessed and evaluated by the World Heritage Committee who will need to consider whether Outstanding Universal Value has been completely or partially lost.

24. Strategies to avert, minimise and address damage and loss are crucial to plan for and manage potential loss of attributes of Outstanding Universal Value in World Heritage properties. There exists a range of approaches and instruments to develop damage and loss strategies associated with the impacts of climate change. The challenge is to identify which strategies are more appropriate for World Heritage properties, not only to the type of climate risks but also to the social, environmental, economic, geographical, landscape and institutional context of the properties for which Outstanding Universal Value may be a risk of being irretrievably damaged or lost (see second Guiding Principle in Section I.C).

E. Managing for Resilience

25. Improving adaptive capacity and building climate resilience could be supported by reducing non-climate sources of stress on World Heritage properties. Consideration and management of existing non-climatic pressures should be included in adaptation plans. Doing this acknowledges that climate change will exacerbate existing pressures such as urbanisation, invasive species, pollution and uncontrolled tourism. Management approaches for these non-climatic stresses will need to be responsive and regularly reviewed to account for a changing climate (see World Heritage Climate Action Goal 2 above).

26. Management approaches for World Heritage properties should be proactive rather than reactive to allow them to better address the cumulative nature of multiple impacts. Property managers should contemplate immediate actions to address existing pressures, including 'no regret-policy' actions. Doing this has the dual benefit of reducing vulnerability and increasing the resilience of properties to existing non-climate sources of stress, and also reducing their vulnerability to climate change related stresses.

ANNEX III – AREAS FOR FURTHER FOCUS REGARDING MITIGATION

Overview

1. This Policy Document recommends that each State Party implements at national and/or other appropriate levels, all the necessary actions to have in place a comprehensive climate mitigation framework, that fosters synergies, better coordination and enhance effective implementation, of the local, subnational, national and international climate mitigation developments since the adoption of the Paris Agreement (see Section II.B above).
2. Climate mitigation responses of the World Heritage Convention to the threat of climate change should be based on the most recent scientific and political developments, and therefore take advantage of the body of knowledge developed to understand Green House Gas (GHG) emissions in World Heritage properties and the interventions needed to reduce those emissions and effectively decarbonise the Heritage sector (see World Heritage Climate Action Goal 3).
3. Acknowledging that there is significant progress in the international community on the technical frameworks required to accomplish climate mitigation goals, and also taking into consideration the IPCC´s GHG emissions sectors, this Policy Document frames the climate mitigation recommendations in four categories: Built environment, Land use management, Life cycle assessment, and Tourism management (see Section II.D.3 above).

A. Built environment

4. The IPCC 1.5 °C Special Report (2018) makes clear that the built environment, including the entire building and construction supply chain, must decarbonise. In consequence, this Policy Document recognises that mitigation measures for the built environment within World Heritage properties should aim to assess and reduce their carbon footprint, with special attention to demand for electricity and other forms of energy that are required to deliver energy services for buildings.
5. Actions for climate mitigation of the built environment should avoid negative impacts on heritage values and be consistent with the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of properties. Among the options to consider are:

    - Retrofitting of historical buildings to decrease energy consumption where possible, recognising that thermal massing and other features of some traditional building systems are inherently efficient, making wholesale energy retrofitting unnecessary and even wasteful;
    - Using traditional passive measures in historical buildings as strategies to reduce energy consumption;
    - Using Life cycle assessment (LCA) methodologies for the selection of replacement materials requiring less energy to produce, and thus emitting less GHG;
    - Promoting knowledge of the appropriate use of new technologies for the rehabilitation of historical buildings for energy efficiency and to reduce GHG emissions;
    - Guarding against insensitive retrofitting and maladapted mitigation strategies that fail to understand how older buildings ‘behave’ and can degrade traditional climate-friendly features, waste materials and damage heritage values.

6. Considering national circumstances, this Policy Document recommends that States Parties adopt a carbon footprint target for World Heritage properties in connection with the World Heritage Climate Action Goals. This will allow heritage managers to assess in a scientific and robust way progress towards the decarbonisation of the heritage sector.

B. Land-use management

7. IPCC´s 1.5 °C Special Report (2018) and Climate and Land Report (2019) find that limiting global warming to 1.5°C would require rapid and far-reaching transitions in the way countries use land, specifically to minimise emissions associated with land use change.

8. Heritage properties, particularly natural properties, are among those places that can significantly contribute to climate mitigation by: (i) safeguarding the natural carbon sinks; (ii) when feasible, increasing carbon sequestration in natural systems. Such approaches should adhere to strict environmental and social safeguards and consider carbon storage permanence.

9. Considering national circumstances, this Policy Document recommends the adoption of two mitigation targets for natural World Heritage properties:

- No net loss of the natural carbon sinks present in World Heritage properties (by 2030): the earth's natural carbon sinks are also places of exceptional importance for biodiversity conservation, and are facing major threats. The carbon stored in those ecosystems is fundamental to achieve the 1.5°C Climate target and should be a priority for natural properties;
- [Panel: keep original] **[Brazil**: add**]** ~~**Low GHG e**E~~ [Panel: add] Net GHG emissions from land use change **[Brazil**: delete**]**~~are reduced to zero~~ (by 2030): IPCC states that it is one of the most important sources of GHG emissions. [Panel: keep original] **[Brazil**: delete**]**~~Consequently, tackling land use change is imperative to address Climate Change.~~

> ***Recommendation of the Panel of experts:***
>
> The Panel of experts recommends that the original text be kept since land use management is an important factor in climate change mitigation/action. The Panel also suggests that, as the proposed change made by Brazil does not represent a measurable target, the retainment of the original text will further strengthen targets. Additionally, it was suggested by the Panel of experts that the insertion of the words "*Net GHG*" be made at the beginning of the sentence to be more explicit as to the type of emissions stated.

C. Life cycle assessment

10. For the World Heritage sector, another way to assess the different types of GHG emissions is by applying Life cycle assessment (LCA). This is a tool widely used among IPCC reports to assess environmental impacts of a system by accounting for all emissions along the full value chain and over the full life cycle. LCA can investigate and compare the potential carbon footprint of products and services, by understanding the mass and energy flows throughout production, use, and disposal. These flows are then translated into environmental indicators such as greenhouse gas emissions.

11. Utilising the competencies of heritage properties management, LCA methodologies can be used to provide systematic evaluation of the carbon footprint caused throughout the life cycle of products or services from raw material extraction to waste treatment, and to scientifically assess a baseline, and possible carbon reduction targets and future heritage-management practices that support climate mitigation objectives. Where possible, properties are encouraged to conduct environmental analyses of site operations, services, events and exhibitions and identify energy-saving opportunities; to

adopt 'green' procurement (energy, waste and water), and to emphasise green products, services and business models.

D. Tourism

12. As one of the world's largest industries, tourism's carbon footprint is an expanding component of global GHG emissions, with tourism to World Heritage properties being a highly visible component.

13. At the same time, World Heritage destinations, if appropriately managed through sustainable tourism strategies, can generate positive economic and social benefits for local communities[8]. Tourism can raise visitors' understanding of different history, cultures and environments and has the potential to promote empathy with communities managing the impacts of climate change on their World Heritage properties. Tourism destinations also have the opportunity of demonstrating and publicising climate impacts and sustainability practices.

14. Among the interaction between climate change and tourism at World Heritage properties, States Parties, in collaboration with World Heritage sites managers and other stakeholders, can undertake the following actions:

- Develop and implement methodologies for monitoring and measuring the GHG emissions caused by tourism at World Heritage properties, including through Life cycle assessment, and identify carbon-saving measures (for example, energy efficient visitor infrastructure);
- Work with the tourism sector at different levels to explore options for determining accountability for carbon mitigation of the GHG emissions associated with the contributing service components of the tourism industry (for example, aviation, hospitality etc.) attributable to World Heritage tourism;
- Consider alternatives for offsetting of GHG emissions associated with tourism at World Heritage properties. It is fundamental that options considered for offsetting (for example certified carbon credits) adhere to strict social and environmental safeguards.

[8] At its 36th session (Saint-Petersburg, 2012), the World Heritage Committee adopted the "World Heritage and Sustainable Tourism Programme" (Decision **36 COM 5E**), which represents a new approach based on dialogue and stakeholder cooperation where planning for tourism and heritage management is integrated at a destination level, the natural and cultural assets are valued and protected, and appropriate tourism developed. See http://whc.unesco.org/en/tourism/

ANNEX IV - AREAS FOR FURTHER FOCUS REGARDING KNOWLEDGE SHARING, CAPACITY BUILDING AND AWARENESS

Drawn from Section I(D)(21) of the 2006 Strategy

1. The importance of education and capacity building for enhancing climate action has been recognised in the 2015 Paris Agreement (Article 12). The World Heritage Convention and its processes also consider these factors as important for the effective management and conservation of World Heritage. Indeed, strengthening of capacity building is important for dealing with effects of climate change as well as for good communication and awareness programmes.
2. The Policy Document therefore draws the attention of all actors of the World Heritage system on the crucial role of knowledge sharing, capacity building and awareness for successful climate actions (see Section II.D.4).
3. Furthermore, World Heritage Climate Action Goal 4 (see Section II.B) highlights that by 2030, States Parties should have developed and implemented activities aimed at improving education, awareness raising, and human and institutional capacity in relation to the risks and responses related to climate change impacts on World Heritage properties, including programmes designed to promote these properties as exemplars of climate action.
4. Mobilizing public and political support for climate action inside and outside World Heritage properties is essential[9]. This has to range from local to regional and global approaches and involve a variety of measures: workshops, exhibitions and expositions, media campaigns, audio-visual material and popular publications which link the global phenomenon of climate change to the local and regional contexts.

A. Global-level actions (World Heritage Convention)

5. At the global level, the Secretariat of the World Heritage Convention (the UNESCO World Heritage Centre) is encouraged to implement knowledge sharing, capacity building and awareness activities, such as:
    - Informing the UNFCCC Secretariat and its Parties of the impacts of climate change on World Heritage in order to include these into their guidelines for national communications;
    - Establishing cooperation with the IPCC Secretariat in order to:
        i) Assess the existing and potential impacts of climate change on World Heritage,
        ii) Identify opportunities to mention issues related to World Heritage in the future Assessment Reports;
    - Ensuring that capacity building activities on climate risk assessments, reporting, adaptation and mitigation strategies are coordinated with the UNESCO World Heritage Centre, the Advisory Bodies, other international organisations and secretariats of other conventions;

[9] See paragraph 11 of Decision **29 COM 7Ba** (Durban, 2005), by which the World Heritage Committee indicated that "the results about climate change affecting World Heritage properties [should] reach the public at large, in order to mobilize political support for activities against climate change and to safeguard in this way the livelihood of the poorest people of our planet."

- Overseeing the organisation of international and regional workshops to:
  - i) Share the knowledge, experience,
  - ii) Establish networking among States Parties on addressing climate change impacts on World Heritage;
- Taking advantage of the World Heritage global network, develop communication strategies to inform the public and policy makers on climate action for World Heritage properties and build public and political support to address climate change impacts;
- Promoting and sharing good practices on climate action for World Heritage properties among States Parties.

B. State Party-/Property-level actions

6. States Parties and managers of World Heritage properties are encouraged to implement knowledge sharing, capacity building and awareness activities, such as:
   - Collecting information and establish national level database on the past and existing impacts of climate change on World Heritage properties;
   - Promoting the development of risk and vulnerability maps at national level which overlay climate data and World Heritage property locations;
   - Providing information to decision-makers, stakeholders, local communities, users and managers of the properties, and other heritage specialists about the existing and potential impacts of climate change on properties, management responses, possible technical and financial assistance, existing networks and institutions from heritage and climate sectors and various capacity building activities;
   - Promoting and sharing of good practices on integrating climate action in conservation and management of World Heritage properties;
   - Encouraging managers of World Heritage properties to provide feed-back based on their experience by developing case studies on good practices and lessons learnt and share these with other managers of properties;
   - Encouraging academic institutions to share their research on existing and potential impacts of climate change including on social and demographic changes in relation to World Heritage properties. Furthermore, they should promote and encourage interdisciplinary projects and data synthesis to improve links between heritage research fields and other areas of climate science.
7. In addition, World Heritage properties can also support climate science in several ways, including by:
   - Using palaeoenvironmental climate data from heritage sites, museums and other curated collections to explore climate trends and shifting climatic baselines;
   - Collating and synthesising existing palaeoenvironmental and archaeological data (from heritage sites, museums and other curated collections) to assess past baselines and tipping points of ecological and social change;
   - Promoting better understanding of traditional knowledge in design, construction, materials and management practices in the light of climate change and assessing their effectiveness in current context as the basis for developing proposals for adapting them to cope with climate change;

- Researching and documenting current and recent traditional land management and maintenance processes, particularly related to water management techniques and community participation;
- Using archaeological data and other information from heritage places, museums and other curated collections to identify and explore past human impacts on environments over short, medium and long periods and at local, regional and global scales;
- Exploring application of past adaptation and mitigation techniques to climate and landscape change, including agriculture and animal husbandry, architecture and land-use patterns, subsistence strategies, and use of material culture.

ANNEXES OF THE PANEL OF EXPERTS' REPORT

Annex 1

Panel of experts
in relation to Decision 44 COM 7C
concerning Climate Change and World Heritage

30 March - 1 April 2022
Online meeting

CLEANED-UP VERSION OF THE UPDATED *POLICY DOCUMENT ON CLIMATE ACTION FOR WORLD HERITAGE,* AS RECOMMENDED BY THE PANEL OF EXPERTS

This Annex, provided for ease of use, presents is a cleaned-up version of the *Policy Document on Climate Action* for World Heritage, as recommended by the Panel of experts and presented in Section III above of this Report.

Paragraphs which include specific recommendations by the Panel of experts are flagged with the following sign:

Key:

Paragraphs for which the Panel of experts established in conformity with Decision **44 COM 7C** of the World Heritage Committee has made specific recommendations not to retain the amendments proposed by Committee members or has suggested new wordings.

Table of Contents

I. PREAMBLE

A. Overview

1. Climate change has become one of the most significant threats to World Heritage, impacting the Outstanding Universal Values (OUV), including integrity and authenticity, of many properties, as well as the economic and social development and quality of life of communities connected with World Heritage properties.

2.  The issue of the impacts of climate change on World Heritage was brought to the attention of the World Heritage Committee in 2005 by a group of concerned organisations and individuals. Subsequently, UNESCO has been at the forefront of exploring and managing the impacts of climate change on World Heritage. In 2006, under the guidance of the World Heritage Committee, and along with the Advisory Bodies (ICCROM, ICOMOS, IUCN) to the World Heritage Committee and a broad working group of experts, a report on 'Predicting and Managing the effects of Climate Change on World Heritage' as well as a 'Strategy to Assist States Parties to the *Convention* to Implement Appropriate Management Responses' was prepared by the UNESCO World Heritage Centre. This was followed by a compilation of case studies on climate change and World Heritage, prepared by UNESCO. This process led to the adoption in 2007 by the General Assembly of States Parties to the 1972 Convention concerning the protection of the World Cultural and Natural Heritage (hereinafter called the World Heritage Convention or the Convention) of a Policy Document on the impacts of Climate Change on World Heritage properties thereinafter called the 2007 Policy Document).

3.  Since the adoption of the 2007 Policy Document, science has continued to provide evidence of the magnitude of this threat, its causes and consequences. Unprecedented atmospheric concentrations of greenhouse gases (GHG), resulting from human activities, particularly the burning of fossil fuels, but also deforestation and other forms of land use change, unsustainable use of natural resources, which in combination are estimated to have caused an increase in global warming by one (1) degree Celsius (°C) above pre-industrial times. This warming has caused and continues to cause long-term changes in the climate system with resulting changes in the dynamics of rain patterns, sea level rise, ocean warming and acidification; and also increased the risk of extreme events such as hurricanes, storms, bushfires, floods, and droughts. According to the Intergovernmental Panel on Climate Change (IPCC), "*some impacts may be long-lasting or irreversible*."[10]

4. World Heritage is immersed in unprecedented global change: a rapidly changing climate and the progressive loss of global biodiversity are examples of the most prominent indicators of how rapidly humans are negatively transforming the planet. Climate change accelerates the destruction of ecosystems, while the loss and unsustainable use of nature are in turn, key drivers of climate change.

