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Science

ADDRESSING THE EXISTENTIAL THREAT: CLIMATE CHANGE AS A CATALYST FOR REFORM IN WORLD HERITAGE

World Heritage Convention and Climate Change Roundtable Report
Australian Academy of Science 6 December 2021



ACKNOWLEDGEMENT OF COUNTRY

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Cover image: St Mark's Square in Venice during a recent flood event. 'Venice and its Lagoon' was inscribed on the World Heritage List in 1987. There are fears that climate change will adversely impact the Outstanding Universal Value of this iconic property.

Credit: Ihor / Adobe Stock.

Back cover image: Tae Rak channel and holding pond at the Budj Bim Cultural Landscape in Australia, a World Heritage site where there are fears that climate change may impact on the cultural values for which it was listed in 2019. **Credit:** Tyson Lovett-Murray.

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FOREWORD



PROFESSOR JOHN SHINE

President, Australian Academy of Science

The Australian Academy of Science is dedicated to the excellence of Australian science, including providing independent, authoritative and influential scientific advice. The Academy's independence and convening power made us the ideal host for the World Heritage Convention and Climate Change Roundtable, and we are pleased

to have been able to bring together a broad range of expertise for this purpose in consultation with the Australian Academy of Law.

Climate change is putting cultural and natural assets of the world at risk, and Australia is no exception with many of our World Heritage properties at high risk from climate change. The challenges that climate change poses to World Heritage properties is complex, requiring multidisciplinary expertise including technical and legal experts in natural and cultural heritage, climate change, and diplomacy. The ideas generated by this roundtable aim to help the World Heritage community address the threat of climate change by addressing collective challenges, rather than on a property-by-property basis.

I want to thank the roundtable organiser, Academy Vice President and Secretary for Biological Sciences, Emeritus Professor Helene Marsh AO, for her significant contribution to this project. I would also like to thank Academy Fellow The Hon Dr Annabelle Bennett AC SC for chairing the roundtable discussion, and all participants for their time and contributions. Finally, I would like to express our gratitude for the philanthropic contributions that help support science policy at the Academy. Without this support, this important work would not be possible.

EXECUTIVE SUMMARY

THE CHALLENGE

- Climate change is now one of the most significant threats to all World Heritage (WH) properties and is already the major threat to WH properties inscribed for natural values.
- Climate change mitigation requires global efforts to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. All countries need to undertake urgent, sustained and deep reductions in global greenhouse gas emissions to limit global warming to 1.5°C.
- Because global greenhouse gas reduction strategies are vital to the conservation of WH properties, for many World Heritage properties, it will ultimately be impossible to maintain the Outstanding Universal Value (OUV) for which they were inscribed in the historical state, even if effective adaptation and on-site mitigation strategies are applied.
- This situation poses a significant challenge to the operations of the WH system, which is also confronted by the increasing politicisation of decision-making and an ongoing insufficiency of resources.
- The concept of OUV is at the core of the WH Convention and its processes. For many WH properties, OUV has been interpreted assuming that the environment is largely stationary, an assumption that is now incorrect.
- For the WH system to be able to address climate change as well as these other challenges, reforms will need to be substantive. Although amendment of international conventions is notoriously difficult, the WH Convention is a treaty where many important matters are dealt with in subsidiary documents, especially its Operational Guidelines (OGs), which are much easier to amend, if the States Parties so wish. Nonetheless, effective operational reforms to the OGs in response to climate change are likely to be highly contested.
- Our aim was to help protect the world's most precious heritage places by developing a menu of ideas to facilitate the operational changes required for the WH system to address the consequences of climate change.

METHODS

- In consultation with the Australian Academy of Law, the Australian Academy of Science assembled online 18 Australian experts in climate science, climate vulnerability assessment, IPCC processes, cultural, natural and Indigenous heritage, outlook reporting, site management, WH system processes, environmental law, international law and diplomacy to develop this menu of ideas.
- We did not aim to achieve consensus and not all participants supported every idea presented here. Our intent is to produce several outputs to contribute to global thinking about this issue rather than prescriptive outcomes or recommendations. This report is the foundation, comprehensive output.

IDEAS FOR CHANGE

- A major decision for the WH Committee will be to determine whether it is appropriate to allow the attributes the OUV of WH properties under the criteria for which they were listed to change within objectively defined limits. If so, **Limits of Acceptable Change** to integrity could be developed for all properties and to authenticity for properties listed under cultural criteria. The concept of Limits of Acceptable Change is not new to the WH system, but its use has been very limited and may require changes to some national laws.
- Streamlined processes for variations to Statements of OUV within agreed limits could apply not only to the degradation of OUV from climate change, but also in other circumstances including positive changes in OUV. Consideration could be given to a **system of approval of significant and minor changes to a statement of OUV**, along the lines of significant and minor changes to property boundaries.
- Widespread use of **climate vulnerability assessments** will be essential to several WH processes discussed in this report. Climate vulnerability assessment has already been used for some properties. Clear guidelines about the requirements for such assessments would need to be developed, noting national laws may affect the format of any assessment at the State Party level. There are extensive international parameters on cultural and natural impact assessment that should inform the basic parameters of such assessments.
- We considered the proposal that **climate change be explicitly considered in the nomination dossier** and suggest that this dossier also be required to include: (a) a climate vulnerability assessment; and (b) a statement in the management plan of the active steps that will be undertaken to mitigate climate change (at the property level) and adapt to climate change impacts.
- Ideas for **changes to WH reporting** include:
 1. increased State Party engagement in the State of Conservation process, especially in the development of realistic responses compatible with the capacity of the relevant State Party to deliver them
 2. Periodic Reporting that is thematic as well as geographic
 3. the WH Centre seeking to work closely with the IPCC to develop a special report on WH and Climate Change
 4. replacing the existing reporting processes with a new system, which is based on a cycle of Outlook-style assessments for thematic groups of properties and includes recommendations for climate adaptation for each property developed with and tailored to the capacity of the relevant State Party.
- **OUV remains fundamental** to a property being inscribed on the WH List or being retained on that List. The Convention therefore needs a mechanism to identify WH under threat.
- The Convention enables properties in ascertained or potential danger from climate change to be included on the List of World Heritage in Danger (IDL). However, **this may not be the best way of recognising the impacts of climate change on OUV**, given the large number properties likely affected and current political challenges associated with inscribing a property on the IDL.

- We considered the advantages and disadvantages of a range of **alternatives to recognise the threat of climate change**, including:
 1. changes to the processes inscription on the IDL, such as thresholds for IDL Listing of various types of properties
 2. batched inscriptions of properties eligible for IDL due to climate impacts based on thematic assessments
 3. a sub-category of IDL – In Danger from Climate Change
 4. the idea of a new list of properties that are deemed vulnerable to climate change after independent expert assessment. This list, which could include both properties on the WH List and on the IDL, would not have the same legal standing as the lists established by the WH Convention, but could be a focus for fundraising for climate adaptation.
- The loss of OUV underpins decisions about **deleting a property from the WH List**. The objectivity of the deletion process could be strengthened by developing explicit thresholds for different types of properties. Specific focus could then be placed on climate change as well as other circumstances where the attributes that convey the OUV of the property have been impacted to such an extent that OUV is no longer present.

CONCLUSIONS

- Implementing a subset of these options could lead to positive changes in the WH system by:
 1. strengthening the role of Advisory Bodies by making the system more overtly objective
 2. increasing engagement with States Parties, Indigenous peoples and local communities in the development of realistic adaptation responses tailored to local capacity
 3. increasing networking opportunities for site managers through periodic thematic reporting based on Outlook-style processes with recommended adaptation responses
 4. reducing politicisation of decision-making in the WH system through batched IDL listing or creation of a separate list for climate vulnerable properties
 5. improving capacity to attract funds for climate adaptation.
- **Substantive reform of the Operational Guidelines would be a fitting project to commence in 2022, the 50th anniversary of the Convention.** We hope these ideas will contribute to thinking about these matters, which are existential to the future of the Convention and its capacity to protect the world's most precious heritage places in the face of climate change.

1. INTRODUCTION

Outstanding Universal Value (OUV) is a precondition for the inscription of cultural, natural and mixed properties on the World Heritage (WH) List. The Convention does not define OUV - rather its Operational Guidelines (OGs) define OUV as being of 'cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole'.¹ Historically, OUV has been interpreted assuming that the environment is largely stationary, with variation around a static mean. Climate change demonstrates that this assumption is wrong.²

Climate change is now considered the greatest threat to the preservation of natural and cultural heritage. The mitigation of climate change will require global action to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system. The United Nations Framework Convention on Climate Change (UNFCCC) established an international treaty with the ultimate objective of stabilising greenhouse gas (GHG) concentrations in a period, which allows ecosystems to adapt naturally and enables sustainable development¹. To achieve this objective, countries will need to undertake urgent, sustained and deep reductions in global greenhouse gas emissions.

