# RECOGNIZING THE ROLE OF CULTURAL HERITAGE IN CLIMATE CHANGE ADAPTATION: RELEVANT PLATFORMS AND WORKSTREAMS UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE*

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## I. INTRODUCTION

Climate change is a global threat that poses a serious challenge not only to socio-economic development, but also to all aspects of life. Climate change adaptation, one of the two main policy responses to climate change, has been identified as being "essentially a governance issue"[1] which requires coordinated action at both the global and national levels. While international cooperation plays a critical role in guiding and supporting the formulation and implementation of plans and strategies at the national level,[2] in order to be truly effective, climate change adaptation requires nationally-determined planning and implementation in accordance with each country's respective circumstances and capabilities.

National governments are crucial in the formulation and implementation of adaptation actions as well as in the creation of frameworks

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[1] W. Neil Adger et al., *Adaptation now, in* ADAPTING TO CLIMATE CHANGE: THRESHOLDS, VALUES, GOVERNANCE 5 (W. Neil Adger, Irene Lorenzoni & Karen L. O'Brien eds., 2010).

[2] INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [hereinafter "IPCC"], CLIMATE CHANGE 2014: SYNTHESIS REPORT. CONTRIBUTION OF WORKING GROUPS I, II AND III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 29 (Pajendra K. Pachauri & Leo Meyer eds., 2014), *available at* https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

that would support and facilitate cooperation among various sectors and stakeholders.[3] A substantial increase in the formulation of national climate change plans and actions has been observed since 2007, as more policymakers attempt to enhance the integration of such actions into their overall development plans.[4] As more plans are developed, however, more climate change impacts are identified, adding to the already-extensive list of sectors that are threatened by climate change.

Cultural heritage is one such sector. For years, the number of studies and discussions on the effect of climate change on cultural heritage has greatly increased. Viewed with other undeniably serious implications and effects of climate change, it may seem to some that taking cultural heritage into consideration is a luxury that countries—especially developing ones—could ill afford. It is important to note, however, that the concept of cultural heritage has gone far beyond the initial impressions of tangible manifestations such as historical sites and buildings. Moreover, it has gone beyond being considered solely an inevitable casualty of climate change.

Cultural heritage is not limited to tangible sites or objects, as it has been described as "an expression of the ways of living developed by a community and passed on from generation to generation," including "customs, practices, places, objects, artistic expressions and values."[5] While the development of and access to new technologies is essential to the overall response to the changing climate, these customs, practices, expressions, and values, when analyzed and integrated into climate change adaptation planning, could lead to more effective and nationally-appropriate plans and policies. This includes more expedient communication strategies, as well as capacity building for local communities.

Interestingly, the objective of preserving or safeguarding cultural heritage is the prevention of loss, whether it be of knowledge, memory, or the physical entity. Since the overall goal of climate change adaptation is reducing vulnerability to and increasing resilience against the adverse impacts of climate change, one may already be able to see inklings of where or how these two concepts overlap. This paper seeks to provide an understanding of what constitutes cultural heritage, and how it can be recognized as a valuable resource in climate change adaptation. It then identifies areas in international

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[3] *Id.*

[4] *Id.*

[5] Culture in Development, *What is Cultural Heritage*, CULTURE IN DEVELOPMENT WEBSITE, *available at* http://www.cultureindevelopment.nl/cultural_heritage/what_is_cultural_heritage.

climate change adaptation policy that indicate a recognition of the value of cultural heritage in this context.

## II. LINKING CLIMATE CHANGE AND CULTURAL HERITAGE

Climate change, as defined by the Intergovernmental Panel on Climate Change ("IPCC"), is "a change in the state of the climate that can be identified [...] by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer."[6] These changes in the climate system are beyond question; many of them are unprecedented, and yet have been observable since the 1950s. These changes have resulted in broad and pervasive impacts on human and natural systems across all continents, as the general warming of the atmosphere and oceans reduce the amount of snow and ice, and raise sea levels.[7] There has also been a decline in low or cold temperature extremes and a rise in high or warm temperature extremes, as well as increases in extreme high sea levels and occurrences of heavy precipitation—or extreme weather—events.[8]

According to the IPCC, climate change is expected to "amplify existing risks and create new risks for natural and human systems." [9] Moreover, "[r]isks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development."[10] This degree of risk can be estimated based on the interaction between factors such as climate-related hazards, which include hazardous events and trends, the vulnerability and exposure of human and natural systems, and the ability to adapt.[11] This also makes certain risks more relevant to particular areas, regions, or populations.[12]

The consequences brought about by the changing climate are broad and overlapping and would likely put into play a series of effects, each one feeding into the other. As extreme weather events re-shape landscapes and

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[6] IPCC, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY. PART A: GLOBAL AND SECTORAL ASPECTS: CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 5 (Christopher B. Field et al., eds., 2014), *available at* https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-PartA_FINAL.pdf.