5. By representing some of the world's most outstanding natural ecosystems, natural World Heritage properties also serve as natural buffers against climate impacts and other disasters, providing space for floodwaters to disperse, stabilizing soil against landslides

[10] IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of Climate Change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press. [hereinafter, the 'IPCC Report'].

and blocking storm surges. They further contribute to healthy, resilient ecosystems that might withstand impacts of climate change and continue to provide the food, clean water, shelter and income communities rely upon for survival.

6. Cultural World Heritage properties represented by cultural landscapes, historic cities, archaeological sites and vernacular architecture also demonstrate various locally developed strategies for mitigation against climate change through energy efficient built form and sustainable use of local resources. Climate change may also affect Indigenous Peoples' and local communities' cultural heritage, landscapes and traditional practices due to changes in the distribution of flora and fauna. Loss of livelihoods of communities living in and around the sites may also impact their livelihood, knowledge systems and their capacity to maintain the site. In addition, local knowledge and wisdom and traditional practice represent different knowledge system that are key source of information to inform mitigation and adaptation options needed to prepare communities for future climate risks.

7. Our understanding of the impacts of climate change increased considerably since 2007, and so has knowledge related to climate adaptation and mitigation measures. As the globe continues to warm, the IPCC has projected that the impacts of climate change on biodiversity, ecosystems and a variety of human systems would be lower at 1.5°C of global warming compared to those at 2°C. The report highlights the need for a low GHG emission and climate resilient development pathways that will strengthen sustainable development and also poverty eradication, while addressing the threat of climate change through ambitious mitigation and adaptation. Analyses by the IPCC indicate that limiting global warming to 1.5°C (with no or limited overshoot) would require rapid and far-reaching transitions in energy, land use, urban areas, infrastructure (including transport and buildings) and industrial systems.

8. This fair and equitable transition needed is unprecedented in breadth and scale, and requires significant greenhouse gas emissions reductions in all sectors, including manufacturing, transport, tourism, construction and infrastructure development, forestry, health, water management, and agriculture; a wide portfolio of mitigation and adaptation options; as well as a significant upscaling of investments in those options. Taken together, they invite a programme of climate action designed to bring about 'transformative change' [11] . In the context of the World Heritage Convention, transformative change would be exemplified by decisions that contribute towards making World Heritage properties carbon neutral, as much as possible, and more resilient and better adapted to a changing climate, while safeguarding their Outstanding Universal Value. By acting as exemplars of climate action, World Heritage properties may serve as catalysts for change in the wider policy, economic, environment and social sectors for the benefit of present and future generations. World Heritage properties can embrace transformative change to become demonstration cases of the change the world needs.

9. World Heritage properties are part of physical and social processes and are strongly connected to surrounding areas, ecosystems, communities and societies. They are not isolated areas, their safeguard depends on the support of communities. For World Heritage stakeholders, it is therefore fundamental to increase the awareness of connectivity of climate change and interactions between decision makers, communities, and natural and cultural heritage to support transformative change. In the context of this Policy Document, transformative change should integrate cross-sectoral thinking and

[11] Defined by the IPCC as a system-wide change that requires more than technological change through consideration of social and economic factors that, with technology, can bring about rapid change in the fundamental attributes of natural and human systems at scale.

approaches that account for direct, indirect, and cumulative impacts on World Heritage properties, and offer opportunities to reconcile multiple interests.

10.  Since the adoption of the 2007 Policy Document, an important number of reports on the state of conservation of World Heritage properties affected by climate change have been presented to the World Heritage Committee. Following the adoption of the 2030 UN Agenda for Sustainable Development, in 2015, outlining 17 Sustainable Development Goals (SDGs), the World Heritage Committee in the same year adopted the 'Policy for the Integration of a Sustainable Development Perspective into the Processes of the *World Heritage Convention*' (the '2015 Sustainable Development Policy') with a view of ensuring policy coherence between the Convention and the SDGs. The 2015 Sustainable Development Policy expressly recognises the linkages between climate change and sustainable development, noting that "*[i]n the face of increasing disaster risks and the impact of climate change, States Parties should recognise that World Heritage represents both an asset to be protected and a resource to strengthen the ability of communities and their properties to resist, absorb, and recover*". In addressing climate governance challenges that are common to many sectors and policy domains and creating conditions for implementing transformative change, World Heritage can also contribute to the implementation of the SDGs in line with the 2015 Sustainable Development Policy.

11.  In 2017, the World Heritage Committee stated that "*the growing evidence of climate impacts across World Heritage properties confirm that urgent and rapid action to reduce global warming is essential and the highest degree of ambition and leadership by all countries is needed to secure the full implementation of the 2015 Paris Agreement adopted under the United Nations Framework Convention on Climate Change (UNFCCC).*" The Paris Agreement adopted under the UNFCCC, aims to strengthen the global response to climate change in the context of sustainable development and efforts to eradicate poverty and reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. Countries have committed to climate action through their successive Nationally Determined Contributions. International action on climate change must be consistent with the Paris Agreement, including its principles, and responding to national climate policies and priorities for Parties to that Agreement.

12. The Paris Agreement noted the importance of ensuring the integrity of all ecosystems and the protection of biodiversity when taking action to address climate change (Preamble). Future scientific understanding led by the IPCC and IPBES (the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) has deepened knowledge on the role of nature, including natural heritage sites, in climate mitigation and adaptation. Cultural World Heritage properties similarly may embody both past carbon investments and also traditional practices, knowledge, and experience handed down through time that must be part of the solution to climate change[12].

13.  Considering their stature and visibility, there is an enormous benefit to World Heritage properties sharing their experiences, tools, methodologies and approaches more broadly. For example, World Heritage properties can play an exemplary role in

[12] The ICOMOS Report "The Future of Our Pasts: Engaging Cultural Heritage in Climate Action" (2019) identifies a variety of traditional practices with relevance to contemporary greenhouse gas mitigation strategies including the inherently sustainable, passive features of traditional architecture (e.g. eaves, verandas, shutters, shading devices); traditional urban land-use patterns (dense, walkable, mixed-use space); and the knowledge embedded in low carbon agricultural heritage systems. Many traditional cultural systems also epitomize circular economy models that emphasize stewardship, reuse and resource efficiency.

implementing integrated approaches that link both cultural and natural heritage in climate action and demonstrate how transformative change can help in strengthening resilience and achieving sustainable development. A two-pronged approach is therefore needed, recognising that World Heritage properties represent both an asset to be protected from climate impacts and a resource to strengthen the ability of communities to pursue transformative change. In any case, Outstanding Universal Value must be safeguarded, and climate action must be pursued.

14. Ultimately, World Heritage properties cannot be safeguarded from climate change in isolation because climate change is a global problem. However, many properties have already demonstrated how management systems that engage with local communities can strengthen natural, cultural and social resilience and offer sustainable futures. In order to better respond to climate change, these approaches should be expanded to ensure that all properties are linked to their wider settings and efforts are linked to wider national and international efforts to combat climate change, while protecting Outstanding Universal Value. Approaches and communities especially those living in or around the properties must be brought together through integrated, inclusive, informed and adaptive governance that will facilitate the transformative change needed for addressing climate change.

15. Over and above all of this, collective action is needed, as envisaged in the Convention, which sees the international community as a whole participating in the protection of the cultural and natural heritage of Outstanding Universal Value, by the granting of collective assistance as an efficient complement to the actions of States Parties. In the face of climate change, this responsibility must be called upon in support, in the form of finance, technology, and capacity-building, to enable necessary transformative change needed to protect the Outstanding Universal Value of World Heritage properties.

B. Purpose and Scope

16. The purpose of this Policy Document is to provide high-level guidance on enhancing the protection and conservation of heritage of Outstanding Universal Value through comprehensive adoption of climate action measures, including climate adaptation, mitigation, resilience building, innovation and research, and in so doing, to create coherence with, and take advantage of synergies between, the objectives and processes of the World Heritage Convention and those of the UNFCCC Paris Agreement and related multilateral agreements, processes and instruments, including but not limited to the 2030 Agenda for Sustainable Development, the 2015 Sendai Framework on Disaster Risk Reduction, the 2016 New Urban Agenda, the Small Island Developing States Accelerated Modalities of Action ("Samoa Pathway") and the Post-2020 Global Biodiversity Framework.

17. The Policy Document provides an outcome-oriented policy framework for the development of goals and targets at national and heritage site levels, updating of national heritage management tools and action plans, and facilitating regular monitoring of the implementation and subsequent review of this Policy Document.

18. This Policy Document aims to galvanise urgent action in support of transformative change by States Parties to the Convention, which can reflect its aims in their own national policies that guide the implementation of the Convention at the World Heritage property level. While this Policy Document is aimed primarily at States Parties to the Convention and managers of World Heritage properties, the implementation of its provisions will often require the contribution and support of the UNESCO World Heritage Centre, the Advisory Bodies and other relevant bodies.

19. The Policy Document is also intended to be of relevance to all stakeholders and rights holders, including Indigenous Peoples and local communities, civil society, and the private sector. Moreover, while the Policy Document is specifically aimed at World Heritage properties, its principles are relevant to cultural and natural heritage in general, in the spirit of Article 5 of the World Heritage Convention.

20. The Policy Document is intended to be embedded in the existing processes of the World Heritage Convention and does not impose any new legal obligations on States Parties. It is intended to operate within the mandate of the World Heritage Convention and does not aim to duplicate the mandate of any other multilateral agreements, processes and instruments.

C. Guiding Principles

21.  **Adopt a precautionary approach aimed at minimising the risks associated with climate change.** The risks associated with climate change depend, among other factors, on the magnitude and rate of warming, geographic location, levels of adaptive capacity that all together determine specific conditions of climate vulnerability. Moreover, for many natural and cultural systems, adaptation in the face of these risks is expected to be more challenging at 2°C of global warming than at 1.5°C, especially in developing countries. In view of this, the implementation by all States Parties of a precautionary approach that pursues pathways limiting the global average temperature increase to 1.5°C with no or limited overshoot, consistent with commitments to implement the Paris Agreement, is the most effective approach for the protection, conservation and management of the cultural and natural heritage. Uncertainty (i.e., lack of scientific certainty) should not be used as a reason for not implementing such a precautionary approach to address the causes and minimise the risks associated with climate change.

22.  **Anticipate, avoid and minimise harm to protect the heritage of Outstanding Universal Value.** Considering that climate change threatens both World Heritage properties and the future well-being of people through harmful and negative consequences, some of which are potentially irreversible, States Parties to the Convention and all World Heritage stakeholders and rights holders are urged to take appropriate measures, within their powers, to anticipate, avoid and minimise harm, consistent with their obligations under the World Heritage Convention to protect the world's natural and cultural heritage considered to be of Outstanding Universal Value.

23. **Use best available knowledge, generated through disciplinary, interdisciplinary and transdisciplinary processes, including from scientists, researchers, site managers, Indigenous Peoples and local communities.** Proposed actions should be based on, and guided by, the best available disciplinary, interdisciplinary and transdisciplinary knowledge, that is developed by researchers, practitioners and Indigenous Peoples and local communities, working together to address climate change as a persistent problem. The heritage management decision-making process should be informed by this 'best available knowledge' approach and the different types of knowledge generated. They also should meet the highest standards of research integrity and be rigorous and transparent in their analysis of the climate risks including estimates of uncertainty, and undertake rigorous impact assessments on potential threats to Outstanding Universal Value to provide decision-makers with insight into, and understanding of, the underlying risks as well as opportunities, and guidance for the formulation of long-term strategies.

24.  **Integrate a Sustainable Development perspective.** Actions taken by States Parties to address climate change impacts can also contribute to the implementation of

the Sustainable Development Goals (SDGs), in line with the 2015 Sustainable Development Policy through adoption of mutually reinforcing, inclusive and adaptive approaches. Those approaches can help to reflect a wider range of heritage values and knowledge systems beyond Outstanding Universal Value, and support equity, including through equitable sharing of heritage-benefits arising from their use and rights-based approaches. Adaptive approaches, including learning from heritage experience, monitoring and feedback loops, contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change.

25. **Promote global partnership, inclusion and solidarity, emphasizing common but differentiated responsibilities and that developed countries provide necessary financial and technical support to developing countries.** In addressing climate change impacts on World Heritage properties, and particularly in the implementation of this Policy Document, relevant stakeholders and rights holders at all levels should work together in a spirit of global partnership, inclusion, and in solidarity with the poorest and most vulnerable people, who are in the front lines of climate change impacts. Climate change does not stop at borders. It conjoins the safeguarding of World Heritage properties with larger sustainability challenges, spatial, social, economic and cultural ones in the surroundings of the properties. Solutions for the safeguarding of the properties can only be found if they are connected to spatial, social and cultural transformations beyond the site. Strategies need to be developed that provide solutions for sustainable development beyond the borders of the World Heritage property.

II. THE POLICY FRAMEWORK

A. Long-Term Vision

26. The vision of the Policy Document is that each State Party understands the current and future potential impacts of climate change on the Outstanding Universal Value of the World Heritage properties situated on their territory, and undertakes climate action in an effective, ambitious, cooperative and active way. This is undertaken consistent with States Parties' obligations under the World Heritage Convention to ensure the protection, conservation and management of their cultural and natural heritage to the utmost of its own capacities and resources and, where appropriate, with international assistance and co-operation.

B. World Heritage Climate Action Goals

27. The Policy Document establishes the following set of World Heritage Climate Action Goals towards 2030, to guide how World Heritage processes can effectively contribute to the transformative change needed to halt and reverse the negative trends associated with climate change causes and effects, through enhanced and improved collaboration, and effective and synergistic implementation of local, national and international climate policy instruments. While the goals are targeted primarily at States Parties to the Convention, they require the contribution and support of the World Heritage Committee, Advisory Bodies, site managers and civil society. These goals should be viewed in light of national circumstances.

- **Goal 1 (Climate risk assessment):** By 2030, States Parties should develop and share tools and build capacity needed to assess climate risks and identify potential reversible or irreversible damage to attributes carrying the Outstanding Universal Value associated with current and projected impacts of climate hazards, and to

report the resulting climate risks assessments through World Heritage processes such as Periodic Reporting and state of conservation reports (see Section D.1 below);

 **Goal 2 (Climate Adaptation):** By 2030, States Parties should establish and develop at the international, national and/or other levels, and implement at the site level, as appropriate, robust climate adaptation frameworks for their cultural and natural heritage that can demonstrate measurable progress on monitoring of climate hazards, assessing and reducing climate risks and vulnerabilities, and in doing so enhancing adaptive capacity and building climate resilience for all World Heritage properties (see Section D.2 below);

-  **Goal 3 (Climate Mitigation):** By 2030, States Parties, in accordance with nationally determined contributions, and in line with principles established under the UNFCCC and the Paris Agreement, should develop and implement at international, national and/or other appropriate levels, comprehensive climate mitigation frameworks that strengthen the capacity for mitigation action of their cultural, natural and mixed properties and encourage the reduction of net greenhouse gas emissions associated with World Heritage properties, including, where appropriate, actions to safeguard natural ecosystems that are carbon sinks (see Section D.3 below);
- **Goal 4 (Knowledge sharing, capacity building and awareness):** By 2030, States Parties should have developed and implemented activities aimed at improving education, awareness raising, and human and institutional capacity in relation to the risks and responses related to climate change impacts on World Heritage properties, including programmes of knowledge-sharing and those designed to promote these properties as exemplars of climate action (see Section D.4 below).

C. Legal framework

28. The World Heritage Convention and the Operational Guidelines for its implementation provide the legal and administrative framework respectively within which this Policy Document is to be applied. Key duties and obligations of States Parties under the Convention are set out in Articles 4, 5 and 6.

29. Article 4 establishes the basis for States Parties to do all that they can to ensure the conservation, protection, presentation and transmission to future generations of World Heritage properties situated on their territories.

30. Climate change is recognised among the most significant threats to World Heritage properties and is growing. As per Article 5(d), to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party to the Convention shall endeavour, in so far as possible, and as appropriate for each country, to "*take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage"*.

31. Under Article 6(1), "…*the States Parties to this Convention recognise that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate*". Under Article 6(3), States Parties undertake "*not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage on the territory of other States Parties*". Article 7 enables

establishment of a system of international co-operation and assistance designed to support States Parties in their efforts to conserve heritage.

32.  While the enumeration of "*serious and specific dangers*" under Article 11 (4) of the Convention concerning the inclusion of properties on the List of World Heritage in Danger does not specifically refer to climate change (which was not under the same scrutiny in the early 1970s as it is now), the provision is clearly sufficiently broad to include the impacts of climate change as a serious and specific danger to properties.