The impact of climate change on WH properties will be geographically uneven. The UNFCCC points out that 'low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems are particularly vulnerable to the adverse effects of climate change'.³ WH properties in such areas will thus be very susceptible to adverse climate change impacts.

Threats to the OUV of WH properties are already occurring at 1.1°C of globally averaged warming above pre-industrialised levels, even though this temperature is less than both the Paris Agreement to pursue efforts to limit warming to 1.5-2°C above pre-industrialised levels and high-emissions climate trajectories. The timeframes for ameliorating these impacts will be decades to centuries. Already, some impacts are not amenable to correction through human intervention because physical and biological limits have been exceeded. Some changes will continue even after the world achieves net zero emissions. For example, temperature will continue to increase due to committed warming from past emissions. The melting of glaciers and ice sheets lags behind global surface temperature warming. This slow response leads to committed sea level rise that will continue over the centuries and millennia following the cessation of emissions.⁴

When considered alone, the potential impact on a WH property from any single climate change-related event may not be greater than impacts from localised, non-climate events. However, climate-related impacts are distinct from localised events due to: (i) the wide range of climate factors, many interrelated; (ii) the broad spatial and temporal scales over which these factors have affected and will continue to affect WH properties; and (iii) the rapidly increasing frequency of impacts related to climate change as climate impacts are exacerbated.

¹ In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) established an international environmental treaty to combat 'dangerous human interference with the climate system', in part by stabilising greenhouse gas concentrations in the atmosphere. As of 2015, the UNFCCC has 197 parties including all United Nations member states.

Climate disturbances are predictable with varying levels of certainty, in both the severity and frequency of drivers and the level of localised impacts. However, this predictability (e.g. high certainty for committed warming and sea level rise) indicates that the values and/or management of virtually every WH property are likely to be affected to some degree by climate change. Some WH systems may be capable of adaptation to these changing conditions, naturally or through intervention strategies. However, there are limits to adaptation of both cultural and natural attributes (e.g. preferred temperature ranges of many species⁵) and implemented adaptation strategies can have unforeseen side effects. Importantly, both climate-related and localised events will occur and impact WH values – and the interactions between these events are likely to have compounding effects, because climate change is a threat multiplier. From a WH policy perspective, it is important to recognise that climate change impacts will result from factors beyond the control of an individual State Party, the corollary to which is the obligation of all signatories to avoid measures that, directly or indirectly, damage heritage.⁶ Thus, climate change represents a major challenge to the operations of the WH system, which is also confronted by the increasing politicisation of decision-making and ongoing lack of resources.⁷ Growth in the number of listed properties has not been paralleled by growth in funds, personnel or the organisational capacities available to the WH system.

For the WH system to be able to address climate change as well as other challenges, reforms need to be substantive. The amendment of international conventions is notoriously difficult. The WH Convention has never been revised and revision is unlikely. Fortunately, the Convention is an example of a treaty where many important matters are dealt with in subsidiary documents, especially its OGs, which give operational effect to the Convention. This situation enables the interpretation of the Convention to evolve over time to reflect changing knowledge and understanding of, and attitudes and approaches to, heritage values and their protection and management. The WH Committee, which consists of representatives from 21 States Parties elected for four-year termsⁱⁱ by the UNESCO General Assembly of States Parties⁶, is responsible for the implementation of the WH Convention including changes to the OGs.

In 2021, the 23rd session of the UNESCO General Assembly of States Parties considered the draft Policy Document on Climate Action for WH (2021).⁸ This document was developed by the WH Committee ‘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’. The General Assembly has referred the draft Policy to an ‘open-ended’ working party for further consideration.⁹ Once this Policy is adopted, revisions to the OGs will be required to translate it into the procedures that will enable its full implementation. These revisions may need to be incremental; however, given that the OGs are revised every few years, substantive change is possible. Nonetheless, acceptable solutions to these issues are likely to be highly contested.

The Academy used facilitated on-line discussion between Australian experts to generate ideas for addressing these issues with a view to producing several outputs, which we hope will contribute to global thinking about these matters.

ii According to the World Heritage Convention (Article 9), a Committee member's term of office is for six years. However, most States Parties choose voluntarily to be Members of the Committee for only four years, in order to give other States Parties an opportunity to be on the Committee.

This report is our foundation, comprehensive output.¹⁰ We did not aim to achieve consensus and not all our ideas are unanimously supported. It is hoped that these ideas will inspire others to think about these issues.

Meaningful reforms to the WH system would be fitting recognition of its 50 years of success, and maximise the opportunities for the world’s most valuable heritage to be effectively managed and transmitted to future generations, despite the impacts of climate change.

2. METHODS

We used a modification of the principles outlined by Sutherland et al. (2011) in their review of methods for collaboratively identifying emerging issues in science and policy.¹¹ The 18 participants were chosen based on their expertise and experience. Wherever possible, we chose people with expertise in multiple aspects of the problem.

Table 1

Details of the 18 participants’ expertise. The numbers in brackets indicate the number of people with that expertise. Most participants had more than one area of expertise.

- | | |
|---|--|
| <ul style="list-style-type: none"> • Climate science (2 experts) • Climate vulnerability assessment (1) • IPCC processes (1) • Cultural heritage (3) • Natural heritage (4) • Indigenous heritage (1) | <ul style="list-style-type: none"> • Outlook reporting (2) • Property management (1) • WH system processes (5) • Diplomacy (1) • Environmental law (6) • International law (5) |
|---|--|

The key, unresolved matters identified by the draft Policy Document on Climate Action for WH (2021) defined the scope of this project⁸:

- ‘Whether a property 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 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 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’.

Marsh, Smith and Terrill developed a set of questions about these matters. These questions were refined with input from several other participants and circulated to all 18 experts. The responses were synthesised in dot point format for discussion at the on-line, closed Roundtable, which was chaired by Bennett in December 2021. Smith

or Terrill introduced each major topic and Marsh briefly summarised each discussion. These conversations occurred verbally and in the ‘chat’ function of the on-line meeting software. Academy of Science policy staff took detailed notes, developed a short statement on the results of the Roundtable, circulated it to all participants for comment and released it on the Academy website the day after the Roundtable¹⁰, along with a media release.

During the discussion, some ideas were suggested that required follow-up by Marsh. Marsh prepared a draft report, which was circulated to all participants and revised in response to their comments.

In framing their ideas, Roundtable participants adopted the following overarching principles:

- Ensure that OUV remains fundamental to a property being inscribed on the WH List or being retained on that List.
- Acknowledge that the Convention needs a mechanism to identify WH under threat.
- Ensure that free, prior and informed consent is sought from the Indigenous peoples, and that there is appropriate and meaningful engagement and involvement of Indigenous peoples and local communities when making any changes.
- Learn from other international treaties (i.e. The Ramsar Convention on Wetlands) that are dealing with similar issues.

Participants also agreed to focus this report on the opportunities presented by climate change as a catalyst for reform of the WH system, rather than restrict it to the unresolved matters listed above.

3. IDEAS FOR CHANGE

3.1 OUV (OUTSTANDING UNIVERSAL VALUE)

3.1.1 CURRENT SITUATION

The concept of OUV is fundamental to WH. Resolving how to consider OUV in the context of climate change underpins the practicality of many of the other ideas we present. Thus, we present our ideas on OUV first.

As explained in Section 1, OUV has been interpreted assuming that the environment is largely stationary² and that any alteration will be gradual¹². This assumption is also integral to some other inter-governmental environmental conventions such as the Ramsar Convention¹³ and many environmental laws. The OGs recognise ‘that all natural areas are in a dynamic state’ and that there are ‘dynamic functions’ present in cultural properties such as cultural landscapes, but are silent about what that means for OUV, except to state that human activities may be consistent with OUV if they are ecologically sustainable. Similarly, major documents such as the ‘Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention’ focus on managing threats to OUV, and assume that threats are manageable through the

actions of a State Party. This policy, for example, notes the need to ‘achieve the appropriate balance, integration and harmonisation between the protection of OUV and the pursuit of sustainable development’.¹⁴

There is limited recognition that OUV is altering because of climate change, or the challenges that this poses to the processes of the Convention. Yet climate change impacts on the attributes which support the OUV of many natural WH sites such as coral reefs¹⁵ and glaciers¹⁶ have already been documented. Climate change also affects the cultural and social attributes of cultural properties, in addition to their physical attributes.^{8,17} For example, the ‘Champagne Hillsides, Houses and Cellars’ cultural landscape in France¹⁸ would lose OUV if it were to become too hot to grow grapes. The cultural practices of Indigenous peoples are changing in response to changes in the timing of the seasons and for a site like Budj Bim Cultural Landscape in Australia¹⁹, there are fears that climate change may eventually impact on the cultural values for which it was listed in 2019.