[7] IPCC, *Climate Change 2014: Synthesis Report*, *supra* note 2, at 2.

[8] *Id.* at 7

[9] *Id.* at 13.

[10] *Id.* at 61.

[11] *Id.* at 5.

[12] *Id.* at 13.

rearrange production cycles, for instance, economic stability and food security is threatened, leading to a likely increase in population displacement and migration. These consequences continue to affect intrinsically basic relationships between humans and the environment; it is easy to foresee the likeliness of climate change having broader and more far-reaching effects than are generally understood or commonly anticipated.

### A. Climate Change Impacts on Cultural Heritage

The idea of heritage embraces what has been referred to as "material culture," which includes structures, sites, and artifacts as well as those that are immaterial or intangible—those that have no "physical manifestation," so to speak.[13] It is perceived to imbue identity and give meaning to life, from local communities to the global one.[14] In this regard, heritage has become recognized as a "global public good," with the term "World Heritage" denoting a shared human legacy and its consequent expression.[15]

Understanding the effect of climate change on cultural heritage is greatly influenced by an understanding of how the latter is defined and perceived. It has been posited that "[t]he theory and practice of 'The Heritage' have been [molded] internationally by the standard-setting efforts of the United Nations Educational, Scientific and Cultural Organization ["UNESCO"], alongside which several international non-governmental organizations have also worked[.]"[16] The general understanding of cultural heritage, therefore, often involves that which falls under the domain of public cultural policy, which "consists of the valorization and preservation by individuals and groups of traces of the past that are thought to embody their cultural identities."[17]

This concept and practice, referred to as *heritage preservation*, is made more recognizable through the efforts of intergovernmental bodies and organizations, such as UNESCO, the International Council on Monuments

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[13] Yudhishthir Raj Isar, Dacia Viejo-Rose & Helmut Anheier, *Introduction*, *in* HERITAGE, MEMORY AND IDENTITY 3 (Helmut K. Anheier, Yudhishthir Raj Isar & Dacia Viejo-Rose eds., 2011).

[14] Rae Sheridan & John Sheridan, INTERNATIONAL HERITAGE INSTRUMENTS AND CLIMATE CHANGE 4 (2013).

[15] Yudhishthir Raj Isar, *UNESCO and Heritage: Global Doctrine, Global Practice*, *in* HERITAGE, MEMORY AND IDENTITY 39 (Helmut K. Anheier, Yudhishthir Raj Isar & Dacia Viejo-Rose, eds., 2011).

[16] *Id.*

[17] Isar et al., *supra* note 13.

and Sites ("ICOMOS"), and the World Monuments Fund ("WMF"). To a non-specialist's mind, heritage preservation is also often inextricably linked to national recognition as well as heritage industries, which for instance involve activities in heritage and/or ecological tourism.

*1. The United Nations Educational, Scientific and Cultural Organization*

The United Nations Educational, Scientific and Cultural Organization, or UNESCO, was established on November 16, 1945 and is based on an understanding that political and economic agreements alone could not forge lasting peace.[18] Its core purpose was to reinforce the idea and desire for peace by building educational, scientific, and cultural relations among the various States and communities, creating networks for the mobilization of education, intercultural understanding, scientific cooperation, and the protection of freedom of expression. [19] It had become an acknowledged forum for international public debate, building bridges between ideological blocs without overstepping bounds between its role as a medium and its Member States' decision-making power and agency.[20]

Under this organization, 35 agreements and conventions have been adopted, along with 31 recommendations and 13 declarations.[21] Arts and heritage, under UNESCO, are understood to come together to embody the domain of culture, of which most of the organization's standard-setting work has been done.[22] As of 2015, UNESCO has adopted about 36 instruments, including agreements, conventions, recommendations, and declarations concerning culture. [23] These instruments include the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, or the World Heritage Convention ("WHC") and the 2003 Convention for the Safeguarding of Intangible Cultural Heritage, or the Intangible Cultural Heritage Convention ("ICHC").