33. The Operational Guidelines, in paragraphs 179 and 180, set out the criteria for placing cultural and natural properties on the List of World Heritage in Danger for both ascertained and potential dangers. Currently, only Paragraph 179 (b) and Paragraph 180 (b) refer to "*threatening impacts of climatic, geological or other environmental factors*" as a potential danger. Paragraph 181 provides that the "*factor or factors which are threatening the integrity of the property must be those which are amenable to correction by human action*".

34. It is also recommended that climate change be considered in the nomination of properties for inscription on the World Heritage List. Each nominated property should have a management plan or other documented management system (Paragraph 108 of the Operational Guidelines). The nomination dossier (Paragraph 132(4)) should address the state of conservation and a description of the factors affecting the property, including threats. The format for the nomination of properties is included in Annex 5 of the Operational Guidelines and refers to "*environmental pressures*" as factors affecting the property and lists, as an example, climate change (Section 4a(ii) of the format).

35. Current management and protection requirements (paragraphs 111, 118, 118bis) address climate change impacts and identify the assessment of vulnerabilities of the nominated site to actual and potential social, economic, environmental and other pressures and changes, including climate change, as a common element any effective management system could include. Impact assessments must also be carried out as a pre-requisite for adaptation and mitigation responses within or around a World Heritage property to ensure that the Outstanding Universal Value is not negatively impacted.

36.  This Policy Document foresees that over the coming decade and beyond, climate change will negatively impact the Outstanding Universal Value of World Heritage properties and also the potential Outstanding Universal Value of many places proposed for inscription on the World Heritage List. This will call for ongoing dialogue inclusive of States Parties, the UNESCO World Heritage Centre, the Advisory Bodies, and civil society, to address significant legal and interpretative questions raised by climate change with respect to the Convention, based on the line of questioning first proposed in Annex 2 of the 2007 Policy Document, as follows:

- Whether a property should be inscribed on the World Heritage List while knowing that its potential Outstanding Universal Value may disappear due to climate change impacts;
- Whether a property should be inscribed on the List of World Heritage in Danger or deleted from the World Heritage List due to impacts beyond the sole control of the concerned State Party (i.e., threats and/or the detrimental impacts on the integrity of World Heritage properties associated with the global impacts of warming from anthropogenic GHG emissions);
- The reality that for some natural and cultural properties, it will be impossible to maintain the "original" Outstanding Universal Value for which they were originally inscribed on the World Heritage List, even if effective adaptation and mitigation

strategies are applied, and this may require an "evolving" assessment of Outstanding Universal Value.

D. Climate action

37. Climate actions include *inter alia* responses within the framework of the World Heritage Convention to the threat of climate change, based on the most recent scientific and political developments. Key categories of climate action with respect to World Heritage properties are: (i) Assessing climate change risks (ii) Climate change adaptation (iii) Climate change mitigation and (iv) Knowledge sharing, capacity building and awareness. These responses take advantage of better coordination and effective implementation of the local, subnational, national and international developments since the adoption of the Paris Agreement.

38.  Latest scientific findings, especially those documented in IPCC reports, indicate that both mitigation and adaptation options are specific to national contexts, and if carefully selected together with enabling conditions can be mutually reinforcing. However, mitigation and adaptation can also have adverse impacts on Outstanding Universal Value, if these are poorly designed or implemented. Even with best efforts, real and perceived tensions may develop between proposed climate action pathways and the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of World Heritage properties, including the conditions of integrity and/or authenticity at the time of inscription.

39. Climate-related risks to World Heritage properties depend on the rate, peak and duration of global warming. Risks are generally higher for warming of 1.5°C above pre-industrial levels than at present, but lower than at 2°C. Adaptation is correspondingly expected to be more challenging for some World Heritage properties at 2°C of global warming than for 1.5°C, especially in developing countries. This underscores the importance of considering both adaptation and mitigation approaches. In addition, adaptation options that also mitigate GHG emissions can provide synergies and cost savings.

D.1 Assessing climate change risks to World Heritage properties

40. Improving capacity to assess climate change risks is the objective of World Heritage Climate Action Goal 1 (see Section II.B. above). This goal asks States Parties, in light of the national circumstances, to develop, by 2030, tools and build capacity needed to identify potential reversible or irreversible loss of attributes of Outstanding Universal Value associated with current and projected climate hazards including those that may exceed the adaptive capacity of relevant human or natural systems. Climate risk assessments are crucial for understanding and anticipating negative impacts and potential loss of Outstanding Universal Value and provide critical information to help determine how to manage them. It also asks States Parties to report the results thereof through World Heritage processes.

41. To design effective climate actions, including mitigation and adaptation strategies, the heritage community needs to have a good understanding of the climate risks involved. Correspondingly, there is a need for methodologies and mechanisms to systematically assess such risks. These methodologies should promote improved measurability of impacts and potential loss of heritage values and improved understanding of the economic, social, health, education, and environmental cost of such losses (including effects on ecosystem and cultural services). Defining or clarifying risks to Outstanding Universal Value and other measurable, non-monetary values that support a given World Heritage property can also aid in determining the adaptation limits of that resource or system, including the acceptability or non-acceptability of levels of change and consequent perceptions of loss and irreplaceability. Although climate actions will often

result in adjustments that are within a given heritage system's adaptive limits, completely preventing all projected impacts of climate change on every World Heritage property will not be possible with the result being damage to or loss of attributes of Outstanding Universal Value.

42. There exists a range of approaches and instruments to undertake risk assessments associated with the impacts of climate change. The challenge is to identify the more appropriate methodologies, not only to the type of hazard but also to the social, environmental, economic, geographical, landscape and institutional context of the properties for which the Outstanding Universal Value may be at risk of being irretrievably damaged or lost. Special consideration should also be included for populations at disproportionately higher risk of adverse consequences, for example disadvantaged and vulnerable populations, Indigenous Peoples, and local communities.

43. Managers of World Heritage properties require a clear understanding of the climate risks to which their properties are vulnerable, the capacity needed to prepare for and respond to those risks, and the residual risks afterwards. Within this context, the Policy Document encourages States Parties to the Convention to aim to integrate climate risk management for World Heritage properties within wider national approaches and frameworks for climate adaptation. As noted in this Policy Document, further dialogue is needed on how the impacts of climate change on Outstanding Universal Value are dealt with by the World Heritage system.

44. Sharing experiences of methods and results to assess climate hazards, vulnerabilities and risks across World Heritage properties can also help to build adaptive capacity and resilience. Cross-property actions such as promoting the development of climate risk assessment tools for regions, ecosystems or heritage typologies is encouraged. Transboundary and transnational properties also present an important case where shared responses to common climate risks should be encouraged.

45. This Policy Document encourages the UNESCO World Heritage Centre, in collaboration with the Advisory Bodies, to find ways to integrate climate risk management mechanisms, including assessment and monitoring of climate hazards and the factors that cause or exacerbate them, into existing World Heritage processes. Mechanisms could include, but not limited to, making the consideration of climate change a requirement in the nomination process, Periodic Reporting, Reactive Monitoring, protective measures, and management systems, including management plans. Climate change considerations should similarly be incorporated into related World Heritage doctrines, policies and resource manuals. New tools might be needed to assess climate change impact on the state of conservation of World Heritage properties, as well as to identify factors that can become threats and that could ultimately impact on the Outstanding Universal Value of properties.

46. Further technical considerations in developing a climate risk management assessment and management strategies are presented in Annex II of this Policy Document.

D.2 Climate change Adaptation

47. World Heritage Climate Action Goal 2 (see Section II.B above) refers to the necessary climate change adaptation actions to avoid and minimise climate impacts on heritage values, consistent with the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of properties. According to IPCC, "*in human systems, climate adaptation is the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, it is the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects*".

48. Climate change adaptation should relate to all hazards that are directly and indirectly attributed to climate change, exposure of various components of the World Heritage properties to these hazards and related vulnerability factors (physical, social, economic, institutional, etc.) This reflects not only the importance of addressing all components of climate risks (hazards, exposure, vulnerability), but also makes clear that climate change adaptation cannot be seen in isolation from other risk factors.

49.  Climate change is a risk multiplier that can exacerbate current hazards, exposures and vulnerabilities including poverty, urbanisation, pollution, and insecurity, with potential implications for social conflict. World Heritage properties may also be impacted by improper adaptation or mitigation responses to climate change (i.e., maladaptation).

50. Climate change may have positive impacts on the Outstanding Universal Value of some World Heritage properties. Therefore, climate change adaptation strategies should consider whether there are opportunities to exploit these positive impacts, while also reducing the risks of the negative impacts of climate change. A lost opportunity may be as harmful as a negative impact.

51. The importance of addressing non-climate threats and pressures, in particular to natural and mixed World Heritage properties, is emphasised because doing so effectively can help build their resilience to climate change and improve their adaptive capacity. In circumstances where the impacts of climate are intensifying and increasing in frequency, action on other pressures will become increasingly important to sustaining the resilience of World Heritage properties and protecting their Outstanding Universal Value.

52. The impacts of climate change can also exacerbate the many drivers of human mobility (migration, planned relocation and displacement). Communities associated with some World Heritage properties are already experiencing climate change impacts that could ultimately induce migration and/or displacement of people and impact Outstanding Universal Value, particularly for those properties for which Outstanding Universal Value depends on cultural continuity. This Policy Document emphasises that adequate support be given to States Parties who face not only the potential loss of World Heritage properties, but the displacement of communities associated with them. Clear guidance needs to be developed on how such eventualities will be considered and evaluated by the World Heritage Committee and on how implementation strategies might be framed. A useful starting point would be to create methodologies for identifying World Heritage properties associated with communities at greater risk for displacement.

53. The Policy Document also recognises that adaptation is a global challenge faced at local, subnational, national, regional and international levels. World Heritage properties can support wider adaptation efforts at all levels. World Heritage properties and the values they embody have the potential to contribute to social resilience and the recovery from climate change losses by providing a common framework for identifying potential loss and by supporting a sense of place, continuity and identity. World Heritage properties can also serve an educational and communication function by highlighting the links between nature and culture, and the sustainability of many historic, traditional and indigenous practices. Heritage values can support social cohesion, which is an important element of adaptive capacity, which in turn can be fostered through participatory approaches to heritage management.

54. In Article 7.5 of the Paris Agreement, its Parties acknowledge that adaptation action should follow “a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate”. World Heritage properties should seek to

exemplify this approach. The importance of Indigenous Peoples' and local communities' knowledge for understanding impacts and designing and implementing appropriate adaptation actions should be valued and appropriately utilised via a participatory process characterised by respect for the diversity of cultural expressions[13]. The use of traditional practices in climate adaptation should be supported by practical training for local experts and communities in order to support dynamism, internal creativity and experimentation in such knowledge systems.

55.  This Policy Document acknowledges that adaptation actions at World Heritage properties should also contribute towards increasing the resilience of indigenous peoples and local communities.

56. World Heritage processes need to be strengthened to support the expected climate adaptation outcomes. Areas for further focus on this topic to World Heritage properties and World Heritage Climate Action Goal 2 are set out in Annex II to the Policy Document.

D.3 Climate change Mitigation

57. Aligning the management of World Heritage properties with the imperative of climate change mitigation through a comprehensive climate change mitigation framework is the objective of World Heritage Climate Action Goal 3 (see Section II.B above). This goal asks States Parties to implement at national and/or other appropriate levels, comprehensive climate change mitigation frameworks that guide mitigation action for cultural sites and safeguard natural ecosystems that are carbon sinks. It also encourages the reduction of greenhouse gas emissions associated with World Heritage properties.

58. The IPCC defines mitigation as "*a human intervention to reduce emissions or enhance the sinks of greenhouse gases.*"[14]. IPCC´s reports, and most notably the 1.5°C Special Report (2018), makes clear that limiting global warming to 1.5°C would require rapid and far-reaching transitions in the global economy, with deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options. Within this context, this Policy Document encourages States Parties to the Convention to aim for a transition towards low-carbon alternatives for World Heritage properties management as soon as possible, in accordance with the equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

59. Given the high profile, global reach, and a broad mix of heritage typologies included within the World Heritage List, States Parties are encouraged to maximise the 'signalling' value and inspirational power of World Heritage properties to showcase 'win-win' mitigation practices that both reduce greenhouse gases and safeguard Outstanding Universal Value, with the potential to set international standards in heritage management.

60. Noting that by representing some of the world´s most outstanding natural ecosystems and by their important role in the mitigation of climate change with the large amount of

[13] See https://unfccc.int/LCIPP-FWG for more details on the UNFCCC's Facilitative Working Group of the Local Communities and Indigenous Peoples Platform

[14] The word 'mitigation' is used in this Policy Document in the technical sense in which it is used by the IPCC: "*a human intervention to reduce emissions or enhance the sinks of greenhouse gases*." This is essentially the same sense in which the word was used in the 2007 Policy Document ("*Mitigation: an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases* (IPCC)"). Users of this Policy Document should not confuse this usage with the sense in which the word 'mitigation' is used in the heritage context (namely, measures to avoid, prevent, reduce or offset negative effects on Outstanding Universal Value or other values).

carbon they store, the protection of natural World Heritage properties is considered the Convention's most impactful contribution to addressing climate change mitigation.

61. World Heritage properties, especially natural, mixed and large-scale cultural landscapes, are among those places that might significantly contribute to climate mitigation by:

- Safeguarding natural ecosystems that are carbon sinks;
- When feasible and consistent with protecting Outstanding Universal Value, undertaking actions to enhance carbon sequestration in natural systems.

Such approaches would need to adhere to strict environmental and social safeguards and consider carbon storage permanence.

62. In the context of cultural and mixed properties, and especially for cultural landscapes, mitigation actions based on enhanced land use management, should avoid and minimise impact on heritage values including customary land management practices, consider the concomitant impact on the livelihoods of Indigenous Peoples and local communities, and be consistent with the States Parties' obligations under the Convention to preserve the Outstanding Universal Value.

63. Among the options to consider are:

- Use of traditional passive measures in historical buildings as strategies to reduce energy consumption;
- Use of the Life cycle assessment (LCA) methodology for the selection of replacement materials requiring less energy to produce, and thus emitting less GHG;
- Promoting the critical role of routine maintenance and good conservation in reducing operational GHG.

64. Annex III to this Policy Document frames some key areas for additional focus of GHG emissions reduction efforts in the context of management of World Heritage properties, including: (a) Built environment; (b) Land use management; (c) Life cycle assessment; (d) Tourism management.

D.4 Knowledge Sharing, Capacity Building and Awareness

65. The 2015 Paris Agreement recognises the importance of education and capacity building for enhancing climate action. The World Heritage Convention and its processes also consider these factors as important for the effective management and conservation of World Heritage In addition, the evolution of the Paris Agreement implementation mechanisms is aiming to enact common and enhanced provisions while differentiating between developed and developing countries, especially for those who are particularly vulnerable to the adverse effects of climate change, such as small island developing States, and greater implementation-related capacity-building for developing countries through viable commitments from developed countries in terms of technology transfer and financing.

66. In line with World Heritage Climate Action Goal 4 (see Section II.B above), States Parties are encouraged to build capacities of decision-makers, stakeholders, local communities, users and managers of the World Heritage properties, and other heritage specialists to upgrade their skills and knowledge about the impacts of climate change on properties, including the intrinsic link between nature loss and climate change, developing and implementing appropriate climate actions, possible sources of technical and financial assistance, and engaging with climate change-related networks.

67. The vast majority of the climate-related issues that World Heritage properties are facing are persistent problems. Therefore, World Heritage needs interdisciplinary and transdisciplinary knowledge, that is created by researchers, practitioners, site managers and local communities and Indigenous Peoples, working together to address climate change that will influence heritage management for the decades to come.

68. In line with references to training and awareness-raising set out in the World Heritage Convention and the UNFCCC, national educational strategies should adequately address the intersections between heritage, in general, and World Heritage in particular, and climate change. Such approaches benefit from emphasising the importance of knowledge exchange across a wide range of stakeholders and rights holders including those from heritage management and climate science, encouraging research, recognising existing ways of learning about climate change, while encouraging the intergenerational exchange of knowledge.