As explained above, OUV is defined by the OGs, which also establish the criteria that the Committee uses to determine the existence of OUV.¹ Since 2007, the WH Committee has adopted a Statement of OUV (SOUV) for each WH property at the time of its inscription. Retrospective Statements of OUV have been adopted for properties inscribed prior to 2007. The OUV of each property has three elements (or pillars), which are presented in the SOUV as: (1) a description of the values of the property and the specific attributes (sometimes also called features) that hold these values against one or more of ten WH criteria; (2) a statement of integrityⁱⁱⁱ (all properties) and authenticity^{iv} (for properties inscribed under one or more cultural criteria); and (3) a statement about the protection and management of the property necessary to maintain its OUV.¹ OUV therefore requires not only satisfaction of one or more criteria, but also the condition of integrity (and authenticity for cultural and mixed properties) and satisfactory protection and management. OUV requires all of these conditions to be fulfilled. The SOUV provides the key reference point or baseline for: (a) the future protection and management of each property; (b) monitoring the protection and management of its OUV; and (c) identifying and measuring any impacts on OUV.

Nonetheless, if change in OUV comes to be seen as inevitable, the current, stationary concept of OUV could create a perverse justification for inaction and trigger arguments in support of allowing other impacts on a property (i.e. rationalising the sources of these impacts as acceptable in the circumstances). As Soga and Gaston (2018) point out in generic reference to the natural environment, ongoing environmental degradation at local, regional and global scales has lowered accepted thresholds for environmental conditions in the absence of past information or experience with historical conditions.²⁰ This phenomenon, ‘Shifting Baseline Syndrome’, is increasingly recognised as one of the fundamental obstacles to addressing a wide range of today’s global environmental issues because it leads to changing reference points.²¹

The SOUV for each WH property is a standard that guards against the moral hazard of Shifting Baseline Syndrome from the time of inscription onwards. In addition, given the likely extensive degradation of the OUV of most, if not all,

iii The 2019 edition of the Operational Guidelines describe integrity as a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes.

iv The ability to understand the value attributed to cultural heritage depends on the degree to which information sources about this value may be understood as credible or truthful. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage, and their meaning as accumulated over time, are the requisite bases for assessing all aspects of authenticity as explained in Paragraphs 78-86 of the Operational Guidelines.

WH properties, it will be important to pre-empt the application of Article 62 of the Vienna Convention on the Law of Treaties (*clausula rebus sic stantibus*)²², the legal doctrine allowing for a contract or a treaty to become unenforceable because of a fundamental change of circumstances.

3.1.2 IDEAS FOR CHANGE

The draft Policy document for Climate Action on WH 2021⁸ foresees that for some WH properties, it will be impossible to maintain the OUV for which they were inscribed, even if effective adaptation^v and on-site mitigation strategies are applied and asks if an ‘evolving assessment of OUV’ would be an appropriate approach to addressing this issue. The Ramsar Convention has discussed this problem of stationarity by considering the Limits of Acceptable Change in the ecological character of RAMSAR sites²³, but has not yet provided guidance for the establishment of such limits. Nonetheless, the description of the ecological character of each RAMSAR-listed wetland in Australia includes a description of the Limits of Acceptable Change of critical components, processes and benefits or services.²⁴

A major decision for the WH Committee would be to determine whether it is appropriate to allow the attributes of each WH property under the criteria, for which it was listed, to be amended within objectively defined limits (Figure 1), subject to appropriate consideration by the Advisory Bodies and the WH Committee. If so, Limits of Acceptable Change for integrity (all properties) and authenticity (cultural and mixed properties) might be an approach worth considering^{vi}. The Limits of Acceptable Change approach, which was developed in the United States for wilderness planning²⁵, is a simple but comprehensive methodology that helps to identify desirable standards and alternatives and can be closely aligned with protecting the values for which protection was established.

The concept of Limits of Acceptable Change is not new to WH. It was a key element in discussions at an International Workshop on the management of historical urban landscapes of the twentieth century held in 2007 in Chandigarh, India.²⁶ The approach has been used for at least one WH site, the cultural property of the Island of Mozambique in Africa.²⁷ The concept was also considered in the ICOMOS document ‘Guidance on Heritage Impact Assessments for Cultural World Heritage Properties’ (2011) which observes that ‘there is no consensus yet on the usefulness of these concepts, or on how to operationalise them’.²⁸

If this approach were considered useful, guidelines for Limits of Acceptable Change (Figure 1) might be developed by the WH Committee with expert guidance and included in the OGs to guide the revision of SOUV for individual properties and inform decisions about the status of the property under the Convention. These guidelines would have to allow for differences in national laws. Given the diverse array of WH properties, it would likely be beneficial to develop consistent guidelines at a finer resolution (e.g. considering thematic groups of properties).

v The 2019 edition of the Operational Guidelines use ‘mitigate’ and ‘mitigation’ in the context of all threats to OUV at a property scale. In the climate change context, ‘mitigation’ refers to mitigating greenhouse gases emission at a global scale. Adaptation is a more appropriate term to use in the case of reducing climate-related hazards to a property.

vi Paragraphs 89-95 of the Operational Guidelines 2019 edition explain ‘integrity’ for properties nominated under the various criteria and define integrity for criteria (vii) to (x).

Figure 1

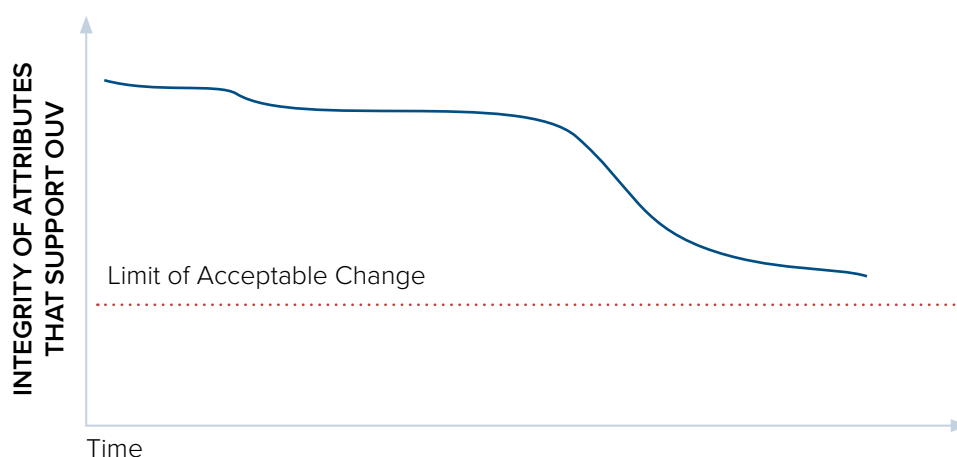


Figure 1: Conceptual diagram illustrating the concept of Limits of Acceptable Change (dotted red line) for a property the State of Conservation of which is degrading. The diagram implies that the integrity of attributes that support OUV (blue line) can be measured on a sliding scale. If this approach were to be adopted, the Limits of Acceptable Change would likely be defined by statements at the property level in accordance with the guidelines adopted by the WH Committee and subject to review by the Advisory Bodies.

To contain the risks of Shifting Baseline Syndrome, this approach would also require that the OGs include robust and transparent mechanisms to evaluate the impact of changes in individual attributes on the OUV of the WH property. These mechanisms might include: (a) objective criteria for such evaluations in the context of the requirements for continued inscription on the WH List, and (b) specified roles for States Parties, the WH Centre and the Advisory Bodies, in the evaluation process as well as the WH Committee in the decision making process. A streamlined process to revise OUV might be facilitated by incorporating Limits of Acceptable Change into the descriptions of the potential OUV of a property during the nomination process (see Section 3.2). The engagement required to implement the Limits of Acceptable Change approach at the property level might enable the effective and inclusive participation of local communities, Indigenous peoples and other stakeholders.