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[18] United Nations Educational, Scientific and Cultural Organization [hereinafter "UNESCO"], *Introducing UNESCO*, UNESCO WEBSITE, *available at* http://en.unesco.org/about-us/introducing-unesco

[19] *Id.*

[20] Isar, *supra* note 15, at 40.

[21] *Id.* at 40-41.

[22] *Id.* at 41.

[23] UNESCO, *Culture, Legal Instruments*, UNESCO WEBSITE, *available at* http://portal.unesco.org/en/ev.php-URL_ID=13649&URL_DO=DO_TOPIC&URL_SECTION=-471.html

*2. The 1972 World Heritage Convention*

The Convention Concerning the Protection of World Cultural and Natural Heritage, more popularly known as the World Heritage Convention, was adopted by the UNESCO General Conference on November 16, 1972. It came into force three years later in 1975, and as of 2017, has been ratified by all 193 UNESCO Member States.[24]

Heritage at the time of the Convention's adoption was understood as pertaining more to "*material* forms of expression," with stand-alone historical monuments as the primary foci of attention.[25] This understanding reflected European-American experts' views, which had been "marked by the depredations of the Second World War[.]"[26] These experts were the principal drafters of the WHC, and it was the perception of a tangible kind of heritage that was reflected in the World Heritage Convention.[27]

Cultural Heritage in the WHC is therefore composed of:

> [M]onuments: architectural works, works of monumental sculpture and painting, elements or structures of an archeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art and science;
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> [G]roups of buildings: group of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science; and
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> [S]ites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.[28]

Apart from cultural heritage, the WHC recognizes and extends its reach to natural heritage as well, which is composed of:

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[24] UNESCO, *States Parties: Ratification Status*, UNESCO WEBSITE, *available at* http://whc.unesco.org/pg.cfm?cid=246.

[25] Isar, *supra* note 15, at 43. (Emphasis in the original.)

[26] *Id.* at 44.

[27] *Id.*

[28] Convention Concerning the Protection of the World Cultural and Natural Heritage [hereinafter "WHC"] art. 1, Nov. 16, 1972, 1037 U.N.T.S. 151, *available at* http://whc.unesco.org/archive/convention-en.pdf

> [N]atural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
>
> [G]eological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plant of outstanding universal value from the point of view of science or conservation; and
>
> [N]atural sites of precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.[29]

Through the identification, protection, and preservation of the sites defined above, the WHC seeks to protect, perpetuate, and raise awareness on cultural and natural heritage through the institutionalization of special bodies and processes. One such process is the nomination and inscription of cultural or natural sites in a World Heritage List.[30] Mixed sites, which embody characteristics of both cultural and natural sites, may also be nominated and inscribed.[31] Meanwhile, endangered properties that are included in the World Heritage List, such as those threatened by development projects or armed conflict, are also inscribed in the List of World Heritage in Danger.[32]

Through the WHC, Parties recognize that each State is primarily responsible for the "identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage" within their territories.[33] Parties, however, considered that due to the insufficiency of resources, countries where heritage properties are located may have difficulty in protecting them at the national level.[34] The recognition of this difficulty led to the establishment of the World Heritage Fund,[35] a trust fund meant to provide support in the form of financial and technical assistance, as well as professional training for long-term projects and during sudden disasters.[36]

Parties to the WHC are bound to avoid any measures that are likely to cause direct or indirect damage to cultural and natural heritage.[37] They are

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[29] Art. 2.
[30] Art. 11.
[31] Sheridan & Sheridan, *supra* note 14, at 10.
[32] WHC, art. 11.
[33] Art. 4.
[34] Pmbl.
[35] Art. 15.
[36] Sheridan & Sheridan, *supra* note 14, at 12.
[37] WHC, art. 6.

likewise to "endeavor, in so far as possible, and as appropriate for each country":