69. States Parties and managers of World Heritage properties are encouraged to share with other managers their experience on dealing with climate change impacts on their properties by developing case studies on challenges and good practices and the lessons learnt. World Heritage properties should also be used, wherever appropriate and possible, as means to raise awareness about the impacts of climate change on heritage and should act as a catalyst in the international debate to obtain support for policies, and to communicate good practices of climate action.

70. Mobilising public and political support for climate action inside and outside World Heritage properties is essential. This can be achieved through workshops, exhibitions and expositions, site interpretation, media campaigns, audio-visual material and publications which link the impacts of the global phenomenon of climate change to national, local and property levels. This would require the development of tools to communicate effectively the impacts of climate change and implications of actions on World Heritage properties to various audiences, including civil society, with subsequent benefits for research, decision-making, planning and management.

71. World Heritage properties can serve as living laboratories, or platforms for knowledge and research, for monitoring change, linking policy and practice and fostering understanding of climate change and of the need for climate action. World Heritage properties should take advantage of the diverse fields of heritage research both in sciences and humanities, and World Heritage properties should be monitored to advance understanding of short-term and long-term environmental and global change on properties. This could include using science, traditional/indigenous and local knowledge (with free, prior and informed consent as appropriate) and the history of World Heritage properties to track past human interactions and their effects on environments, and to assess climatic, environmental and social baselines from where contemporary climate and society are shifting.

72. Areas for further focus regarding knowledge sharing, capacity building and awareness are set out in Annex IV to the Policy Document.

D.5 Transformative change

73. This transformative change section of the Policy Document highlights and synthetises the elements associated with the urgency and scale of action required by the World Heritage Convention to support bold decisions to transition to a carbon neutral and resilient world that can sustain World Heritage properties for future generations.

74. World Heritage is immersed in an unprecedented global change: a rapidly changing climate and the progressive loss of global biodiversity are perhaps the most prominent indicators of how rapidly humans are negatively transforming the planet. The majority of direct drivers of those changes share common causes in that they are underpinned by

societal values and behaviours that induce unsustainable production and consumption patterns.

75. Global initiatives, most notably led by IPCC and IPBES, are indicating the need for urgent and concerted efforts for a "fundamental, system-wide reorganisation across technological, economic and social factors, including paradigms, goals and values", that ultimately lead to a "*transformative change*" to address both nature loss and climate change. Both IPCC and IPBES indicate that except in scenarios that include transformative change, negative trends in climate and nature are projected to continue to 2050 and beyond.

76. In the short term (before 2030), all heritage decision-makers could contribute to that transformative change, through enhanced and improved implementation and enforcement of effective national and local climate policy. Additional measures are necessary to enable transformative change in the long term (by mid-century) to contribute to addressing the indirect drivers that are the root causes of climate change, including changes in social, economic and technological structures within and across nations.

77. In the context of climate adaptation, transformative change for limiting the risks from global warming of 1.5°C implies system transitions that can be enabled by an increase of adaptation investments, policy instruments, the acceleration of technological innovation and behaviour changes. For example, World Heritage can be safeguarded through enhanced international cooperation and linked locally relevant measures. The review and renewal of agreed climate-related international goals and targets based on the best available scientific knowledge and the widespread adoption and funding of transformative and resilient heritage management plans, are key to this safeguarding.

78. Another aspect of transformative change in the heritage sector, are the pathways undertaken by each country for limiting global warming to 1.5°C that should imply rapid and far-reaching transitions in many heritage-related sectors. These transitions are unprecedented in terms of scale, and imply deep GHG emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.

III. IMPLEMENTATION OF THE POLICY DOCUMENT

79. This section articulates recommendations for implementing the Policy Document at various levels, namely World Heritage Committee, States Parties and World Heritage property levels. The five key considerations for implementing the Policy Document are:

- Integrating measures to identify and manage climate related risks to the Outstanding Universal Value at the property level and in the processes of the Committee;
-  Integrating World Heritage in climate action design, planning and implementation at the international, national and local levels;
- Developing and sharing tools and methodologies to assess and manage the current and future impact of climate change with and among Parties and various stakeholders and rights holders, at the property, national and international levels (particularly through the process of establishing regional Action Plans);
- Enabling World Heritage properties to contribute to the transformative change that is necessary for low carbon and climate-resilient development;

- Utilising a place-based approach to contextualise climate action responses, integrating nature and culture in the management of all properties in response to climate change, and respecting the rights and interests of Indigenous Peoples and local communities.

80. To achieve these, various actions are recommended at World Heritage Committee, States Parties and World Heritage property levels. For the effective implementation of the Policy Document, an internationally collaborative approach is advocated through engagement of all the stakeholders and rights holders to develop and implement the tools and methodologies that can support climate action for World Heritage properties. This should utilise existing mechanisms where appropriate, including Reactive Monitoring and Periodic Reporting, to promote best practice and regional engagement opportunities for climate-related action concerning World Heritage protection.

A. Enabling conditions

81.  Successful implementation of this Policy Document requires enabling conditions that support the feasibility of adaptation and mitigation options and can accelerate and scale-up systemic transitions and enhance capacities of systems and societies to adapt to climate change, while safeguarding the Outstanding Universal Value, achieving sustainable development, eradicating poverty and reducing inequalities. These include the transfer and mobilization of finance, technological innovation, institutional capacity, multi-level governance, and changes in human behaviour and lifestyles. They also include inclusive processes, attention to power asymmetries and unequal opportunities. States Parties will endeavour to enhance the feasibility of actions contemplated through this Policy Document by attention to the enabling conditions underpinning climate action in the World Heritage context. The World Heritage Committee will be an advocate for climate action and will work to support partners that are expected to carry out such action under this Policy Document.

Governance

82. Climate governance is key to creating the conditions for implementing transformative change in the World Heritage context. Such World Heritage climate governance systems should embrace inclusive approaches that accommodate a plurality of heritage values, beyond Outstanding Universal Value, and can ensure equitable sharing of heritage-benefits, including through rights-based approaches. Climate governance should encourage novel strategies for climate–related knowledge production and co-production that are inclusive of diverse values and knowledge systems. Local communities should be closely involved in the processes of investigation of the impacts of climate change and the development of climate action strategies. Adaptive approaches, including learning from heritage experiences, monitoring and feedback cycles, contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change. Governance systems should also link the management of natural and cultural values, including at a landscape scale, where possible.

83. The 2017 UNESCO Declaration of Ethical Principles in relation to climate change provides a useful framework for addressing justice and equity and the need for prioritising action in an equitable and transparent manner. The 2017 UNESCO Policy on engaging with Indigenous Peoples provides further useful references on participation and actions.

Finance

84. Transfer and mobilisation of finance are among the necessary enabling conditions to promote climate action for World Heritage properties, including investment in

infrastructure for mitigation and adaptation. Adaptation needs have typically been supported by public sector sources such as national and subnational government budgets, and in developing countries together with support from multilateral and bilateral development assistance, multilateral development banks, the UNFCCC and its Paris Agreement. In this aspect, World Heritage properties should be considered as part of the overall national and regional planning strategies to ensure that adequate financial resources are made available to support property-level climate action, taking into account the developed countries' leading role in the provision and mobilization of such resources in support of developing countries. Barriers include the scale of adaptation financing, limited institutional and national financing capacity and access to adaptation finance. The better incorporation of funding for World Heritage properties into global climate finance mechanisms is needed. International cooperation is a critical enabler for developing countries and vulnerable regions, notably SIDS and LDCs, to strengthen their action for the implementation of responses at World Heritage properties consistent with transformative change.

Technological Innovation

85. Climate technologies are technologies used to address climate change and include renewable energies such as wind energy, solar power and hydropower that help reduce GHG. Traditional knowledge and Indigenous science can also constitute climate technology with relevance to contemporary climate action. Various climate technologies – such as drought-resistant crops, early warning systems and sea walls – can be used to adapt to the adverse effects of climate change at World Heritage properties. These are key to the survival of many World Heritage properties and to the conservation of their Outstanding Universal Value; this is particularly true for cultural landscapes where there is a strong and harmonious human connection to the natural environment.

B. World Heritage Committee-level implementation

86. Implementation of climate actions related to the enabling conditions (see Section III.A above) at the World Heritage Committee-level could be supported by:

- Developing and implementing a funding strategy to attract public and private sector support for climate action and capacity building for World Heritage properties. Prioritisation process should be set up to provide financial support to the States Parties for carrying out various mitigation and adaptation measures for protecting, conserving and presenting the Outstanding Universal Value of World Heritage properties. Moreover, better incorporation of funding for World Heritage properties into global climate finance mechanisms is needed;
- Ensuring that basic documents of the World Heritage system, such as the Operational Guidelines and the Resource Manuals, adequately address climate change;
- Promoting climate action measures for properties that are on the frontlines of climate change impacts in order to express solidarity with them and encourage South-South collaboration.

87. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the World Heritage Committee-level could be supported by:

- Strengthening the link between the World Heritage Convention and UNFCCC in terms of monitoring and reporting mechanisms related to climate change and World Heritage properties;

- Promoting synergies with existing international policies and tools from various sectors including SDGs, Sendai framework, biodiversity conventions and agreements, Paris Agreement, New Urban Agenda, as well as the site-based instruments such as the 1971 Ramsar Convention of Wetlands of International Importance, the UNESCO Man and the Biosphere and Global Geoparks Programmes for a comprehensive approach towards climate change and its impact on World Heritage;
- Considering amendments to the formats of World Heritage Periodic Reporting and state of conservation reporting by including indicators that identify the impact of climate change on World Heritage properties and indicate site-specific adaption strategies based on the UNESCO's Culture|2030 Indicators;
- Identifying regional (across States Parties) or thematic actions such as promoting the development of risk and vulnerability maps for regions and sub-regions, which overlay climate data and World Heritage property locations and operationalise such initiatives.

88. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the World Heritage Committee-level could be supported by:
    - Enhancing opportunities for collaboration and partnerships with key international organisations such as the World Bank, the United Nations Environment Programme (UNEP), the United Nations Office for Disaster Risk Reduction (UNDRR), the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC), the G20, etc. for various projects that promote climate action in World Heritage properties; In this regard, it should be recognised that the ability of the World Heritage Committee to interact with other international mechanisms will depend on, and be limited by, the respective mandates and responsibilities of each body.
89. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the World Heritage Committee-level could be supported by:
    - Considering amendments to the formats of World Heritage Periodic Reporting and state of conservation reporting by including indicators that collect information on site-specific mitigation strategies being pursued.
90. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the World Heritage Committee-level could be supported by:
    - Strengthening the links between the World Heritage Convention and UNFCCC and its Paris Agreement in terms of sharing of information and communication related to climate change and World Heritage properties;
    - Developing, compiling and sharing good practice guidance and capacity building tools for climate vulnerability and risk assessment and developing and implementing climate mitigation and adaptation measures;
    - Facilitating sharing of scientific information and experience across States Parties through setting up of an online platform for effective implementation, monitoring and review of implementation of the Policy Document;
    - Identifying mechanisms to support needs and capacities of the Least Developed Countries (LDCs) and the Small Island Developing States (SIDS) to address climate change impacts.

C. National-level implementation

91. Implementation of climate actions related to the enabling conditions (see Section III.A above) at the national-level could be supported by:

- Identifying and accessing the resources needed from all sources through collaboration with government and corporate/private sectors;
- Achieving coherence with other national policies by building synergies between the heritage sector and other sectors such as environment, urban and disaster risk management. This may include identification and mapping of relevant sectors which can collaborate and creation of shared data sources and benchmark methodologies;
- Ensuring that national guidance on World Heritage and for cultural and natural heritage generally addresses climate change;
- Developing pilot projects that promote good practices in climate action for World Heritage properties that are inclusive of diverse values and knowledge systems and disseminating these at international, national and property levels to demonstrate how World Heritage properties are assets to protect as well as resources to strengthen community adaptation, resilience and continuity.

92. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the national-level could be supported by:

- Standardising and sharing data gathering across various World Heritage properties to facilitate identification and analysis of common hazards and impacts of climate change at national level;
- Consistent with any World Heritage Committee standards and guidelines, developing effective processes for assessing the vulnerability of Outstanding Universal Value and other heritage values to climate change impacts, and evaluating the effectiveness of climate action measures implemented at the World Heritage properties in the Nomination process, Periodic Reports and the state of conservation reports;
- Developing climate vulnerability and risk indicators and establishing baseline data for World Heritage properties at national level to assess and track Climate risks, as the first step in strengthening capacity to manage climate risks at all World Heritage properties. These can include the Climate Adaptation and Resilience indicators (under the Environment and Resilience thematic dimension) of the UNESCO's Culture|2030 Indicators;
- Supporting reassessment and adjustments in all stages of heritage practice including inventorying, documentation and monitoring, impact assessments, conservation and management planning, and risk assessment in view of the unprecedented, systemic threat posed by climate change.

93. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the national level could be supported by:

- Recognising and including World Heritage in National Adaptation Frameworks and other national policies for climate action in order to strengthen actions to adapt and build resilience to climate change, and to promote collaboration to ensure that adequate financial resources are made available to support property-level climate action, including investment in infrastructure for adaptation;
- Working in partnership with relevant organisations, stakeholders and rightsholders in field activities to develop and implement adaptation strategies;

- Sharing methodologies and tools, respecting traditional knowledge and methods;
- Encouraging, relevant institutions to the extent possible and within the available resources, to monitor relevant climate parameters and contribute to preparing for and managing the inevitable uncertainties and complexities associated with climate change through various adaptation strategies.

94. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the national level could be supported by:

- Implementing precautionary approaches that pursue pathways that contribute to limiting global warming to 1.5°C, with no or limited overshoot in light of the CBDR-RC principle;
- Recognising and including World Heritage in national climate action plans and other national policies for climate action in order to strengthen actions to mitigate and to promote collaboration to ensure that adequate financial resources are made available to support property-level climate action, including investment in infrastructure for mitigation;
- Working in partnership with relevant organisations, stakeholders and rightsholders in field activities to develop and implement mitigation strategies;
- Developing frameworks that identify and promote the co-benefits of climate action and heritage safeguarding and which reduce real and perceived tensions between climate action and safeguarding Outstanding Universal Value, for example through impact assessment tools, environmental and social standards and taxonomies which take into account the cultural and social dimension of climate action projects; as well as through planning processes and methodologies for proactively avoiding and mediating conflicts. Such frameworks may be particularly relevant in addressing proposed renewable energy projects (e.g. terrestrial and maritime "wind farms" energy infrastructure, transmission grids), carbon dioxide removal/capture projects, flood control schemes, changes in land-use, and the renovation of heritage buildings for energy efficiency.

95. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the national level could be supported by:

- Elaboration on the role of World Heritage in climate-resilient development pathways that strengthen sustainable development (including efforts to eradicate poverty and reduce inequalities) and promote mitigation of and adaptation to a changing climate.

D. World Heritage property-level implementation

96. Implementation of climate actions related to World Heritage Climate Action Goal 1 (Assessing Climate Risks) (see Section II.B above) at the World Heritage property level could be supported by:

- Undertaking climate vulnerability and risk assessments for World Heritage properties to assess potential impact on Outstanding Universal Value caused by projected climate change hazards and the impact on associated communities including:

    i) Acquiring data on climate related hazards, vulnerabilities and risks and other baseline information, including a current inventory of not only attributes of Outstanding Universal Value, but other relevant cultural and natural values,

ii) Developing strategies to reduce non-climatic stress factors on properties to enhance resilience of the property to climate change impacts.

97. Implementation of climate actions related to World Heritage Climate Action Goal 2 (Adaptation) (see Section II.B above) at the World Heritage property level could be supported by:

- Developing and implementing climate adaptation strategies consistent with climate adaptation frameworks developed at the national level including:
  - i) Integrating climate action measures (mitigation and adaptation) in site management systems and management plans, and reporting, monitoring and evaluating the effectiveness of these measures,
  - ii) Developing the capacity to access local climate scenarios (i.e. simulations of the future climate at local level) and incorporate the results into medium term planning and policy making for the property;
- Prioritising monitoring of climate hazards, assessing and reducing climate risks and enhancing adaptive capacity at the property;
- Implementing management practices that reduce the vulnerability and increase the resilience of World Heritage properties to existing non-climatic pressures and threats that will be exacerbated by climate change impacts, such as urbanisation and uncontrolled tourism;
- Engaging with traditional knowledge holders and local communities to appreciate and apply community and indigenous values and understanding of climate change and adaptation, when formulating and implementing climate actions and priorities.