Climate change is unlikely to affect all the attributes of the OUV of a property at the same rate. For example, impacts from sea level rise are projected to be greater towards the end of this century, while the effects of marine heatwaves are already apparent.²⁹ Potential impacts may be on a subset of attributes, which for properties inscribed under multiple WH criteria, may affect perceptions of the overall loss of OUV. Among the natural and mixed properties, which the 2020 International Union for Conservation of Nature (IUCN) Outlook Report³⁰ rated as at high or very high threat from climate change, 86% are listed under more than one criterion (Table 2); not all of the attributes that hold the values associated with each criterion are likely to be equally susceptible to climate change. A similar survey has not been completed for properties listed for cultural values only. Nonetheless, it is likely that the attributes relevant to different criteria in these properties will also be variously affected and at different rates. As a result of climate change, the OUV of many WH properties may be held by fewer criteria than at the time of inscription. There are accommodations within the OGs to vary the criteria under which a property is inscribed. The OGs¹ state: 'Where a State Party wishes to have the property inscribed under additional, fewer or different criteria other than those used for

the original inscription, it shall submit this request as if it were a new nomination. Properties recommended will only be evaluated under the new criteria and will remain on the WH List even if unsuccessful in having additional criteria recognized’.

Table 2

Number of criteria under which the properties rated by IUCN (2020)³⁰ as at high or very high threat from climate change were inscribed.

| Number of criteria under which property listed | Number of properties for which climate change was rated as a high threat by IUCN 2020 | Number of properties for which climate change was rated as a very high threat by IUCN 2020 |
|---|--|---|
| 1 | 9* | 3** |
| 2 | 21 | 14 |
| 3 | 15 | 6 |
| 4 | 7 | 4 |
| 5 | 3 | 1 |

* High threat: 2 properties Criterion (vii); 2 (viii); 3 (ix); 2 (x);
 ** Very high threat: 1 (vii), 2 (x)

More streamlined processes for changing the SOUV of a property could apply not only to degradation of OUV as a result of climate change, but also in other circumstances, including positive changes in OUV (e.g. discovery of new species, new discoveries at an archaeological site), as well as negative changes resulting from non-climate change threats (e.g. extinction of a species from unsustainable harvest, loss of historical artefacts due to armed conflict). Consideration could be given to a system of approval of significant and minor changes to a Statement of OUV, along the lines of significant and minor changes to property boundaries (Figure 2).¹ For example, changes to the attributes within a criterion under which a property is listed that are within the specified limits could be considered a minor change; changes to the number of criteria a significant change. A significant change could still require re-nomination while the property remained on the WH List during this process with deletion if no criteria were met, in accordance with paragraph 166 in the OGs. Understanding the Limits of Acceptable Change would be one possibility that might also assist in defining a ‘Desired state of conservation for the removal of the property from the List of WH in Danger’¹, for properties on the IDL recognised as under ascertained or potential danger from climate change (Section 3.4).

Figure 2

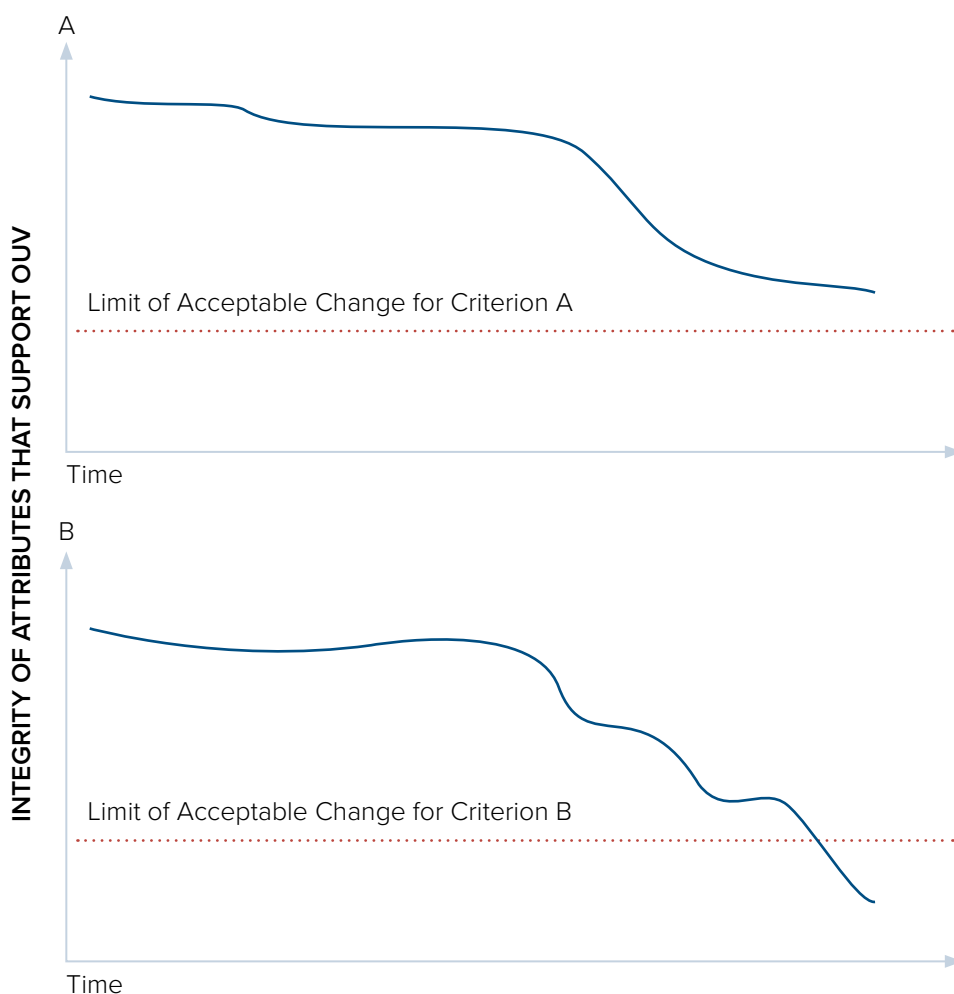


Figure 2: Conceptual diagram illustrating a hypothetical WH property listed under two criteria. The integrity of attributes of its OUV (blue line) have degraded through time due to climate change. The changes to attributes relevant under Criterion A remain within the Limits of Acceptable Change, in contrast to those relevant under Criterion B. The SOUV for the property would need to be reframed around Criterion A only. Such a change would require re-nomination of the property, which would remain on the WH List during that process. The diagram implies that the attributes which support OUV can be readily measured on a sliding scale. If adopted, the Limits of Acceptable Change would likely be defined by statements at the property level in accordance with WH Committee guidelines and subject to review by the Advisory Bodies.

Meaningful definition of the Limits of Acceptable change at the property level in this era of climate change would require use of a climate vulnerability assessment, a tool that will be essential to several of the other processes discussed below. Such assessments are being applied to increasing numbers of properties using several methodologies.^{30,31}

We suggest that the relevant State Party might undertake these assessments with expert assistance as required and independent review by the Advisory Bodies. Clear guidelines for such an assessment would need to be developed, noting that national laws may affect the form of any assessment at the State Party level. There is a precedent for this approach - IUCN has a guidance document that sets out the core requirements for what might be termed an 'acceptable' environmental impacts assessment in terms of examining potential impacts on WH properties.³²

3.2 NOMINATION

3.2.1 CURRENT SITUATION

The present process for the Inscription of properties on the WH List is detailed in the OGs including information on the requirements for the format and content of the nomination dossier.¹ The format for nominations provided in Annex 5 includes ‘climate change and severe weather events’ in the list of major factors of environmental deterioration that should be considered in Part 4.b (ii) of the nomination dossier.

Nonetheless, **climate change is not always considered as a threat in nomination dossiers.** For example, of the 34 properties for which the nomination dossiers were formally considered at WH44 in 2021, only 18 nominated climate change as a threat and only 12 considered how to address this threat in their Management Plan. Many of the suggested adaptation responses were superficial.

3.2.2 IDEAS FOR CHANGE

We question the idea that the nomination of a property for the WH List should be disallowed solely because of ascertained or potential risks to potential OUV from climate change.⁸ This proposal may be inconsistent with the Convention⁶; the salient criterion for inscription is that the property is agreed by the Committee to have OUV at the time of inscription. By definition, OUV must include adequate protection.¹ If a nominated property is deemed to have OUV, the precedent is that it will be inscribed on the WH List, even if it is inscribed on the List of WH in Danger (IDL) at the same meeting^{vii} as illustrated by 10 of the 52 properties on the IDL in January 2022.³³ The long-term credibility and effectiveness of the Convention could be reduced if nominations of properties under potential risk from climate change were to be disallowed solely for that reason, while properties in ascertained (and potential) danger due to climate change remain on the WH List. The counter argument is that the credibility of the WH List might be diminished by inclusion of a higher proportion of new inscriptions on the IDL.