> (a) [T]o adopt a general policy which aims 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 [programs];
>
> (b) [T]o set up within its territories, where such services do not exist, one or more services for the protection, conservation and presentation of the cultural and natural heritage with an appropriate staff and possessing the means to discharge their functions;
>
> (c) [T]o develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage;
>
> (d) [T]o take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and
>
> (e) [T]o foster the establishment or development of national or regional [centers] for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field.[38]

To aid in the accomplishment of its objectives, and under the auspices of UNESCO, the WHC established "An Intergovernmental Committee for the Protection of the Cultural and Natural Heritage of Outstanding Universal Value," commonly referred to as the World Heritage Committee.[39] The tasks of the World Heritage Committee include deciding which properties put forward or nominated by the Parties are to be inscribed in the World Heritage List; deliberating on requests for international financial assistance under the World Heritage Fund; providing advice to Parties as to how they could properly implement and observe their commitments under the Convention; and collecting and assessing reports submitted by Parties on the state of conservation of inscribed properties under their care.[40]

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[38] Art. 5.

[39] Art. 8.

[40] Sheridan & Sheridan, *supra* note 14, at 12.

*3. The 2003 Intangible Cultural Heritage Convention*

On October 17, 2003, the Convention for the Safeguarding of the Intangible Cultural Heritage, commonly referred to as the Intangible Cultural Heritage Convention ("ICHC"), was adopted by the UNESCO General Assembly. It took effect in 2006 and has been ratified by 178 out of 193 UNESCO Member States as of 2018.[41]

Through the ICHC, the role of intangible cultural heritage as a mainspring of cultural diversity and a mode of guarantying sustainable development was reinforced, along with the recognition of the intrinsic interdependence of both intangible and tangible cultural and natural heritage.[42] The ICHC also acknowledged the threats to intangible heritage, given that:

> [T]he processes of globalization and social transformation, alongside the conditions they create for renewed dialogue among communities, also give rise, as does the phenomenon of intolerance, to grave threats of deterioration, disappearance and destruction of the intangible cultural heritage, in particular owing to a lack of resources for safeguarding such heritage[.][43]

In the adoption and implementation of the ICHC, Parties seek:

(a) [T]o safeguard the intangible cultural heritage;

(b) [T]o ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned;

(c) [T]o raise awareness at the local, national and international levels of the importance of the intangible cultural heritage, and of ensuring mutual appreciation thereof;

(d) [T]o provide for international cooperation and assistance.[44]

Under the ICHC, cultural heritage is defined as:

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[41] UNESCO, *The States Parties to the Convention for the Safeguarding of the Intangible Cultural Heritage*, UNESCO WEBSITE, *available at* https://ich.unesco.org/en/states-parties-00024.

[42] Convention for the Safeguarding of the Intangible Cultural Heritage, pmbl., Oct. 17, 2003, 1037 U.N.T.S. 151, *available at* http://www.unesco.org/culture/ich/en/convention

[43] Pmbl.

[44] Art. 1.

> [T]he practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural space associated therewith—that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.[45]

Cultural heritage is manifested in numerous ways, such as oral traditions and expressions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe, and traditional craftsmanship. [46] Through this definition, the Convention institutionally broadens and adds depth to the understanding of what cultural heritage pertains to and why it must be safeguarded.

To safeguard intangible cultural heritage, the ICHC set forth measures to ensure the viability of intangible cultural heritage, which include, among others, its identification, documentation, research, preservation, protection, promotion, enhancement, transmission, and revitalization.[47] By requiring Parties to inventory and identify the elements of intangible cultural heritage within their areas of responsibility in a contextually appropriate manner, this Convention emphasized the difference in the nature of tangible and intangible heritage and the means by which they are to be protected and safeguarded. This can be seen in how the preservation of tangible cultural heritage goes into the conservation of heritage in its "extant materiality," while the preservation of intangible heritage attempts a "materialization of the immaterial" through its documentation.[48]

Like the WHC, the ICHC establishes lists through which intangible heritage is recorded, such as the List of Intangible Heritage in Need of Urgent Safeguarding and the Representative List of the Intangible Cultural Heritage of Humanity. Inscriptions in these lists give rise to certain obligations or responsibilities on the part of States Party to the Convention pertaining to the protection and safeguarding of intangible heritage.

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[45] Art. 2 (1).
[46] Art. 2 (2).
[47] Art. 2 (3).
[48] Isar et al., *supra* note 13, at 4.