98. Implementation of climate actions related to World Heritage Climate Action Goal 3 (Mitigation) (see Section II.B above) at the World Heritage property level could be supported by:

- Contributing to the establishment of carbon footprint systems that demonstrate measurable progress on quantifying and, where appropriate, reducing or otherwise offsetting any net greenhouse gas emissions associated with the property, including by engaging with relevant stakeholders and service providers in order to monitor, measure and reduce the GHG emissions associated with the property, including from tourism, land use and buildings.

99. Implementation of climate actions related to World Heritage Climate Action Goal 4 (Knowledge, Capacity Building and Awareness) (see Section II.B above) at the World Heritage property level could be supported by:

- Designed and implemented activities to improve diverse knowledge mobilisation, education, awareness raising, and human and institutional capacity in relation to the risks and responses arising from climate change impacts on World Heritage properties, including:
  - i) Using properties as observatories of climate change to support climate science, Indigenous Peoples' knowledge systems and understanding of short-term and long-term environmental change,
  - i) Increasing messaging on climate change matters,
  - ii) Showcasing case studies and better conservation practices related to climate action and climate change,
  - iii) Updating site interpretation by including climate change stories for increasing awareness and providing enhanced visitor experience of World Heritage;

- Enhancing climate action governance processes including by involving local communities closely in the processes of investigation of the impacts of climate change and the development of climate action strategies;
- Contributing knowledge, data and perspectives derived from the properties to broader climate policy processes through participation in appropriate local, regional and national climate planning processes and climate science initiatives, including interdisciplinary and transdisciplinary cooperation and knowledge co-production.

ANNEXES

ANNEX I - GLOSSARY

The glossary contains definitions of concepts that have been used in the Policy Document. These are drawn from IPCC reports (2012 – "Special report on Managing the risks of extreme events and disasters to advance Climate Change adaptation" – SREX; 2018 – "Special report on the impacts of global warming of 1.5°C"; 2019 – "Special report on Climate Change and land"). It is hoped that these terms will understood by heritage sector to enable better communication and coordination with environment sector. The discrepancy between some of the terms such as mitigation used in heritage and defined in the glossary based on IPCC reports also need to be recognised.

Adaptation:

"In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects" (IPCC-2018)

Adaptation limits:

"The point at which an actor's objectives (or system needs) cannot be secured from intolerable risks through adaptive actions". (IPCC-2018)

Adaptive capacity:

"The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences". (IPCC-2018)

Baseline scenario:

"In much of the literature the term is also synonymous with the term business-as-usual (BAU) scenario, although the term BAU has fallen out of favour because the idea of business as usual in century-long socio-economic projections is hard to fathom. In the context of transformation pathways, the term baseline scenarios refers to scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted. Baseline scenarios are not intended to be predictions of the future, but rather counterfactual constructions that can serve to highlight the level of emissions that would occur without further policy effort. Typically, baseline scenarios are then compared to mitigation scenarios that are constructed to meet different goals for greenhouse gas (GHG) emissions, atmospheric concentrations or temperature change. The term baseline scenario is often used interchangeably with reference scenario and no policy scenario". (IPCC-2018)

Carbon budget:

"This term refers to three concepts in the literature: (1) an assessment of carbon cycle sources and sinks on a global level, through the synthesis of evidence for fossil-fuel and cement emissions, land- use change emissions, ocean and land CO2 sinks, and the resulting atmospheric CO2 growth rate. This is referred to as the global carbon budget; (2) the estimated cumulative amount of global carbon dioxide emissions that is estimated to limit global surface temperature to a given level above a reference period, taking into account global surface temperature contributions of other GHG and climate forcers; (3) the distribution of the carbon budget defined under (2) to the regional, national, or sub-national level based on considerations of equity, costs or efficiency". (IPCC-2018)

Carbon footprint:

"The process of storing carbon in a carbon pool" (IPCC-2018)

Carbon sink:

"A reservoir (natural or human, in soil, ocean, and plants) where a greenhouse gas, an aerosol or a precursor of a greenhouse gas is stored. Note that UNFCCC Article 1.8 refers to a sink as any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere". (IPCC-2018)

Climate change:

"Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: "*a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods*." The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes". (IPCC-2018)

Climate risk:

"In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation or mitigation responses to such a hazard, on lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Risk results from the interaction of vulnerability (of the affected system), its exposure over time (to the hazard), as well as the (climate-related) hazard and the likelihood of its occurrence". (IPCC-2018)

Co-benefits:

The positive effects that a policy or measure aimed at one objective might have on other objectives, thereby increasing the total benefits for society or the environment. Co-benefits are often subject to uncertainty and depend on local circumstances and implementation practices, among other factors. Co-benefits are also referred to as ancillary benefits. (IPCC-2018)

Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC):

"Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a key principle in the United Nations Framework Convention on Climate Change (UNFCCC) that recognises the different capabilities and differing responsibilities of individual countries in tacking climate change. The principle of CBDR– RC is embedded in the 1992 UNFCCC treaty. The convention states: "… the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions." Since then, the CBDR-RC principle has guided the UN climate negotiations." (IPCC-2018)

Ecosystem-based Approaches

"The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resource". (CBD, COP5 Decision V/6)

Enabling condition:

"Conditions that affect the feasibility of adaptation and mitigation options, and can accelerate and scale-up systemic transitions that would limit temperature increase to 1.5°C and enhance

capacities of systems and societies to adapt to the associated climate change, while achieving sustainable development, eradicating poverty and reducing inequalities. Enabling conditions include finance, technological innovation, strengthening policy instruments, institutional capacity, multi-level governance, and changes in human behaviour and lifestyles. They also include inclusive processes, attention to power asymmetries and unequal opportunities for development and reconsideration of values". (IPCC-2018).

Exposure:

"The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected". (IPCC-2018)

Extreme weather event:

"An extreme weather event is an event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense. When a pattern of extreme weather persists for some time, such as a season, it may be classed as an extreme climate event, especially if it yields an average or total that is itself extreme (e.g., drought or heavy rainfall over a season)". (IPCC-2018)

Land use, Land use change and Forestry (LULUCF):

"In the context of national greenhouse gas (GHG) inventories under the UNFCCC, LULUCF is a GHG inventory sector that covers anthropogenic emissions and removals of GHG from carbon pools in managed lands, excluding non-CO2 agricultural emissions." (IPCC-2018)

Life Cycle Assessment (LCA):

A Life Cycle Assessment involves the investigation and evaluation of the environmental impacts of a given product or service, based on the identification of energy and materials inputs and emissions released to the environment. In LCA, the environmental impacts are calculated over the entire lifetime of the product 'from cradle-to-grave' – hence the name 'life cycle'. In the context of carbon mitigation, is used to quantify the emissions of products or services along the supply chain of the product or service.

Maladaptation:

Maladaptive actions (maladaptation) are actions that may lead to increased risk of adverse climate-related outcomes, including increased vulnerability to climate change, or diminished welfare, now or in the future. Maladaptation is usually an unintended consequence.

Mitigation:

This report uses the IPCC definition of mitigation: "A human intervention to reduce emissions or enhance the sinks of greenhouse gases". (IPCC 2018). This is essentially the same sense in which the word was used in the 2007 World Heritage Committee Policy ("Mitigation: an anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC)"). Readers should not confuse this usage with the more general sense in which the word 'mitigation' is sometimes used in the heritage context (namely, measures to avoid, prevent, reduce or offset negative effects on Outstanding Universal Value or other values).

Nature-based solutions (NbS):

This report acknowledges that there still does not exist a multilaterally agreed definition on NbS. In the lack thereof, one of the possible definitions might be: "Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits". (IPBES-2019)

Nationally Determined Contributions (NDCs)

"A term used under the United Nations Framework Convention on Climate Change (UNFCCC) whereby a country that has joined the Paris Agreement outlines its plans for reducing its emissions. Some countries' NDCs also address how they will adapt to climate change impacts, and what support they need from, or will provide to, other countries to adopt low-carbon pathways and to build climate resilience. According to Article 4 paragraph 2 of the Paris Agreement, each Party shall prepare, communicate and maintain successive NDCs that it intends to achieve. In the lead up to 21st Conference of the Parties in Paris in 2015, countries submitted Intended Nationally Determined Contributions (INDCs). As countries join the Paris Agreement, unless they decide otherwise, this INDC becomes their first Nationally Determined Contribution (NDC)." (IPCC-2018)

Resilience:

"The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation". (IPCC-2018)

Risk:

"The potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain". (IPCC-2018)

Risk assessment:

"The qualitative and/or quantitative scientific estimation of risks". (IPCC-2018)

Risk management:

"Plans, actions, strategies or policies to reduce the likelihood and/or consequences of risks or to respond to consequences". (IPCC-2018)

Risk transfer:

"The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise, or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party". (IPCC-2013)

Safeguard:

In the context of the Policy Document, it refers to law, rules, or measures intended to prevent social and environmental systems from being harmed by climate mitigation and/or adaptation actions.

Transformation:

A change in the fundamental attributes of natural and human systems. Societal (social) transformation A profound and often deliberate shift initiated by communities toward sustainability, facilitated by changes in individual and collective values and behaviours, and a fairer balance of political, cultural, and institutional power in society. (IPCC-2018)

Transformative change:

"A system wide change. This requires more than technological change to consideration of social and economic factors that with technology can bring about rapid change at scale". (IPCC-2018)

Uncertainty:

A state of incomplete knowledge that can result from a lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from imprecision in the data to ambiguously defined concepts or terminology, incomplete understanding of

critical processes, or uncertain projections of human behaviour. Uncertainty can therefore be represented by quantitative measures (e.g. a probability density function) or by qualitative statements (e.g. reflecting the judgment of a team of experts). (IPCC-2018)

Vulnerability:

“The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt”. (IPCC-2018)

ANNEX II - AREAS FOR FURTHER FOCUS REGARDING ADAPTATION

Overview

1. This Policy Document recommends that each State Party implements at national and/or other appropriate levels, all the necessary actions to have in place a comprehensive climate risk management framework that fosters adaptation and resilience building actions, and that are also synergistic, better coordinated with the local, subnational, national and international climate adaptation developments (See World Heritage Climate Action Goals 1 and 2).

2. Adaptation actions should be based on and guided, as appropriate, by traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems. The importance of Indigenous Peoples' and local communities' knowledge for understanding impacts and designing and implementing appropriate adaptation action should be valued and utilised via a participatory process characterised by respect for the diversity of cultural expressions. Traditional methods and systems for preventing, conserving and addressing the negative impacts of climate change on World Heritage properties should be included in relevant climate policies.

3. States Parties are also encouraged to maximising the 'signalling' value and inspirational power of World Heritage properties to showcase effective adaptation practices.

A. Assessing climate risks

4. The Policy Document is inclusive to all hazards that are directly and indirectly attributed to climate change, and related vulnerability factors of the heritage properties (physical, social, economic, institutional, etc.).

5. Climate change will alter the severity, frequency and spatial distribution of many types of climate-related hazards. In consequence, climate risk assessments should be based on predictions of future climate change impacts developed using recent and current observations as proxies for future change, integrated with a range of local climate scenarios (i.e. simulations of the future climate at local level) (see Section II.D.1 above). While these simulations have considerable uncertainty (there are several sources of uncertainty: development patterns of society, population, wealth distribution and GHG emissions levels), current methodologies yield results that are useful to medium term planning and policy making for World Heritage properties.

6. Climate–related hazards also serving as multipliers of pre-existing threats and vulnerabilities, it is increasingly difficult to minimise the exposure of heritage sites to a dangerous climate, and the assessment of heritage-climate vulnerability and implementation of options to reduce it are central to adaptation planning.

7. Responding to the unprecedented and systemic threat of climate change calls for adjustments in all stages of heritage practice. Climate change will require reassessments of many heritage methodologies including inventorying, assessments, documentation and monitoring, impact assessments conservation management planning and risk assessment.

B. Climate risk management

8. Climate risk management incorporates all actions necessary to assess and manage the risks of a changing climate, considering:

    - The multiplicity of climate-related hazards, including both rapid and slow onset events:
        - 'Rapid-onset' events are short-lived, acute, intensive, recurrent, highly damaging and uncontrollable. They include extreme winds, hurricanes,

typhoons, storm surge, extreme precipitation, hailstorms, flash Floods, landslides, heat waves, and wildfires. Climate change is expected to increase the frequency and intensity of many of these types of events through much of the world,

- ‘Slow-onset’ events are long-lived, progressive and potentially permanent transitions that are less damaging in the short-term, but which may have profound consequences over the longer-term. They include Glacier melt, Sea Level Rise, acidification, desertification and changes in seasonality and species distribution;

- Differences in exposure of heritage sites to those climate-related hazards;
- How climate-related hazards exacerbate other hazards and stressors, often with negative outcomes for heritage sites;
- The multidimensional factors of climate vulnerability at the human-environment system level (exposure, sensitivity and adaptive capacity) - or the combination of elements that made a heritage site more susceptible to be negatively affected;
- The climate risks (or the combined likelihood and potential negative impacts to World Heritage properties) on attributes bearing the Outstanding Universal Value and local values, and including impacts on the economic, social, health, education, and well-being of associated communities (including effects on social cohesion);[15]
- Options for responding to climate-related risks, with continuing uncertainty about the severity and timing of climate-change impacts and with limits to the effectiveness of adaptation.

9. Climate risk management approaches can benefit from:

- Partnering with relevant organisations, stakeholders and local community groups in field activities to develop and implement adaptation strategies; sharing methodologies and tools, respecting traditional knowledge and methods;
- Pilot test and share good practices at regional, national and international levels to promote climate action at World Heritage properties through knowledge dissemination, networking and coordination;
- Identifying regional (cross-State Party)/thematic actions such as promoting the development of risk and vulnerability maps for regions and sub-regions which overlay climate data and World Heritage property locations and operationalise such initiatives;
- Developing frameworks for the successful negotiation of co-benefits and trade-offs of Climate adaptation and Outstanding Universal Value to identify and avoid potential maladaptation.

10. As it is fundamental to assess climate change impact in the state of conservation of the World Heritage property, new tools may be needed to address climate change preparedness, as well as identifying factors that can become threats that could ultimately impact on the Outstanding Universal Value of the property. World Heritage processes, such as Nomination, Periodic Reporting, Reactive Monitoring, need to be strengthened to support these outcomes, with special attention to the Operational Guidelines.

[15] The 2019 ICOMOS report “*The Future of Our Pasts: Engaging Cultural Heritage in Climate Action*” contains one matrix of climate drivers (e.g. temperature and precipitation changes, climate- influenced wildfires, changes in seasonality, etc) as well as some compounding related stressors (e.g. pollution and ocean acidification) correlated to resulting impacts on six major cultural heritage typologies.

11. The integration of World Heritage within national and regional climate risk management approaches can support all necessary actions to strengthen national and local capacities to manage climate-related risks for heritage, as they can be understood now, and the more complex climate risk expected in the future. Whether dealing with actual potential negative risks and its corresponding impacts or climate-related disaster contexts, or future impacts associated with climate variability, extreme weather events and climate change, the essential challenge is both climate risk reduction and the maintenance (with possibly increase) in human and ecosystem's resilience, including through the valorisation of traditional ecological knowledge.

12. States Parties are encouraged to promote a synergistic implementation of existing international policies and tools from various sectors like SDGs, Sendai framework, biodiversity conventions and agreements, Paris Agreement, New Urban Agenda etc. for a comprehensive approach towards climate adaptation and its mainstreaming on World Heritage processes.

13. Elements of adaptation planning relevant to World Heritage properties can include anticipatory risk management (ensuring that future heritage management reduces rather than increases climate risk), compensatory risk management (actions to mitigate the negative impacts associated with existing climate risk) and reactive climate risk management (ensuring that risk is not reconstructed after climate-related impacts, including disaster events). Moreover, measurers will need to consider both potential impacts on the Outstanding Universal Value of the properties, and, where relevant, the related socio-economic and environmental systems, before decisions are made.

14. At the national level, States Parties to the World Heritage Convention should develop and implement integrated climate risk management strategies, plans and programmes, as these can ultimately increase the coordination among the disparate institutional and administrative mechanisms, projects, human and financial resources currently applied to climate adaptation and disaster risk management.

C. Baseline information

15. Data on climate related hazards, vulnerabilities and risks should be acquired, managed and updated by the responsible agencies and consequently shared with those responsible for managing World Heritage properties. Managers of World Heritage properties must have access to relevant data and modelling, and the capacity to collect and process data so they can build climate risk models.