Predicting future climate impacts at the property scale is problematic, except in the cases of the properties where science has established specific physical (e.g. melting point of ice) or biological thresholds (e.g. maximum survival temperatures of key species). These thresholds are poorly known for the attributes of OUV for most properties. For example, White et al. (2021) provide empirical evidence of geographical bias in physiological knowledge of organismal responses to climate change.³⁴ Knowledge is especially poor at high latitudes (including in North America) as well as the Saharan and Sahel regions of Africa, parts of the Andes, and much of Eurasia outside Western Europe and South-east Asia. Disallowing nominations from the properties with the most comprehensive information on climate impacts would be inequitable and may perversely discourage comprehensive, evidenced-based nominations. It is also difficult to separate climate change from other hazards causing cumulative impacts because climate change is a threat multiplier.⁵ Thus knowing that climate change is likely to affect potential OUV adversely should not be an overriding factor in deciding against inscribing most properties.

Disallowing properties solely because of climate change vulnerability could also have the unintended consequence of reducing the effectiveness of the Global Strategy to establish a Representative, Balanced and Credible WH List¹ because States Parties in the Global South have fewer resources to manage the impacts of climate change on the potential OUV of any property. Given the wide-ranging nature of climate change hazards, a pre-emptive disallowance of nominations on that basis could become all encompassing, and apparently defeatist. States Parties may be reticent to nominate sites for recognition. This situation would almost certainly reduce progress to a Representative, Balanced and Credible WH List.¹

vii 10 of the 52 properties currently on the In Danger List were inscribed on that list at the same meeting where they were inscribed on the World Heritage List.

Inscription of a property on the WH List that is at risk from climate change has the potential to assist in the protection of the property through the application of the available mechanisms under the WH Convention. The draft Policy Document on Climate Action for WH 2021⁸ recommends that climate change be explicitly considered in the nomination dossier. We suggest that the OGs should include a requirement for the nomination dossier for each property to include: (a) a climate vulnerability assessment that complies with agreed guidelines (see Box 1); and (b) a statement of the active steps that will be undertaken to mitigate (at the site scale^{viii}) and adapt to climate hazards in the management plan. Effective implementation of these requirements would require clear guidelines as to how climate change should be considered in respect to potential impacts on OUV.

BOX 1. DESIRABLE ATTRIBUTES OF A CLIMATE VULNERABILITY ASSESSMENT FOR WORLD HERITAGE INCLUDE THAT IT³⁴:

- be **applicable** to all types of types of World Heritage properties
- be **systematic** in assessing risk to heritage from climate change to enable comparisons across properties and the sharing of information and learnings between properties
- be sufficiently **comprehensible** to facilitate community support and to incorporate into World Heritage processes
- be based on best-available **climate science** relevant to the scale of the property (acknowledging the uncertainty inherent within climate projections and their downscaling to the property level)
- evaluate **predicted impacts**, where possible using recent observations of impacts (acknowledging uncertainty in extrapolating past impacts to the future)
- consider the **adaptive capacity** of the system, both inherent and through management actions
- assess the effect that the potential loss of heritage values may have on the **community** associated with the property, including through economic, social, cultural and environmental losses
- be sufficiently **rapid** that application to the majority of World Heritage properties can be achieved
- be **repeatable** to allow updated assessments as climate change progresses and projections are revised; and to evaluate the success of management strategies implemented to mitigate impacts.

For natural and mixed sites nominated under Criteria (ix) and (x), the climate vulnerability assessment could consider: (1) whether the property and its buffer zone/s¹ are sufficiently extensive and connected to provide opportunities for adaptation and shifts in range for indigenous biodiversity, especially threatened species mentioned in the Statement of OUV; and (2) whether these processes would be enhanced by serial listing to build site redundancy given possible climate impacts, provided the other requirements for serial listing are met.¹

Nominating a property for WH Listing is already a lengthy and expensive process. Brumann (2021) notes that estimates of the cost of preparing a nomination are variable but way beyond the preparatory assistance currently available from the WH Fund.⁷ If a climate vulnerability assessment and/or adaptation action plan were required as part of the nomination dossier, it would be important for appropriate funding and expertise to be available to support the Global Strategy for a Representative, Balanced and Credible WH List.¹

viii Quirico (2012) concludes that specific adaptation and in-site mitigation measures for climate change are not problematic under the World Heritage Convention but that more general mitigation strategies are likely to be inconsistent with the framework established by the World Heritage Convention and the principles governing the law of treaties. Huggins (2007) presents an opposing argument with regard to the last point.

3.3 EVALUATION AND REPORTING PROCESSES

3.3.1 CURRENT PROCESSES

3.3.1.1 Processes covered by the Operational Guidelines

Periodic Reporting

The WH Committee systematically monitors the state of conservation of WH properties through periodic reports that are intended to be submitted every six years by States Parties to the WH Centre. The Periodic Reporting process¹ is a self-reporting system designed to be led as far as possible by the States Parties in each region (Arab States, Africa, Asia and the Pacific, Latin America and the Caribbean, Europe and North America) sequentially over a six-year reporting cycle with the final year reserved for reflection and evaluation. Aggregates are reported at a regional scale and the quality of input is dependent on the capacity of individual States Parties and their willingness to include information from site managers. In partnership with the Secretariat and the Advisory Bodies, States Parties develop long-term regional follow-up Action Plans as overall frameworks of proposed priority actions in the Region for the coming six years.

Reactive Monitoring

The process for monitoring the state of conservation of WH properties considered to be under threat is called Reactive Monitoring and is outlined in the OGS¹. The Reactive Monitoring process was developed to support States Parties by providing them with the technical guidance to protect their properties and more direct access to credible information. As the Convention has evolved and the number of properties has increased, the Reactive Monitoring process has become more comprehensive.

If the WH Centre is made aware of potential impacts to the OUV of a property, it asks the State Party to verify the source and information and provide comment. If the WH Centre and the Advisory Bodies consider the OUV to be under threat or potential threat, the Secretariat will request a report from the State Party on the state of conservation of the property. This State of Conservation (SOC) report is considered in the development of the Advisory Body's report to the Committee at the next session. The Advisory Body's report takes into account all relevant information and contains recommendations in the form of a draft decision for the Committee to consider and technical actions the State Party should take to protect the OUV.

In response to an 'invitation' from the State Party, the Reactive Monitoring process may also include Reactive Monitoring missions undertaken by the Advisory Bodies with the Secretariat (WH Centre). Such missions usually follow a request to the State Party in the previous year's decision of the WH Committee. A report of the Reactive Monitoring Mission is prepared by the Secretariat (WH Centre), other sectors of UNESCO and the Advisory Bodies for the WH Committee. The report details specific issues affecting a property and includes conclusions and recommendations. In some cases, the report includes a draft WH Committee Decision.

The scope of the Reactive Monitoring process extends beyond the initial identification of threats to OUV to encompass ongoing monitoring and reporting of progress through annual SOC reports, and potentially Reactive Monitoring missions for properties that are either on the IDL or face the prospect of being inscribed on that list.

These processes are designed to identify emerging threats to OUV and enable responses to address them and are foreseen in the procedures leading to inscription on the List of WH in Danger (IDL) and deletion of properties from the

WH List. A review of the Reactive Monitoring process requested by the Committee in 2017 and endorsed in 2019³⁵ identified that, while many States Parties and stakeholders consider the Reactive Monitoring process aligns with the objectives of the Convention, in practice, the process has several challenges. For example, the proportion of properties reported on under the SOC process has increased as more sites are inscribed on the WH List. As requested by the WH Committee in 2003, the Committee only discusses SOC reports if there is an urgent need or a significant decision (e.g. a proposed inscription on the IDL). In 2021, of 1120 properties on the WHL prior to the meeting, there were 255 SOC reports of which 20 were discussed. The small number of SOCs discussed suggests that the WH Committee supported the draft Decisions proposed by the WH Centre and the Advisory Bodies. Even so, this is a resource consuming and increasingly politicised process.

The WH Committee is also required¹ to review annually the state of conservation of properties on the IDL and their need for monitoring procedures and expert missions. These regular reviews are designed to inform the Committee's decision (in consultation with the State Party), whether to: (a) require additional measures to conserve the property; (b) remove the property from the List of WH in Danger, if the property is no longer under threat; or (c) consider deleting the property from the WH List, if the property has deteriorated to the extent that it has lost those characteristics that determined its inscription on the WH List.¹ Implementation of the IDL process, which is also highly politicised, is also resource consuming.³⁶

3.3.1.2 Processes external to the Operational Guidelines and the current workings of the WH Committee

Thematic reports

Thematic reports have been undertaken to assess the status of types of natural properties directly affected by climate change such as coral reefs^{15,37}, glaciers¹⁶ and forests³⁸. The purpose of these assessments has been to provide a comprehensive analysis of the impacts of climate change on these types of properties to inform the global community of the situation, rather than provide data for the WH Committee's evaluation and reporting systems.