*4. Climate Change and Tangible Cultural Heritage*

In 2005, at the 29th Session of the World Heritage Committee in Durban, South Africa, a group of concerned organizations and individuals—among them being environmental advocacy groups—raised the issue of the adverse effects of climate change on natural and cultural World Heritage properties as understood under the WHC. In response, the World Heritage Committee requested UNESCO's World Heritage Centre to call together experts from various fields, forming a working group that would undertake a study on climate change impacts on World Heritage.[49] This request resulted in the preparation and release of two publications in 2006—one to predict and manage the adverse effects of climate change on World Heritage, and another to aid in the planning and implementation of appropriate management responses by States Party to the WHC.[50]

The Committee also requested the World Heritage Centre to develop a policy paper on climate change and world heritage through a consultative process. This paper was accepted at the July 2007 World Heritage Committee meeting and discussed, among others, synergies between the WHC and climate change, anticipated research needs, legal considerations, linkages with other United Nations bodies, as well as possible alternative mechanisms that could address the issue.[51] In 2008, another publication was released by the World Heritage Centre, this time containing case studies on World Heritage sites and how they were being impacted by the changing climate. The objective of this publication was to raise awareness on the issue of climate change in relation to cultural heritage.

Other studies and reports have since been conducted, placing greater emphasis on specific sites, conditions, or climate change effects. Given that much of the world's population is located near coasts and major rivers, for instance, and communities are known to have settled there historically, it follows that many cultural and historic sites can be found in these areas.[52] Sea level rise is predicted to be one of the most damaging climate change effects on cultural heritage, with about 136 out of 720 sites on the World Heritage

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[49] Cristina Sabbioni, May Cassar, Peter Brimblecombe & Roger-Alexander Lefèvre, *Vulnerability of Cultural Heritage to Climate Change Report to Council of Europe*, at 5, Nov. 20, 2008, *available at* https://www.coe.int/t/dg4/majorhazards/activites/2009/Ravello15-16may09/Ravello_APCAT2008_44_Sabbioni-Jan09_EN.pdf.

[50] *Id.*

[51] *Id.* at 6.

[52] Michelle Berenfeld, *Climate Change and Cultural Heritage: Local Evidence, Global Responses*, 25 THE GEORGE WRIGHT F. 67 (2008).

List likely to be lost should global temperatures continue to rise.[53] These sites are in danger of being completely submerged as sea levels rise or could be destroyed as coasts erode.

Changing weather patterns are another serious threat to tangible cultural heritage. Historic structures are built under certain environmental conditions, and sudden or extreme changes in weather patterns are likely to greatly challenge the physical integrity of these sites.[54] Heavy rainfall in areas suffering from desertification also causes flash floods due to the soil's inability to absorb water, further endangering and causing damage to sites and infrastructure.[55]

*5. Climate Change and Intangible Heritage*

The adoption of the 2003 ICHC has made substantial progress in broadening the understanding of heritage, and with this came a broadened appreciation of the implications of climate change on cultural heritage. With the definition of cultural heritage institutionally expanded to encompass the intangible, it can be said that the understanding of the range of the adverse impacts of climate change has been effectively expanded as well. Intangible cultural heritage has been recognized by experts to suffer from the effects of climate change, as its impacts on natural and cultural landscapes inevitably change communities' ways of life. According to ICOMOS:

> The inevitable loss of natural features, flora and fauna will impact cultural landscapes and with it, living traditions. The intangible and tangible heritages are intertwined; impacts from the loss of tangible values affects intangible values. Loss of coastal land will result in the movement of population and industries, which in turn will result in pressure hitherto un-impacted cultural landscapes and sites. Similarly, there will be population migration from drought-stricken and chronically flooded areas. The increase of urbanization, population movement and relocation will result in loss of traditional caretakers and repair technologies for sites, as well as impact cultural practices.[56]

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[53] Ben Marzeion & Anders Levermann, *Loss of cultural world heritage and currently inhabited places to sea-level rise*, 3 ENVTL. RES. LETTERS 4 (2014), *available at* http://iopscience.iop.org/1748-9326/9/3/034001/article.

[54] Berenfeld, *supra* note 52.

[55] *Id.* at 70-77.