16. More appropriate adaptation actions can be selected and applied if there is baseline information, that includes:

- A current inventory of not only attributes of Outstanding Universal Value but other relevant cultural and natural values;
- Knowledge of current and projected climate related hazards;
- Understanding key social, physical, economic, environmental, and institutional and factors that all together determine the vulnerability of heritage properties to those hazards;
- Understanding of the potential direct and indirect Impacts (climate risks); and
- Understanding the type of heritage at risk (movable, immovable and intangible).

17. It is essential that heritage managers assess climate risks that adequately inform adaptation. These should be undertaken at macro-scale to gain a broad overview at a regional level, and micro-place level, which tends to be holistic and considers the site-specific dynamics of hazards, vulnerabilities and potential /observed negative impacts.

18. Considering that multiple resources will be required for adaptation activities, heritage property managers need to properly assess the costs, benefits of climate adaptation strategies and, to ensure resources are allocated responsibly.

19. A key complementary method that heritage sites managers can implement, are Adaptation Capacity Assessments. This type of assessment builds on the climate risk assessments and evaluates the existing capacity to address those risks. Depending on the context, it helps to identify gaps and strengths of existing heritage sites management to effectively implement climate adaptation strategies.

20. Recognition of diverse interests, circumstances, social-cultural contexts, and expectations can benefit climate risk based–decision making processes.

D. Damage and loss of Outstanding Universal Value

21. This Policy Document encourages every State Party to do all it can to implement site-based adaptation, to the utmost of its own resources and with any international assistance and co-operation which it may be able to obtain, including efforts of other States Parties to implement a precautionary approach.

22. Although adaptation to a changing climate will often result in adjustments that are within a given heritage system's adaptive limits, completely preventing all projected impacts of climate change on every World Heritage property may not be possible, and in some cases damage to and loss of attributes of Outstanding Universal Value as a result of climate change may still result.

23. Acknowledging that completely preventing all projected impacts of climate change on every World Heritage property may not be possible, the impact of such loss will need to be fully assessed and evaluated by the World Heritage Committee who will need to consider whether Outstanding Universal Value has been completely or partially lost.

24. Strategies to avert, minimise and address damage and loss are crucial to plan for and manage potential loss of attributes of Outstanding Universal Value in World Heritage properties. There exists a range of approaches and instruments to develop damage and loss strategies associated with the impacts of climate change. The challenge is to identify which strategies are more appropriate for World Heritage properties, not only to the type of climate risks but also to the social, environmental, economic, geographical, landscape and institutional context of the properties for which Outstanding Universal Value may be a risk of being irretrievably damaged or lost (see second Guiding Principle in Section I.C).

E. Managing for Resilience

25. Improving adaptive capacity and building climate resilience could be supported by reducing non-climate sources of stress on World Heritage properties. Consideration and management of existing non-climatic pressures should be included in adaptation plans. Doing this acknowledges that climate change will exacerbate existing pressures such as urbanisation, invasive species, pollution and uncontrolled tourism. Management approaches for these non-climatic stresses will need to be responsive and regularly reviewed to account for a changing climate (see World Heritage Climate Action Goal 2 above).

26. Management approaches for World Heritage properties should be proactive rather than reactive to allow them to better address the cumulative nature of multiple impacts. Property managers should contemplate immediate actions to address existing pressures, including 'no regret-policy' actions. Doing this has the dual benefit of reducing vulnerability and increasing the resilience of properties to existing non-climate sources of stress, and also reducing their vulnerability to climate change related stresses.

ANNEX III – AREAS FOR FURTHER FOCUS REGARDING MITIGATION

Overview

1. This Policy Document recommends that each State Party implements at national and/or other appropriate levels, all the necessary actions to have in place a comprehensive climate mitigation framework, that fosters synergies, better coordination and enhance effective implementation, of the local, subnational, national and international climate mitigation developments since the adoption of the Paris Agreement (see Section II.B above).
2. Climate mitigation responses of the World Heritage Convention to the threat of climate change should be based on the most recent scientific and political developments, and therefore take advantage of the body of knowledge developed to understand Green House Gas (GHG) emissions in World Heritage properties and the interventions needed to reduce those emissions and effectively decarbonise the Heritage sector (see World Heritage Climate Action Goal 3).
3. Acknowledging that there is significant progress in the international community on the technical frameworks required to accomplish climate mitigation goals, and also taking into consideration the IPCC´s GHG emissions sectors, this Policy Document frames the climate mitigation recommendations in four categories: Built environment, Land use management, Life cycle assessment, and Tourism management (see Section II.D.3 above).

A. Built environment

4. The IPCC 1.5 °C Special Report (2018) makes clear that the built environment, including the entire building and construction supply chain, must decarbonise. In consequence, this Policy Document recognises that mitigation measures for the built environment within World Heritage properties should aim to assess and reduce their carbon footprint, with special attention to demand for electricity and other forms of energy that are required to deliver energy services for buildings.
5. Actions for climate mitigation of the built environment should avoid negative impacts on heritage values and be consistent with the obligations of States Parties under the Convention to preserve the Outstanding Universal Value of properties. Among the options to consider are:

    - Retrofitting of historical buildings to decrease energy consumption where possible, recognising that thermal massing and other features of some traditional building systems are inherently efficient, making wholesale energy retrofitting unnecessary and even wasteful;
    - Using traditional passive measures in historical buildings as strategies to reduce energy consumption;
    - Using Life cycle assessment (LCA) methodologies for the selection of replacement materials requiring less energy to produce, and thus emitting less GHG;
    - Promoting knowledge of the appropriate use of new technologies for the rehabilitation of historical buildings for energy efficiency and to reduce GHG emissions;
    - Guarding against insensitive retrofitting and maladapted mitigation strategies that fail to understand how older buildings ‘behave’ and can degrade traditional climate-friendly features, waste materials and damage heritage values.

6. Considering national circumstances, this Policy Document recommends that States Parties adopt a carbon footprint target for World Heritage properties in connection with the World Heritage Climate Action Goals. This will allow heritage managers to assess in a scientific and robust way progress towards the decarbonisation of the heritage sector.

B. Land-use management

7. IPCC´s 1.5 °C Special Report (2018) and Climate and Land Report (2019) find that limiting global warming to 1.5°C would require rapid and far-reaching transitions in the way countries use land, specifically to minimise emissions associated with land use change.

8. Heritage properties, particularly natural properties, are among those places that can significantly contribute to climate mitigation by: (i) safeguarding the natural carbon sinks; (ii) when feasible, increasing carbon sequestration in natural systems. Such approaches should adhere to strict environmental and social safeguards and consider carbon storage permanence.

9. Considering national circumstances, this Policy Document recommends the adoption of two mitigation targets for natural World Heritage properties:

   - No net loss of the natural carbon sinks present in World Heritage properties (by 2030): the earth's natural carbon sinks are also places of exceptional importance for biodiversity conservation, and are facing major threats. The carbon stored in those ecosystems is fundamental to achieve the 1.5°C Climate target and should be a priority for natural properties;

   - Net GHG emissions from land use change are reduced to zero (by 2030): IPCC states that it is one of the most important sources of GHG emissions. Consequently, tackling land use change is imperative to address Climate Change.

C. Life cycle assessment

10. For the World Heritage sector, another way to assess the different types of GHG emissions is by applying Life cycle assessment (LCA). This is a tool widely used among IPCC reports to assess environmental impacts of a system by accounting for all emissions along the full value chain and over the full life cycle. LCA can investigate and compare the potential carbon footprint of products and services, by understanding the mass and energy flows throughout production, use, and disposal. These flows are then translated into environmental indicators such as greenhouse gas emissions.

11. Utilising the competencies of heritage properties management, LCA methodologies can be used to provide systematic evaluation of the carbon footprint caused throughout the life cycle of products or services from raw material extraction to waste treatment, and to scientifically assess a baseline, and possible carbon reduction targets and future heritage-management practices that support climate mitigation objectives. Where possible, properties are encouraged to conduct environmental analyses of site operations, services, events and exhibitions and identify energy-saving opportunities; to adopt 'green' procurement (energy, waste and water), and to emphasise green products, services and business models.

D. Tourism

12. As one of the world's largest industries, tourism's carbon footprint is an expanding component of global GHG emissions, with tourism to World Heritage properties being a highly visible component.

13. At the same time, World Heritage destinations, if appropriately managed through sustainable tourism strategies, can generate positive economic and social benefits for local communities [16]. Tourism can raise visitors' understanding of different history, cultures and environments and has the potential to promote empathy with communities managing the impacts of climate change on their World Heritage properties. Tourism destinations also have the opportunity of demonstrating and publicising climate impacts and sustainability practices.

14. Among the interaction between climate change and tourism at World Heritage properties, States Parties, in collaboration with World Heritage sites managers and other stakeholders, can undertake the following actions:

- Develop and implement methodologies for monitoring and measuring the GHG emissions caused by tourism at World Heritage properties, including through Life cycle assessment, and identify carbon-saving measures (for example, energy efficient visitor infrastructure);
- Work with the tourism sector at different levels to explore options for determining accountability for carbon mitigation of the GHG emissions associated with the contributing service components of the tourism industry (for example, aviation, hospitality etc.) attributable to World Heritage tourism;
- Consider alternatives for offsetting of GHG emissions associated with tourism at World Heritage properties. It is fundamental that options considered for offsetting (for example certified carbon credits) adhere to strict social and environmental safeguards.

[16] At its 36th session (Saint-Petersburg, 2012), the World Heritage Committee adopted the "World Heritage and Sustainable Tourism Programme" (Decision **36 COM 5E**), which represents a new approach based on dialogue and stakeholder cooperation where planning for tourism and heritage management is integrated at a destination level, the natural and cultural assets are valued and protected, and appropriate tourism developed. See http://whc.unesco.org/en/tourism/

ANNEX IV - AREAS FOR FURTHER FOCUS REGARDING KNOWLEDGE SHARING, CAPACITY BUILDING AND AWARENESS

Drawn from Section I(D)(21) of the 2006 Strategy

1. The importance of education and capacity building for enhancing climate action has been recognised in the 2015 Paris Agreement (Article 12). The World Heritage Convention and its processes also consider these factors as important for the effective management and conservation of World Heritage. Indeed, strengthening of capacity building is important for dealing with effects of climate change as well as for good communication and awareness programmes.
2. The Policy Document therefore draws the attention of all actors of the World Heritage system on the crucial role of knowledge sharing, capacity building and awareness for successful climate actions (see Section II.D.4).
3. Furthermore, World Heritage Climate Action Goal 4 (see Section II.B) highlights that by 2030, States Parties should have developed and implemented activities aimed at improving education, awareness raising, and human and institutional capacity in relation to the risks and responses related to climate change impacts on World Heritage properties, including programmes designed to promote these properties as exemplars of climate action.
4. Mobilizing public and political support for climate action inside and outside World Heritage properties is essential[17]. This has to range from local to regional and global approaches and involve a variety of measures: workshops, exhibitions and expositions, media campaigns, audio-visual material and popular publications which link the global phenomenon of climate change to the local and regional contexts.

A. Global-level actions (World Heritage Convention)

5. At the global level, the Secretariat of the World Heritage Convention (the UNESCO World Heritage Centre) is encouraged to implement knowledge sharing, capacity building and awareness activities, such as:
    - Informing the UNFCCC Secretariat and its Parties of the impacts of climate change on World Heritage in order to include these into their guidelines for national communications;
    - Establishing cooperation with the IPCC Secretariat in order to:
        i) Assess the existing and potential impacts of climate change on World Heritage,
        ii) Identify opportunities to mention issues related to World Heritage in the future Assessment Reports;
    - Ensuring that capacity building activities on climate risk assessments, reporting, adaptation and mitigation strategies are coordinated with the UNESCO World Heritage Centre, the Advisory Bodies, other international organisations and secretariats of other conventions;

[17] See paragraph 11 of Decision **29 COM 7Ba** (Durban, 2005), by which the World Heritage Committee indicated that "the results about climate change affecting World Heritage properties [should] reach the public at large, in order to mobilize political support for activities against climate change and to safeguard in this way the livelihood of the poorest people of our planet."

- Overseeing the organisation of international and regional workshops to:
  - i) Share the knowledge, experience,
  - ii) Establish networking among States Parties on addressing climate change impacts on World Heritage;
- Taking advantage of the World Heritage global network, develop communication strategies to inform the public and policy makers on climate action for World Heritage properties and build public and political support to address climate change impacts;
- Promoting and sharing good practices on climate action for World Heritage properties among States Parties.

C. State Party-/Property-level actions

6. States Parties and managers of World Heritage properties are encouraged to implement knowledge sharing, capacity building and awareness activities, such as:
   - Collecting information and establish national level database on the past and existing impacts of climate change on World Heritage properties;
   - Promoting the development of risk and vulnerability maps at national level which overlay climate data and World Heritage property locations;
   - Providing information to decision-makers, stakeholders, local communities, users and managers of the properties, and other heritage specialists about the existing and potential impacts of climate change on properties, management responses, possible technical and financial assistance, existing networks and institutions from heritage and climate sectors and various capacity building activities;
   - Promoting and sharing of good practices on integrating climate action in conservation and management of World Heritage properties;
   - Encouraging managers of World Heritage properties to provide feed-back based on their experience by developing case studies on good practices and lessons learnt and share these with other managers of properties;
   - Encouraging academic institutions to share their research on existing and potential impacts of climate change including on social and demographic changes in relation to World Heritage properties. Furthermore, they should promote and encourage interdisciplinary projects and data synthesis to improve links between heritage research fields and other areas of climate science.
7. In addition, World Heritage properties can also support climate science in several ways, including by:
   - Using palaeoenvironmental climate data from heritage sites, museums and other curated collections to explore climate trends and shifting climatic baselines;
   - Collating and synthesising existing palaeoenvironmental and archaeological data (from heritage sites, museums and other curated collections) to assess past baselines and tipping points of ecological and social change;
   - Promoting better understanding of traditional knowledge in design, construction, materials and management practices in the light of climate change and assessing their effectiveness in current context as the basis for developing proposals for adapting them to cope with climate change;

- Researching and documenting current and recent traditional land management and maintenance processes, particularly related to water management techniques and community participation;
- Using archaeological data and other information from heritage places, museums and other curated collections to identify and explore past human impacts on environments over short, medium and long periods and at local, regional and global scales;
- Exploring application of past adaptation and mitigation techniques to climate and landscape change, including agriculture and animal husbandry, architecture and land-use patterns, subsistence strategies, and use of material culture.

Annex 2

Panel of experts
in relation to Decision 44 COM 7C
concerning Climate Change and World Heritage

30 March - 1 April 2022
Online meeting

AGENDA

Wednesday 30 March – 11.45am-4.00pm (Paris time)	
11.45am	Welcome remark and Opening of the meeting, by the Director of the UNESCO World Heritage Centre, Mr. Lazare Eloundou Assomo
12.00pm	Background information (including process followed to elaborate the draft updated Policy Document), by the Deputy Director of the UNESCO World Heritage Centre, Ms. Jyoti Hosagrahar
12.30pm	Methodology of work and expected outputs of the Panel of experts, by the Deputy Director of the UNESCO World Heritage Centre, Ms. Jyoti Hosagrahar
12.45pm	Review of **Section I** of the draft updated Policy Document: "***Preamble***"
2.00pm	Break
2.15pm	Review of **Section I** of the draft updated Policy Document: "***Preamble***" (cont'd)
4.00pm	Closure of the first day of the meeting

Thursday 31 March – 11.30am-4.30pm (Paris time)	
11.30am	Review of **Section II** of the draft updated Policy Document: "***The Policy Framework***"
2.00pm	Break
2.15pm	Review of **Section II** of the draft updated Policy Document: "***The Policy Framework***" (cont'd); and discussion on **unresolved policy matters**
4.30pm	Closure of the second day of the meeting

Friday 1 April – 11.45am-4.00pm (Paris time)	
11.45am	Review of **Section III** of the draft updated Policy Document: "***Implementation of the Policy Document***" and the "***Annexes***"
12.45pm	Discussion on **unresolved policy matters** (cont'd)
1.45pm	Break
2.00pm	Discussion on **unresolved policy matters** (cont'd) and work on the **reporting** of the Panel of experts to the 'Open-ended Working Group for the updating of the Policy Document on Climate Action for World Heritage'
4.00pm	Closure of the meeting

Annex 3

Panel of experts
in relation to Decision 44 COM 7C
concerning Climate Change and World Heritage

30 March - 1 April 2022
Online meeting

LIST OF PARTICIPANTS

Experts

Ms. Thuraya Said AL SARIRI (Oman)

Thuraya Said Al Sariri is Sultanate of Oman's representative in Man and Biosphere Reserves Council (2017-2021) and Natural Expert in World Heritage Commission in UNESCO. Also, she is a member in International Commission of Protected areas in IUCN. Head of the technical team for managing the project of transplanting 10 million wild trees in Oman, Head of technical team for Oman Environment Strategy development strategy, Chair for West Asia Arabian Plant Specialist Groups Under IUCN; 1st Coherent of National Leadership and Competitiveness program) and member in many international related commissions and work groups at UNESCO and IUCN. She Joined the Environment Authority in 2000 as an environmental specialist for over six years in the Marine Pollution Control Section. From 2005-2010, she was a director of Marine conservation department and from 2010-2015 Director of Biodiversity Department. From Mid-2015 until recently, she has been working as an assistance director general of nature conservation.