Outlook reports

The IUCN WH Outlook process has assessed impacts on the OUV of natural and mixed properties (22% of the total number of properties) every three years since 2014 (e.g. IUCN 2020).³⁰ This process provides a simultaneous, independent, desktop assessment of the state of conservation of each natural and mixed property and its potential for OUV to be maintained in the future. These desktop assessments are based on specialist knowledge, information from documentary sources and information gathered through consultation with a wide range of knowledge holders, including site managers and management authorities. Their purpose has been to track the state of conservation of natural and mixed sites as an indicator of the effectiveness of protected and conserved areas at a time when the international community seeks to measure progress towards global biodiversity targets and define the Post-2020 Global Biodiversity Framework. The assessments do not make recommendations to the relevant States Parties. Reports are made at both the scale of individual properties as well as regional scales.

3.3.2 IDEAS FOR CHANGE

Reforming the Periodic Reporting process

A practical alternative might be to amend the Periodic Reporting process so that it is based on property type rather than region and grouped by region within property type. Such a reform would facilitate the comparative evaluation of the response of different types of properties to climate change. This approach would require the development of attribute-based typologies for cognate groups of properties that could be evaluated in turn over an agreed reporting cycle. Changes along these lines could be considered in the sixth year of the current reporting cycle, the time for reflection and evaluation.

Reforming the State of Conservation process

The SOC process might benefit from increased opportunity for State Party engagement. The standard format for State Party reports on the SOC process could be revised to include a specific section for and questions on climate change risks/impacts, including scope for reporting on a climate vulnerability assessment undertaken according to agreed standards (as for nominations) and clear guidelines on how climate change should be considered with respect to OUV (See Section 3.1). This approach would be resource intensive and may not be a practical long-term option.

Developing an outlook process for cultural properties

Extending the Outlook process to cultural sites on a logistically manageable reporting cycle would provide robust periodic assessments of the impact of climate change on WH and facilitate cross-property comparisons and learnings. It would be appropriate for this to be led, if not undertaken, by the ICOMOS Climate Change and Heritage Working Group that, together with the Climate Heritage Network, is already working in this area. However, the resourcing requirements would be substantial.

Working with the IPCC to provide reports on WH and climate change

The WH Centre could seek to work closely with the IPCC to develop a special report on WH and climate change. There is a clear rationale for doing this – WH properties are being used as a rallying point for climate action. Such a report could eliminate or reduce the resource constraints and resistance to change in the WH system by elevating the issue to an independent expert body. The opportunity for influencing the topics of IPCC special reports comes up as part of the scoping meetings for the Seventh Assessment Report (AR7). These meetings will be held after AR6 has been concluded in mid 2022. A possible disadvantage of this approach is that it would separate climate change threats from other threats to the OUV of a property, unless the IPCC reports were developed in partnership with the Advisory Bodies and the WH Centre.

Replacing the Periodic Reporting and SOC processes with a new reporting process

A longer-term option might be to replace the existing reporting processes with a new system based on a cycle of thematic Outlook-type assessments conducted by the Advisory Bodies with the requirement for substantive engagement of the relevant State Party in the development of corrective measures. This option could have substantive advantages. The reporting cycle could be designed so that the Advisory Bodies, the WH Centre and the WH Committee consider a manageable number of properties in any one year. All threats would be considered, not just climate threats (cf. the proposed IPCC WH report). States Parties would be empowered by their substantive engagement and networking amongst the managers of thematically or geographically related properties and comparisons amongst groups of properties facing similar challenges would be facilitated. The potential to link such a process to the Limits of Acceptable Change approach outlined in Section 3.1 could be explored.

3.4 RECOGNISING PROPERTIES THREATENED BY CLIMATE CHANGE

3.4.1 CURRENT PROCESSES

The WH Convention does not anticipate climate change. Nonetheless, its Article 11 (4) states: ‘The List [of WH in Danger] may include only such property forming part of the cultural and natural heritage as is threatened by serious and specific dangers, such as the threat of disappearance caused by accelerated deterioration, large-scale public or private projects or rapid urban or tourist development projects; destruction caused by changes in the use or ownership of the land; major alterations due to unknown causes; abandonment for any reason whatsoever; the outbreak or the threat of an armed conflict; calamities and cataclysms; serious fires, earthquakes, landslides, volcanic eruptions, changes in water level, floods and tidal waves.’ Consequently, as the 2021 draft Policy Document on Climate Action for WH points out, ‘While the enumeration of ‘serious and specific dangers’ under Article 11 (4) of the Convention concerning the inclusion of properties on the IDL 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 its effects’.⁸ The OGs set out the criteria for placing cultural and natural properties on the IDL for both ascertained and potential dangers.¹ The ‘threatening impacts of climatic, geological or other environmental factors’ are mentioned as a potential danger.

In a significant and increasing number of WH properties, States Parties will be unable to ameliorate the impacts of climate change on the OUV of their properties. This situation will result in a rapidly increasing number of WH properties showing potential or ascertained danger to the attributes that support OUV and therefore meeting the requirements for inclusion on the IDL. For example, listing the properties with natural values identified by IUCN³⁰ as vulnerable or highly vulnerable to climate change (83 of 252 analysed) would result in the number of properties listed as In Danger being increased from 52 to 135, creating major challenges for the resources required to effectively prepare for and conduct the annual meetings of the WH Committee.

The IDL was designed as a mechanism for drawing the attention of the State Party and the international community to properties in which the OUV has been or is likely to be significantly impacted and to garner support and mobilise resources for actions to protect, conserve and reinstate or maintain the OUV of the property. International support has declined markedly and the WH Fund has limited capacity to support States Parties that have properties on the IDL.⁷

Over the past two decades, States Parties have become increasingly resistant to having their properties inscribed on the IDL, largely because of the associated perception of ‘naming and shaming’⁷ that is not considered to be in their national interest. The WH Committee has been increasingly reticent to include properties on the IDL, regardless of the ascertained or potential danger to OUV and despite recommendations by Advisory Bodies. This situation means that in practice, the thresholds for listing a property on the IDL are inconsistent, a situation exacerbated by disparities in the quantity and quality of scientific information available for different properties. Despite attempts to change the stigma associated with IDL and the consequential attempts of States Parties to resist such listing, this situation is not likely to change any time soon and this reality must be factored into any changes to practice.

All these factors suggest that the current process of In Danger listing may not be the **best** way to mark the impacts of climate change on the OUV of WH properties as distinctive impacts, even though such listing is **legal** under the Convention and its OGs.

3.4.2 IDEAS FOR CHANGE

We identify several policy-relevant alternatives to the status quo as ideas for further discussion (Box 2). These alternatives are not all mutually exclusive and could be introduced incrementally. There are advantages and disadvantages to each of these options (Table 3) and each would need to be implemented in a way that upholds the objectives of the Convention and can be resourced appropriately. To be effective, any change must enable States Parties to have access to substantial funding to support climate change adaptation at the property level.

BOX 2: POLICY-RELEVANT ALTERNATIVES TO THE STATUS QUO FOR RECOGNISING PROPERTIES WITH OUV DEGRADED BY CLIMATE CHANGE

- **Options 1-4:** involve changes to the IDL process.
 - **Option 1:** continue using the IDL but with more clearly defined thresholds and associated guidelines for inscription for different types of properties
 - **Option 2:** link IDL to the cycle of independent thematic assessments proposed in Section 3.3 leading to batch inscriptions of all the properties reviewed under a theme with OUV considered to be in ascertained or potential threat from climate change-related threats on the basis of the independent review process alone
 - **Option 3:** given the likelihood that the great majority of properties will be affected by climate change, require the development of a sub-category of IDL based on new criteria for assessments and inscription (i.e. In Danger from Climate Change)
 - **Option 4:** combine Options 2 and 3: batch inscription of thematic groups of properties with the ascertained and potential danger to OUV from climate change determined by the cycle of independent thematic assessments into a sub-category of IDL.
- **Option 5#:** introduce a separate list for properties evaluated as vulnerable or highly vulnerable to climate change related impacts using an agreed, transparent process such as the independent thematic reporting process outlined in Section 3.3. Having a separate 'climate vulnerable' list would allow for this to contribute to a justification for subsequent inclusion to the IDL.