Ms. Fatema AL SULAITI (Qatar)

Dr Fatema Al Sulaiti is a highly experienced art historian, specializing in Islamic art and architecture, her work encompasses academic pursuits, cultural fieldwork. Her PhD focused on Islamic architecture, with an eye towards its impact, past and present, on urbanism, landscape design and conservation. She believes that through the application and reinterpretation of historical Islamic building techniques and urban planning models, the shared cultural heritage of the modern Islamic world is both reinforced and rejuvenated. She has done extensive work in cultural fields since 2007, both within the classroom and out, taught numerous courses at universities while continuing to actively publish new research in both English and Arabic covering many topics within the greater field of Culture and Architecture. Her work has

garnered global recognition, including her study on the Role of Modern Design in Contemporary and Traditional Architecture, which won international accolades. In addition, this dual-track of scholarship and archaeological fieldwork has effectively fused in her role managing and advising for museums. Dr Fatema is currently the Director of International Cooperation at Qatar Museums. She believes Qatar has much to offer the world in the field of culture protection and is dedicated to ensuring the nations success as a valued member of the UNESCO.

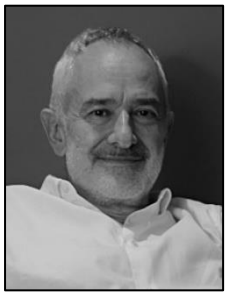
Ms. Orit BORTNIK (Israel)

Orit Bortnik is the Director of the Archeology and Heritage Department at the Israel Nature and Parks Authority (INPA). She has the responsibility for treatment at Archaeological sites, including recommendations for conservation, monitoring and maintenance, and is in charge of the professional management and guidance of the conservation teams. She also formulates the Authority's policy on the treatment of archeology and heritage sites, and accompany archaeological expeditions of academic research institutions – handling permit applications for excavations, surveys and studies. She holds a B.A degree in archeology and art, a Master's degree in the conservation of built heritage and is a PhD student in the field of heritage conservation and sustainable tourism at world heritage sites.

Mr. Amran HAMZAH (Malaysia)

Dr. Amran Hamzah is a Professor in Tourism Planning at Universiti Teknologi Malaysia, where he has been teaching for 40 years. His areas of specialisation are tourism policy planning and the interface between community-based ecotourism and protected area management. In addition to his academic duties, Amran has successfully led more than 100 consultancy projects for national and international clients. Amran was elected as an IUCN Regional Councillor for the 2016-2021 term. He is currently serving as a Regional Vice Chair for IUCN-WCPA (World Commission on Protected Areas) and is on the Advisory Board of the UNTWO Best Tourism Villages of the World Initiative. He has also been actively involved in World Heritage especially the incorporation of Asian values in cultural heritage management.

Mr. Juan Luis ISAZA LONDONO (Colombia)



Juan Luis Isaza Londoño is an architect specialized in cultural management and cultural heritage protection. Former National Director of Heritage of the Ministry of Culture of Colombia, he is currently the Academic Director and professor of the International Postgraduate Course in Heritage and Sustainable Tourism at the National University of Tres de Febrero, Untref, and the UNESCO Chair in Cultural Tourism of the Association of Friends of the National Museum of Fine Arts, Aamnba (Argentina). He is also a Professor of the master's degree in Tourism Planning and Management at the Universidad Externado de Colombia. Juan Luis Isaza is currently a member of the International Council on Monuments and Sites, ICOMOS. He also has been an advisor for UNESCO, the World Monuments Fund, WMF, ICOMOS and the Governments of Chile, Colombia and Peru.

Ms. Nelia KUKOVALSKA (Ukraine)

Nelia Kukovalska is a Director General of the National Conservation Area "St. Sophia of Kyiv", Academician of the Ukrainian Academy of Architecture (2005), Honored Worker of Culture of Ukraine (2008), Corresponding Member of the Academy of Civil Engineering of Ukraine (2016), Member of the Association of European Councils (2020), Senior Specialist in the field of architecture, restoration, construction, practices of monument protection and museum work. From June 2000 – Director, from September 2003 – General Director of the National Conservation Area "St. Sophia of Kyiv". Nelia Kukovalska is the leader and one of the authors-developers of a number of programs for preserving the architectural heritage of the Conservation Area and the strategy of museum activities aimed at ensuring scientifically sound protection (conservation, restoration, rehabilitation and museification) of architectural monuments of the Conservation Area.

Ms. Helene MARSH (Australia)

Emeritus Professor Helene Marsh, James Cook University Australia, an expert in natural heritage and biodiversity conservation, was a member of the Australian delegation to the World Heritage Committee from 2018-2021. As a Vice-President of the Australian Academy of Science, she led a recent roundtable process in consultation with the Australian Academy of Law, involving 18 experts in climate science, climate vulnerability assessment, IPCC processes, cultural, natural and Indigenous heritage, outlook reporting, site management, World Heritage system processes, environmental law, international law and diplomacy to develop a menu of ideas to facilitate the operational challenges required for the World Heritage system to address the consequences of climate change.

Ms. Shaemma Rashed Mahmoud Mohamed MEBWANA (United Arab Emirates)

Shaemma Rashed Mahmoud Mohamed Mebwana is a Climate Change Analyst at the Ministry of Climate Change and Environment in Dubai, UAE. She is leading the Adaptation of Primary Sectors to Climate Change Project & the development of National Sectoral Action Plan on Climate Change Adaptation. She supports the outreach agenda structure for the Climate Change Department & international engagement and has participated in the development of the UAE Climate Change Research Network research agenda. She is also assisting in the development of UNESCO Regional Report on Knowledge and Youth-Led Climate Action in the Arab Region. She provides support in the development of National MRV and GHG emission modeling expansion and assist with the Paris Agreement requirements (NDC, National Communication, etc.) and with the UAE's climate agenda (e.g., supporting the preparation for COP27 & COP28). She also participated in COP26 negotiation & leading the youth delegates.

Mr. Ntando MKHIZE (South Africa)

Ntando C.S. Mkhize is currently employed in the South African National Department of Forestry, Fisheries and the Environment (DFFE) as a Deputy Director, responsible for the biodiversity and climate change work programme. I have a qualification in BSc (Biological Sciences), a BSc Honours (Environmental Management), as well as a Masters' Degree in Environmental Management from the University of the Free State, South Africa. I am also currently enrolled for a Master of Science: Interdisciplinary Global Change Studies with the University of the Witwatersrand (Wits) in Johannesburg, South Africa. I possess about 15 years of cumulative professional-level experience in the area of biodiversity conservation and planning as well as climate change adaptation for the biodiversity sector in South Africa. About seven years of this experience have been spent on coordinating biodiversity and climate change activities relating to strategy and policy development as well as programme design and management in South Africa's Biodiversity and Ecosystems Sector.

Ms. Gabriela Mora NAVARRO (Mexico)

Gabriela Mora Navarro is the current Head of Research Department, Coordinación Nacional de Conservación del Patrimonio Cultural, Instituto Nacional de Antropología e Historia (INAH). Cultural heritage conservation and management specialist (Bachelor´s degree in Conservation, Master of Science in Applied Geology), her current activities include coordination of the research laboratories and archaeological conservation projects at the Coordinación Nacional de Conservación del Patrimonio Cultural INAH, collaboration in inter-agency monitoring research projects in Palenque, Calakmul, Teotihuacan, and Templo Mayor Archaeological Sites. INAH representative in the Working Group on Adaptation Policies (GT-ADAPT) of the Intersecretariat Commission on Climate Change (CICC), of the Secretariat of Environment and Natural Resources, Mexico, and designated Focal Point to the Flexible Mechanism on Climate Change, promoted by the Greek Government.

Mr. Carlo OSSOLA (Switzerland)

Member of the IUCN-WCPA specialising in natural and landscape heritage management, Carlo Ossola collaborates with the Federal Office for the Environment in Switzerland and is a member of the Swiss Commission for UNESCO. Active in the evaluation of the state of conservation of World Heritage properties, in impact studies and in the protection of World Heritage properties.

Ms. Ave PAULUS (Estonia)

Ave Paulus is president of the ICOMOS Estonia, member of ISCCL, ICLAFI, Rights- Based Approaches, and Climate Change and Heritage working groups. She is an expert from Estonia in European Union OMC Group on Strengthening Cultural Heritage Resilience for Climate Change. She has master's degrees from the Estonian Academy of Arts (heritage conservation and restoration) and Tartu University (semiotics and theory of culture). Her doctoral thesis relates to the topic of community-based heritage protection. She has coordinated cooperation between heritage communities, states, and universities in more than 30 development projects concerning heritage management. She is a senior specialist for cultural heritage issues in the Environmental Board of Estonia, Council member of Virumaa Museums, spokesperson of the intangible heritage of the Folk Culture Centre, Board member of Lahemaa and Alutaguse National Parks Cooperation Councils. Paulus has presented her research and practice results at some national and international scientific events.

Ms. Maria PIANIGIANI (Italy)

Maria Pianigiani is an architect who works at the UNESCO Office of the General Secretariat - Italian Ministry of Culture. She coordinates projects of the new nominations and management plans as well as the activities of implementation of the Convention for WH properties already registered in the World Heritage List. Since her Ph.D. in "Process materials and constructions in Civil and Environmental Engineering for the protection of the historic monumental heritage" she has been engaged in many fields concerning the protection of cultural heritage such as damage assessment, seismic resilience in addition to reconstruction, repair and restoration of strategic and cultural buildings.

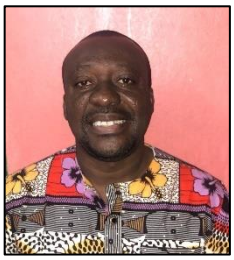
Ms. Magdolna PUHA (Hungary)

Magdolna Puha works for the Deputy State Secretariat for Architecture, Construction and Heritage Protection in the Hungarian Prime Minister's Office as government officer for World Heritage, expert on landscape architecture. She was a Committee Member at the extended 44th session of the World Heritage Committee, as part of the Hungarian delegation. She has master degrees from the Corvinus University as a landscape architect specialised on landscape- and nature protection. Her doctoral thesis relates to the topic of planning methodology for riverside recreation areas and recreational landscape capacity researching. She was working on European Union found tenders of Revitalization of the nature environment and Protected historical gardens and botanical gardens. She is member of the National Committee of Geoparks in Hungary representing cultural heritage, and she attended on the 10th Carpathian Convention Implementation Committee Meeting and on the 6th Meeting of the Conference of the Parties of the Carpathian Convention (COP6) representing cultural heritage. She is participating in projects and exhibitions of the Hungarian Heritage House with the aim to preserve the values rooting from traditional Hungarian folk art by designing handicrafts.

Mr. Bomin SU (China)

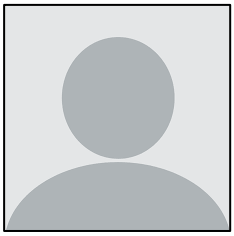
Bomin Su is a Doctor of Science, Researcher. Currently, he serves as the director of Dunhuang Academy. He graduated from the Physical Chemistry major, Chemistry Department of Lanzhou University in 1985. He gained a master degree and doctorate in Analysis Chemistry major from Lanzhou University in 1996 and 2003 respectively. He started to work in Dunhuang Academy since 1992. He was a visiting researcher at the Conservation Science Laboratory of Tokyo University of the Arts since June 2000 to May 2002; the Getty Conservation Institute of the United States during January to July of 2006. He devoted himself to the conservation on cultural heritage for nearly 30 years, which mainly involves the aspects of conservation on ancient murals, material analysis and testing, and preventive conservation on cultural heritage. He was responsible for several conservation projects of Mogao Grottoes at Dunhuang, which were based on the cooperation between Dunhuang Academy and the Getty Conservation Institute of the United States, as well as the Tokyo National Research Institute for Cultural Properties of Japan. As principal leaders, he finished more than 20 national projects. Besides, he published 60 plus academic papers in the name of the first author and co-author; co-published 5 monographs, owns 9 technical patents.

Mr. Sylvain K. TIEGBE (Côte d'Ivoire)



Sylvain K. Tiegbe was the co-editor of the nomination file for the inscription of the Historic Town of Grand-Bassam on the UNESCO World Heritage List - the inscription of the Historic Town was adopted in 2012. From 2012 to 2016, he was the executive secretary of the management programme of the Historic Town. He is a member of ICOMOS Côte d'Ivoire and the author of a number of studies and papers related to the inventory of cultural heritage (both tangible and intangible) and endogenous knowledge as a tool for resilience.

Mr. Hoseah WANDERI (Kenya)



Hosea Wanderi is a research scientist and the Wander leader of the Kenyan Focal Point on the World Heritage Convention and works for the Directorate of Antiquities, Sites and Monuments, National Museums of Kenya.

Ms. Abena WHITE (Saint Vincent and the Grenadines)

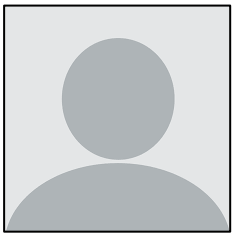
Abena White is a graduate in Natural Resources and Environmental Management with a specialization in Climate Change from the Center for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus, Barbados. She currently is the Climate Change and Natural Resource Management Officer (assigned) at the National Parks, Rivers and Beaches Authority in the St. Vincent and the Grenadines and is responsible for the implementation of climate change and environmental conservation work including mainstreaming climate change into institutional policies and plans.

Observers

Ms. Abir ARKAWI (Syrian Arab Republic)

Abir Arkawi is an active architect, teaching at the Faculty of Architecture at Damascus University, Syria and working for Municipality Administration Modernisation (MAM), Damascus. She is also an expert to UNDP/PRC (Regional Planning Commission, Syria) Management natural and cultural sites, Syria, 2011.

Ms. Patricia Ayelen AMIGO (Argentina)



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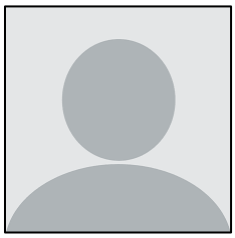
Ms. Aidatul Fadzlin BAKRI (Malaysia)

Aidatul Fadzlin Bakri is a Senior Lecturer at the Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM), Malaysia. Prior to pursuing an academic career, she worked for six years in an architectural firm, where she gained experience in residential, commercial, and transportation terminal projects. Aidatul holds a PhD in Cultural Heritage from the University of Birmingham in the United Kingdom, as well as a MSc. in Heritage and Conservation Management and a Bachelor of Architecture (Hons.) from UiTM. She is passionate about conducting research and consultation in the field of heritage and conservation, with a particular emphasis on heritage values, place identity, and the interaction of people with designated heritage sites.

Mr. Mod Salleh Bin DAIM (Malaysia)

Mod Salleh Bin Daim is the Head of the Sustainable Community Development Centre (SCDC) Office of Industry, Community and Alumni Network (ICAN) at the Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia. He is also a Senior Lecturer (FSPU), Centre of Studies for Park and Amenity Management, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia. His areas of expertise range from Protected Area & Biodiversity Management, Community-based Conservation, Management and Ecotourism, Park, Recreation and Tourism Resource Management.

Mr. Cesar DE OLIVERA LIMA BARRIO (Brazil)



Graduated in Law from the Pontifical Catholic University of São Paulo (2001), Master in Diplomacy from Instituto Rio Branco (2005) and Teaching High-Secondary from the American School and Mackenzie College (1995), he worked as second secretary of the Ministry of Foreign Affairs and Assistant Professor at the Instituto Rio Branco. He has experience in the area of History, with emphasis in Brazilian History. He currently works as Counsellor at the Permanent Delegation of Brazil to UNESCO.

Ms. Milena Andrade DNEBOSKA (Czech Republic)

Milena Andrade Dneboská works since 2014 for the National Heritage Institute, Prague regional office, in charge of historical parks, gardens and composed green spaces within Historic Centre of Prague as well as in its attached heritage zones. She holds a MSc. in Landscape Architecture - 2000, Mendel University of Agriculture and Forestry in Brno, Czech Republic), MA in Preservation of Architectural and Landscape Heritage - 2006, University of Évora, Portugal (and was a PhD candidate at University College Dublin, Ireland). In Portugal, she participated to several international investigation projects related to multifunctionality of landscape, its heritage and memory. In Ireland, she focused on ecological aspects of designed landscapes and recently in Czech Republic, she participated to a national project of historic landscapes characterisation.

Ms. Marie MAHIN (France)

Marie Mahin is the World Heritage Officer at the Ministry of Ecological Transition in France. She is in charge of the support at the national level of the candidatures for the inscription of natural sites on the World Heritage List, as well as the management of properties, once they are inscribed on the World Heritage List.

Mr. George OWOYESIGIRE (Uganda)

Starting as a Field Ranger, George Owoyesigire has risen the ranks to Deputy Director for Community Conservation at the Uganda Wildlife Authority. Throughout his career, he has been a passionate and dependable advocate for communities living near wildlife. His foremost intervention of bee-keeping for human-elephant conflict mitigation has changed lives around Uganda's Kibale National Park. Not only has it deterred elephants from raiding crops and destroying property, it has also generated much-needed income for poor rural communities through the sale of honey, single-handedly turning around community attitudes towards conservation. A versatile conservationist, he is as comfortable in a community meeting as he is drafting policy. He has been key to the formulation of national policy for the management of human-wildlife conflict, ensuring communities and wildlife can continue to co-exist with mutual benefit. He is a graduate from the Oxford Brookes University, U.K.

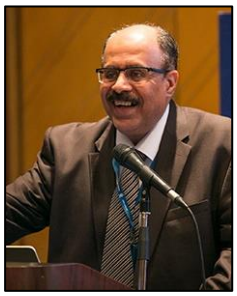
Ms. Ľubica PINČÍKOVÁ (Slovakia)

Lubica Pincikova is architect, methodologist for the protection and promotion of cultural heritage, and expert advisor for the UNESCO World Cultural Heritage. She is head of the Department of National Cultural Monuments and Historic Sites in the Monuments Board of the Slovak Republic. She works in the field of international regional cooperation and actively participated in addressing shared regional, as well as global issues. She is author or co-author of several books, numerous articles and scientific papers concerning monuments protection and several nomination projects and management plans of World Heritage Sites. She is a president of the National Committee of ICOMOS Slovakia.

Ms. Birgitta RINGBECK (Germany)

Dr. Birgitta Ringbeck graduated in History of Art, Archaeology and Ethnology in Münster, Bonn and Rome. From 1990 to 1997, she headed the Department of Preservation of Regional Traditions and Culture at the Nordrhein-Westfalen-Stiftung, a foundation for the protection of nature, local heritage and culture. Then, until end 2011, she was the director of Supreme Authority for the Protection and Conservation of Monuments at the Ministry of Construction and Transport in North Rhine-Westphalia. Since 2002, she has been the official responsible for UNESCO World Heritage matters in the Standing Conference of the Ministers of Education and Cultural Affairs of the Federal States ("Länder") of the Federal Republic of Germany, and since January 2012, she has been the cultural expert in the German Delegation to UNESCO´s World Heritage Committee (2011-2015: Germany was member of the World Heritage Committee). She is chairperson of the board of trustees of the German World Heritage Foundation. Her primary fields of expertise are monument conservation, World Heritage and World Heritage management. Her publications include papers on architecture history, monument conservation and the World Heritage Convention, including the practical guide *Management Plans for World Heritage Sites* with chapters on sustainable development climate change.

Mr. Mohammed Y. S. SHOBRAK (Saudi Arabia)



Professor at the Biology Department, Science College, Taif University in Saudi Arabia, Mohammed Y. S. Shobrak specializes in Zoology, and more specifically in Animal Ecology and Wildlife Conservation. He has extensive field experience, notably on Wildlife Research, Management and Monitoring, Re-introduction of endangered species (houbara bustard, Arabian oryx, Red necked Ostrich and Sand Gazelle), Teaching and training Biodiversity Studies, which included in the Environmental Impact Assessment studies, Red Listing of species (involved in workshops to develop regional red list of the Arabian Peninsula' fauna), as well as in international wildlife agreements (Presented Saudi Arabia in CMS, CITES, AEWA and birds of prey and owls MoU).

H.E. Ms. Yvette SYLLA

Ambassador and Permanent Delegate of the Republic of Madagascar to UNESCO, Chairperson of the Open-ended Working Group of States Parties in relation to Resolution **23 GA 11** concerning climate change and World Heritage. Professor of History at the University and national President of the Party "Madagasikara Mandroso" (Mama), Yvette Sylla is a well-known figure in the political world; she has already been twice minister, respectively of Foreign Affairs and Trade.

Advisory Bodies

Ms. Cathy DALY (ICOMOS)

Dr Cathy Daly is a Senior Lecturer in Conservation at the University of Lincoln UK and Research Consultant with Carrig Conservation Ltd. Ireland. Cathy is an archaeological conservator and holds an MA in World Heritage Studies and a PhD in heritage management. Cathy's research focusses on climate change and cultural heritage. She was a participant in the 2017 Vilm workshop on the update to the 2007 policy and member of the ICOMOS WG that provided comments on the 2021 draft. She is a bureau member of the ICOMOS International Working Group on Climate Change and co-lead of working group 4 of the Climate Heritage Network.

Mr. Matthew EMSLIE-SMITH (IUCN)

Matthew Emslie-Smith is a World Heritage Monitoring Officer within IUCN's new Heritage, Culture and Youth Team in the Centre for Society and Governance. He coordinates the monitoring on the state of conservation of natural and mixed World Heritage sites in Latin America and the Caribbean, Central Eastern and South-Eastern Europe and Central Asia, and Oceania. He is also the Programme focal point on climate change and nature-based solutions and leads on the development of the IUCN World Heritage Outlook, following the launch of Outlook 3 in December 2020. Prior to joining IUCN, he worked in Central Asia on issues of governance and infrastructure development surrounding protected and conserved areas. Hailing from Dundee, Scotland, he holds a B.Sc in Zoology from the University of St Andrews, UK, and an M.Sc in Conservation Science and Policy from the University of Exeter, UK.

Mr. Rohit JIGYASU (ICCROM

Rohit Jigyasu is a conservation architect and risk management professional, President of ICOMOS-India from 2014-2017. He has been working with several national and international organizations such as Archaeological Survey of India, Indian National Trust on Art and Cultural Heritage (INTACH), Indian National Institute of Disaster Management, UNESCO, ICCROM, the World Bank and Getty Conservation Institute for consultancy, research and training on Disaster Risk Management of Cultural Heritage. He now works for ICCROM where he provides specialized knowledge in the areas of disaster risk management for cultural heritage. He is

also a member of the ICOMOS Climate Change and Heritage Working Group. He was one of the two international experts contracted by UNESCO to work on drafting the first version of the updated *Policy Document on Climate Action for World Heritage* in 2019.

Mr. Peter SHADIE (IUCN)

Peter Shadie is IUCN's Global Coordinator, World Heritage, based in the organisation's headquarters in Gland, Switzerland. He served as Ad-Interim Director of the IUCN World Heritage Programme for two years in 2019-2020. Through the period 2000 to 2017, he was a member of the IUCN World Heritage Panel, which reviews World Heritage nominations and provides technical advice to IUCN. Peter has more than 35 years' experience working in conservation. He began his career as a park ranger with Australia's New South Wales National Parks and Wildlife Service before joining IUCN's Global Protected Areas Programme in 1999 where he was Executive Director for the 2003 IUCN World Parks Congress. From 2006 to 2010 he led IUCN's work on protected areas across 23 countries as Head of its Protected Areas Programme in Asia. He then returned to his homeland Australia, working as a freelance consultant. Peter is also a former CEO and Director of the Blue Mountains World Heritage Institute and a member of the IUCN World Commission on Protected Areas.

UNESCO Secretariat (Culture Sector)

Mr. Lazare ELOUNDOU ASSOMO, Director, World Heritage

Ms. Jyoti HOSAGRAHAR, Deputy-Director, World Heritage

Ms. Frédérique AUBERT

Mr. Alessandro BALSAMO

Mr. Richard VEILLON

Mr. Guy DEBONNNET

Ms. Susanna KARI

Mr. Tales CARVALHO RESENDE

Ms. Jessica ROLAND WILLIAMS

Ms. Garance AMELINE

ANNEX 4

Decision 44 COM 7C adopted by the World Heritage Committee at its extended 44th session (Fuzhou/Online, 2021)

7C. Draft updated Policy Document on the impacts of climate change on World Heritage properties

Decision: 44 COM 7C

The World Heritage Committee,

1. Having examined Document WHC/21/44.COM/7C,
2. Recalling Decisions **40 COM 7**, **41 COM 7**, **42 COM 7** and **43 COM 7.2**, adopted at its 40th (Istanbul/UNESCO, 2016), 41st (Krakow, 2017), 42nd (Manama, 2018) and 43rd (Baku, 2019) sessions respectively,
3. Takes note with satisfaction of the wide range of climate change-related activities undertaken by the World Heritage Centre, in collaboration with the Advisory Bodies;
4. Thanks the State Party of the Netherlands for having funded the project to update the 2007 Policy Document on the impacts of Climate Change on World Heritage properties, and expresses its gratitude to all the experts and representatives of States Parties, of the World Heritage Centre and of the Advisory Bodies who contributed to the meetings of the Technical Advisory Group;
5. Takes note with appreciation that a wide diversity of stakeholders of the World Heritage Convention (States Parties, site managers, Advisory Bodies, World Heritage Centre and representatives of local communities, indigenous peoples, academics, NGOs and civil society) were able to contribute to the updating process through the online consultation launched by the World Heritage Centre;
6. Takes note of the new title proposed for the updated Policy Document to become “Policy Document for Climate Action for World Heritage”;
7. Endorses the draft "Policy Document on Climate Action for World Heritage”, as presented in Annex 1 of Document WHC/21/44.COM/7C, and requests the World Heritage Centre, in consultation with the Advisory Bodies, to revise it by incorporating views expressed and amendments submitted during the extended 44th session and, as appropriate, to consult Committee members, especially concerning the following points:
   a) the fundamental principle of common but differentiated responsibilities and respective capabilities (CBDR-RC), which is one of the basic pillars of United Nations Framework Convention on Climate Change (UNFCCC),
   b) the alignment of climate change mitigation actions with the CBDR-RC and the Nationally Determined Contributions accepted under the UNFCCC and the Paris Agreement, except on an entirely voluntary basis,
   c) the need for support and capacity-building assistance, as well as the encouragement of technology transfer and financing from developed to developing countries;
8. Recalls Decision **41 COM 7** and reiterates the importance of States Parties undertaking the most ambitious implementation of the Paris Agreement of the UNFCCC, and strongly invites all States Parties to ratify the Paris Agreement at the earliest possible opportunity and to undertake actions to address Climate Change under the Paris Agreement consistent with their common but differentiated responsibilities and respective

capabilities, in light of different national circumstances, that are fully consistent with their obligations within the World Heritage Convention to protect the Outstanding Universal Value (OUV) of all World Heritage properties;

9. Decides to transmit the draft "Policy Document on Climate Action for World Heritage", following final revisions, for review and adoption at the 23rd session of the General Assembly of States Parties to the Convention in 2021;

10. Also requests the World Heritage Centre, jointly with the Advisory Bodies, once the "Policy Document on Climate Action for World Heritage" is adopted by the General Assembly of the States Parties and within the available resources, to elaborate proposals for specific changes to the *Operational Guidelines* that would be required to translate the principles of this Policy Document into actual operational procedures, and to develop education and capacity-building initiatives that would be needed to enable wide implementation of this Policy Document, and calls on States Parties to contribute financially to this end;

11. Further requests the World Heritage Centre, in parallel with the processes outlined in Paragraph 10, to convene a panel of experts drawn from the ad-hoc Working Group, World Heritage Centre, the Advisory Bodies and other qualified experts in the field of climate science and heritage to meet by March 2022 and also calls on State Parties to contribute financially to this end;

12. Requests furthermore the World Heritage Centre, jointly with the Advisory Bodies, and subject to available resources, to consider preparing a Guidance Document to facilitate effective implementation of, and support for, the actions, goals and targets of this Policy Document, which could include indicators and benchmarking tools for measuring and reporting progress towards achieving the World Heritage Climate Action Goals, and further calls on States Parties to support this activity through extrabudgetary funding;

13. Encourages the States Parties, the World Heritage Centre and the Advisory Bodies to disseminate widely the "Policy Document on Climate Action for World Heritage", once adopted, through appropriate means to the World Heritage community and the broader public, including in local languages, and to promote its implementation;

14. Recommends that the "Policy Document on Climate Action for World Heritage" be interpreted in the context of the UNFCCC, the Paris Agreement (2015) and the United Nations 2030 Agenda for sustainable development, and in conjunction with the Policy Document for the integration of a sustainable development perspective into the processes of the World Heritage Convention (2015);

15. Urges States Parties and all stakeholders of the Convention to urgently integrate climate change mitigation and adaptation actions in risk preparedness policies and action plans, in order to protect the OUV of all World Heritage properties, in line with the "Policy Document on Climate Action for World Heritage";

16. Further recommends that World Heritage-related Category 2 Centres and UNESCO Chairs prioritize issues related to the implementation of the "Policy Document on Climate Action for World Heritage" within their capacity-building and research initiatives;

17. Finally requests the World Heritage Centre, in consultation with the Advisory Bodies, to present a progress report on the implementation status of the "Policy Document on Climate Action for World Heritage" at its 48th session, after four years of implementation.

ANNEX 5

Resolution 23 GA 11 adopted by the General Assembly of States Parties to the World Heritage Convention at its 23rd session (UNESCO, 2021)

11. Policy Document on Climate Action for World Heritage

Resolution: 23 GA 11

The General Assembly,

1. Having examined Documents WHC/21/23.GA/11 and WHC/21/23.GA/INF.11,
2. Recalling Decisions **40 COM 7**, **41 COM 7**, **42 COM 7**, **43 COM 7.2** and **44 COM 7C**, adopted respectively at the 40th (Istanbul/UNESCO, 2016), 41st (Krakow, 2017), 42nd (Manama, 2018), 43rd (Baku, 2019) and extended 44th (Fuzhou/online, 2021) sessions of the World Heritage Committee,
3. Thanking the State Party of the Netherlands for having funded the project to update the 2007 Policy Document on the impacts of Climate Change on World Heritage properties, and expressing its gratitude to all stakeholders of the *World Heritage Convention* who contributed to this process,
4. Noting the debate on this item that took place during the extended 44th session of the World Heritage Committee (Fuzhou/online, 2021), as well as the comments expressed by the Committee members on this draft through a written consultation process,
5. Noting that the World Heritage Committee has endorsed the draft "Policy Document on Climate Action for World Heritage", as presented in Annex 1 of Document WHC/21/44.COM/7C, at its extended 44th session (Fuzhou/online, 2021), and recommended its review in line with the principles mentioned in paragraph 7 of Decision **44 COM 7C**,
6. Takes note of the "Policy Document on Climate Action for World Heritage", as endorsed by the extended 44th session of the World Heritage Committee, and decides to establish an open-ended working group assisted by the World Heritage Centre and the Advisory Bodies, with the mandate to review and develop its final version taking into account Decision **44 COM 7C**, as well as proposals for its effective implementation, for consideration by the 24th session of the General Assembly of States Parties;
7. Recommends that the panel of experts as agreed in Decision **44 COM 7C**, be convened before March 2022, with a mandate to:
   a) consider revisions to the Policy Document and its unresolved policy matters, and
   b) report to the open-ended working group established in paragraph 6, to inform its consideration of the Policy Document and proposals to implement it;
8. Encourages States Parties to provide extra-budgetary funding for the open-ended working group.