A similar idea was proposed by Seekamp and Jo (2020), who suggested that the WH Committee develop a new grouping of sites: 'WH in Climatic Transformation'.³⁹ Such a list, which could include properties on both the WH List and the IDL, could not have the same legal standing as the lists established by the Convention. Nonetheless, such a list could serve as an interim acknowledgement of ascertained and potential climate impacts on OUV and a pathway to inscription on the IDL.

For a property considered to be at ascertained or potential danger from climate change, the Desired State of Conservation and associated Program of Corrective Measures would ideally be established and agreed before the WH Committee formally considers inscribing it on the IDL or on a new list. There would need to be clear guidance on how a Desired State of Conservation can be framed for the property (see Section 3.1) including SMART^{ix} performance measures that could be reported in the SOC process (or its replacement) and a realistic timescale for improvement in the condition of OUV (recognising that the results of interventions in response to climate change are likely to take many years or decades to manifest and that interventions to ameliorate some climate change impacts may not be possible). These performance measures would need to be constructed and prioritised in a manner compatible with the capacity of the global community and the specific State Party (or States Parties) to deliver them.

^{ix} SMART is the acronym for Specific, Measurable, Attainable, Relevant, and Time-Bound.

Table 3

Some advantages (green) and disadvantages (blue) of five alternatives to the status quo for recognising WH properties with OUV in ascertained or potential danger from climate change.

| IDL with clearly defined standards | IDL with batched inscriptions based on independent thematic assessments | IDL with sub-categories | IDL with sub-categories and batched inscriptions based on independent thematic assessments | Additional list for properties in climate transition based on independent thematic assessments | |
|------------------------------------|---|-------------------------|--|--|---|
| | | | | | Recognised in the Convention |
| | | | | | Supports evidence-based IDL |
| | | | | | Potential for inclusion on the IDL as a catalyst for action |
| | | | | | Pro-active approach to considering climate impacts on WH |
| | | | | | Improve clarity of IDL |
| | | | | | Significant and rapid increase in properties on IDL |
| | | | | | Potential for properties to remain on IDL indefinitely because climate mitigation beyond capacity of individual State Party |
| | | | | | Increased workload for WH system due to individual consideration of many more IDL properties |
| | | | | | Reduced resources for non-climate threats to OUV |
| | | | | | Changes to OGs required |

 Advantages  Disadvantages

3.5 DELETING A PROPERTY FROM THE WH LIST

There are established processes in the OGs for properties to be deleted from the WH List where the property has deteriorated to the extent that it has lost those characteristics that determined its inclusion in the WH List.¹ We consider that properties that have irretrievably lost their OUV for any reason including climate change should not remain on the WH list, but suggest some ideas for change. The first is to strengthen the objectivity of the deletion process by developing explicit guidelines and thresholds to underpin and support WH Committee decisions for various combinations of property type and threat. Relevantly, these should relate to any circumstances which give rise to the loss of attributes which support OUV. Specific focus could then be placed on climate change as well as other circumstances where the attributes that convey the OUV of the property have been impacted to such an extent that OUV is no longer present, and the cause of such impact cannot be remedied by corrective measures taken by the State Party or by the global community. Our second idea is for the designation of ‘Lost OUV’ for delisted sites or sites listed under fewer criteria. Delisted sites are on the UNESCO WH website⁴⁰, but this change would enable recognition of the intangible cultural heritage values associated with such locations. Implementation of these ideas would require consequential changes to the OGs.

4. A WAY FORWARD?

IDEAS FOR POSITIVE CHANGE TO THE WORLD HERITAGE SYSTEM TO ACCOMMODATE CLIMATE CHANGE

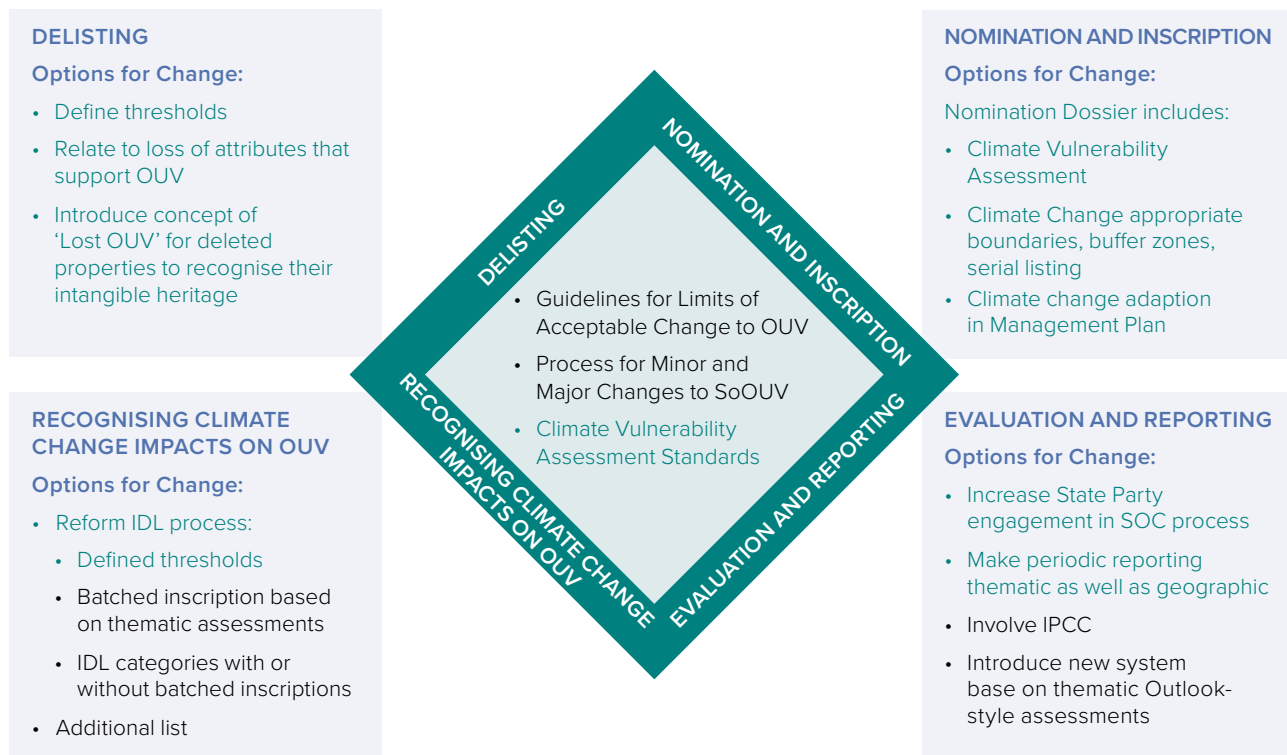


Figure 4: Ideas for positive change to various aspects of the WH system developed by our facilitated discussion process. Suggestions for refining the present system are in green; more substantive change options are in black. The suggestions that apply to more than one aspect are in the central diamond. Some ideas did not achieve consensus support.

As summarised in Figure 4, our ideas provide a menu of options for reform, which could be actioned through revision of the OGs on the advice of expert working groups as well as more substantive changes, which would require workshops to determine their format and acceptability. Desired changes could be introduced sequentially, either singly or in groups, depending on the inclinations of the WH community.

Options that involve developing agreed standards or thresholds for processes such as climate vulnerability assessment, inclusion on the IDL and the deletion of properties from the WH List have the potential to improve the system by making it more overtly objective, thereby strengthening the role of the Advisory Bodies. The State Party engagement required to conduct climate vulnerability assessments and design property-level Limits to Acceptable Change, Desired States of Conservation, and Programs of Corrective Management, could provide opportunities for increasing meaningful engagement with Indigenous peoples and local communities in the development of responses that are tailored to local capacity. Methods for conducting such engagement have and are being developed through face-to-face and on-line climate vulnerability assessment workshops^x. In addition, a climate change toolkit has been developed for WH properties in Australia (J. Melbourne-Thomas, personal communication, January 2022) to help guide that process of engagement across multiple parties and to integrate disparate sets of knowledge into a climate change decision-making process. A workshop building on the 2007 workshop in Chandigarh²⁶ and the Island of Mozambique experience^{27,41} could provide learnings to inform consideration of the likely advantages and disadvantages of a Limits of Acceptable Change approach. Making periodic reporting both thematic and geographic could provide opportunities for property managers to learn how to adapt to climate change across cognate properties and/or specific types of climate impacts. Recognising properties at high or very high vulnerability to climate change in a separate list or enabling batched IDL listing of thematic groups of vulnerable properties on the basis of assessments conducted by the Advisory Bodies could reduce the political bias inherent in current consideration of recommendations for inclusion of properties on the IDL and the associated quid-pro-quo dealings that currently compromise considerations of nominations and SOC reports.⁷ A separate list might also provide a focus for fundraising for climate change adaptation, as could explicit assessments of climate vulnerability in the nomination process.

We conclude that climate change could be a catalyst for positive reform across the WH system and a fitting project to commence on the 50th anniversary of the Convention.

x The Climate Vulnerability Index (CVI)³¹ is a rapid and systematic framework that is used to assess the vulnerability of both the OUV and the community associated with a property. The CVI has been successfully applied globally in a wide array of natural and cultural properties, and thematic applications of the CVI are also underway. A modified version of the CVI was applied together with a First Nations community in northern Australia to their land/sea country.

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ROUNDTABLE STRUCTURE

The virtual roundtable was held via Zoom from 9.30 am to 12:30 pm AEDT, 6 December 2021. The event included three main sessions covering key topics, as well as short introductory and concluding sessions.

| TIMING | ITEM | SPEAKER |
|-------------------------------------|---|------------------------------------|
| 9.30 am (10 mins) | Welcome <ul style="list-style-type: none"> Acknowledgement of Country Opening statement Overview of agenda and house rules | Hon Dr Annabelle Bennett |
| 9.40 am (5 mins) | Overview of roundtable tools | Dr Hayley Teasdale |
| 9.45 am (30 mins) | Topic 1 – Inscription of properties whose Outstanding Universal Value is threatened by climate change <ul style="list-style-type: none"> Short presentation to introduce topic Roundtable discussion of potential approaches and whether they are possible/practical considering the legal, political and resource constraints | Dr Greg Terrill |
| 10.15 am (60 mins) | Topic 2 – Changing the status of properties due to impacts beyond the sole control of the concerned State Party <ul style="list-style-type: none"> Short presentation to introduce topic Roundtable discussion of potential approaches and whether they are possible/practical considering the legal, political and resource constraints | Associate Professor Anita Smith |
| <i>Short break (11.15-11.25 am)</i> | | |
| 11.25 am (30 mins) | Topic 3 – Evolving assessments of Outstanding Universal Value <ul style="list-style-type: none"> Short presentation to introduce topic Roundtable discussion of potential approaches and whether they are possible/practical considering the legal, political and resource constraints | Dr Greg Terrill |
| 11.55 am (30 mins) | Wrap-up and final comments | Hon Dr Annabelle Bennett |
| 12.25 pm (5 mins) | Next steps | Emeritus Professor Helene Marsh |
| 12.30 pm | Event concludes | All |

PARTICIPANTS LIST

The Hon Dr Annabelle Bennett AC FAA FAAL (Chair), Chancellor, Bond University

Honorary Professor Bill Campbell AO FAAL, College of Law, Australian National University

The Hon Penelope Figgis AO, Vice Chair for Oceania, IUCN World Commission on Protected Areas

Ms Chrissy Grant, Chair: Wet Tropics Management Authority and International Indigenous Peoples' Forum on World Heritage

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Mr Stephen Oxley, Consultant, former head of Australia's delegation to the World Heritage Committee

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Professor Kerrie Wilson, Pro Vice-Chancellor (Sustainability Strategy), Queensland University of Technology

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STATEMENT

STATEMENT – WORLD HERITAGE CONVENTION AND CLIMATE CHANGE ROUNDTABLE

Reflecting that climate change is putting at risk the cultural and natural assets of the world, the World Heritage Committee endorsed a Policy Document for Climate Action for World Heritage in July 2021 (the draft Climate Policy), that provides high-level guidance on protecting and conserving the Outstanding Universal Values of World Heritage properties through climate action measures.

In November 2021, the UNESCO General Assembly of the States Parties established an open-ended working group to further develop the draft Climate Policy. Following its final adoption, revisions to the Operational Guidelines for the Implementation of the Convention will be required to translate the Climate Policy into the operational procedures that will enable its full implementation.

A Roundtable was hosted by the Australian Academy of Science in consultation with the Australian Academy of Law on Monday, 6 December, to generate ideas to address the operational and legal consequences of climate change on World Heritage assets.

The Roundtable addressed three key topics that the 2021 draft Climate Policy identified as needing resolution:

- Should a property be inscribed on the World Heritage List while knowing that its potential Outstanding Universal Value may disappear due to climate change impacts?
- Should a property 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 the detrimental impacts on the integrity of World Heritage properties associated with the global impacts of warming from anthropogenic Greenhouse Gas emissions)?
- Will it be impossible for some natural and cultural properties to maintain the 'original' Outstanding Universal Value for which they were inscribed on the World Heritage List, even if effective adaptation and mitigation strategies are applied?

The World Heritage Convention is an international treaty adopted in 1972 to protect globally significant heritage places envisaged as a common heritage of humankind. With 194 signatory states, it is regarded as one of the world's most successful international conventions. Currently, there are 1154 properties on the World Heritage List, and additional properties are inscribed every year at the annual meeting of the World Heritage Committee, the representatives from 21 of the signatory states, elected to implement the Convention.

To be inscribed (or remain) on the World Heritage List, a property must meet the requirements of Outstanding Universal Value (OUV). The protection of OUV is a collective responsibility of signatory states to the Convention. Climate change is recognised as one of the most significant threats to World Heritage, and it is already degrading the OUV of many properties. The number of properties degraded by climate change and the extent of such degradation will increase in the coming decades. This year, the operations of the UNESCO World Heritage Committee made global headlines when it considered whether the Great Barrier Reef should be inscribed on the List of World Heritage in Danger, mainly because of the impacts of climate change. Although the Committee decided not to inscribe the Great Barrier Reef on the In Danger List this year, it will reconsider this matter in 2022.

This ongoing debate about the World Heritage status of the Great Barrier Reef illustrates fundamental legal and operational challenges for the Convention and its Operational Guidelines, as climate change increasingly impacts the World Heritage attributes of more properties.

Can the challenges of climate change be used as a catalyst for positive change in the operations of the World Heritage Committee and thereby help conserve the world's most precious heritage places in the face of climate change?

This question is crucial to Australia, which has a disproportionately high number of properties threatened by climate change. For example, in 2020, the International Union for the Conservation of Nature rated 11 (69%) of Australia's 16 natural and mixed World Heritage properties as being at high risk from climate change. Several cultural properties are also at risk, including the Australian Convict Sites, notably Port Arthur and the Sydney Opera House. To consider these unresolved complex and multidisciplinary matters, the Academy convened a Roundtable attended by 18 technical and legal experts in natural and cultural heritage, climate change, and diplomacy.

The Roundtable aimed to generate ideas without gaining group consensus. It is hoped that other countries will be able to gather their experts and generate ideas to assist the World Heritage Committee find the most appropriate solutions to the challenges of climate change to World Heritage.

The following key ideas emerged from the roundtable:

Overarching principles

- Ensure that OUV remains fundamental to a property being inscribed on the World Heritage List or being retained on that List.
- Acknowledge that the Convention needs a mechanism to identify World Heritage properties under threat.
- Ensure that free, prior and informed consent is sought from the Indigenous peoples, and that there is appropriate and meaningful engagement and involvement when making any changes.
- Learn from other international treaties (i.e. The Ramsar Convention on Wetlands) that are also dealing with similar issues.

Adjusting the inscription process for potential properties threatened by climate change

- Require a climate change vulnerability assessment with agreed standards for each property in the nomination dossier.
- Clarify the expectations regarding the standard of the protection and management of each proposed property, with a focus on climate impact mitigation and adaptation at the property level.

Acknowledging the status of properties threatened by climate change

- Ensure there is objective, independent assessment of climate risk to properties against transparent thresholds and standards.
- Use thematic assessments to assess the risks to groups of similar types of properties (e.g., rainforests, coral reefs, glaciers, coastal archeological sites).
- Recognise properties in ascertained or potential danger from climate change by either: (a) establishing a new category of list, or (b) creating a subset of the In Danger List and use this recognition to generate resources to assist with mitigation and adaptation at the property level, especially for properties in the Global south.
- Enable properties in similar ascertained or potential danger from climate change to be inscribed in batches.

Assessing and monitoring Outstanding Universal Value in a changing world

- Acknowledge that climate change is likely to cause change rather than loss of the OUV of most properties, at least for many decades.
- Develop robust ways to assess how the OUV of a property is changing and use attribution science to determine what changes are associated with climate change drivers or other direct human pressures.
- Actively recognise properties with OUV in climate transition to trigger actions to support property level mitigation and adaptation.

Overall, these ideas will help the Convention to achieve its universal aspirations and address the threat of climate change by evolving from a property-by-property approach to one that addresses collective challenges. More detailed outputs from the Roundtable will be published in the coming weeks.