[56] International Council on Monuments and Sites [hereinafter "ICOMOS"] Scientific Council, *Recommendations from the Scientific Council Symposium: Cultural Heritage and Global Climate Change*, Oct. 7, 2007, *available at* https://www.icomos.org/climatechange/pdf/Recommendations_GCC_Symposium_EN.pdf

### B. Policy Responses to Climate Change

There are two main policy responses to climate change: mitigation and adaptation. Mitigation is defined by the IPCC as "a human intervention to reduce the sources or enhance the sinks of greenhouse gases."[57] It pertains to the limitation or reduction of the amount of greenhouse gases ("GHGs") in the atmosphere, and to actions that would curtail or cut down such emissions. Adaptation, on the other hand, is "[t]he process of adjustment to actual or expected climate and its effects."[58] It concerns the manner in which communities adjust to, cope with, and prepare for the adverse effects of climate change, to ensure that harm is minimized or avoided as much as possible. The overall goal of adaptation is to reduce the vulnerability of communities and increase their resilience to the adverse effects of climate change.

It is easy to see how the protection of heritage against the negative impacts of climate change immediately relates to climate change adaptation. Adaptation speaks to the vulnerability and resilience of cultural heritage, ensuring that as climate change speeds up and amplifies the dynamism of the cultural landscape, heritage conservationists will remain able to "[manage] static remains in a dynamic landscape."[59]

Mitigation and adaptation go hand-in-hand as a two-pronged approach in managing the problem of climate change. Drastic cuts in GHG emissions are necessary to avoid further climate change in the long-term, while adaptation actions are necessary to ensure that the risks brought about by current and medium-term climate change can be managed, if not entirely avoided.[60] The effective balancing of mitigation and adaptation actions is also meant to ensure that development is achieved in a sustainable manner.[61]

### C. Intangible Heritage as a Resource for Adaptation Actions

Adaptation essentially requires a change in the way human communities interact with their environment, and cultural heritage—

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[57] IPCC, CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE: WORKING GROUP III CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 4 (Ottmar Edenhofer et al. eds., 2014), *available at* https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf

[58] IPCC, *Climate Change 2014: Impacts, Adaptation and Vulnerability*, *supra* note 6, at 5.

[59] ICOMOS Scientific Council, *supra* note 56.

[60] IPCC, *Climate Change 2014: Synthesis Report*, *supra* note 2, at 8.

[61] *Id.* at 17.

particularly through indigenous and traditional knowledge—highlights this relationship. The safeguarding and preservation of cultural heritage and climate change adaptation thus share a similar objective insofar as the protection and sustainability of existing resources, relationships, and ways of life are concerned.[62] To recognize cultural heritage as a resource in climate change adaptation is to acknowledge that moving forward properly and effectively requires a better understanding of what has come before, and what remains.

Cultural heritage is a well-recognized resource in disaster risk reduction. Lessons learned by indigenous communities through the centuries feed into how they recognize signs of impending disasters, such as through subtle changes in the atmosphere or the behavior of plants and animals in their environment.[63] In addition, the symbolism inherent in heritage aids in psychological recovery after disasters, along with traditional social networks that provide support and resources. [64] Traditional skills and practices employed in the building of infrastructure have been recognized as a means to rebuild communities after disasters. By keeping these skills alive and dynamic, rebuilt environments may not only be achieved more sustainably, but they may also be made more effective and resilient to the causes of destruction, through the use of locally-sourced materials and the integration of recent discoveries and traditional knowledge.[65]

Heritage preservationists can doubtlessly provide a unique perspective in the formulation of adaptation plans and policies, given that the nature of their work requires them to take into consideration time scales of hundreds or thousands of years. Experts have noted that climate change adaptation planning could be similar—albeit at a much larger scale—to planning for environmental and social changes concerning specific heritage sites. [66] Tailoring the sharing of knowledge and information to fit given contexts and cultures would more effectively bridge gaps in the understanding, planning, and implementation of adaptation actions. Apart from ensuring that the adaptation actions are appropriate to the context within which they are to be applied, taking cultural heritage into consideration would also ensure that the adaptation, planning, and implementation are inclusive.

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[62] Berenfeld, *supra* note 52, at 78.

[63] ICOMOS SCIENTIFIC COMMITTEE, HERITAGE AND RESILIENCE: ISSUES AND OPPORTUNITIES FOR REDUCING DISASTER RISKS 21 (2013) (background paper prepared for the Fourth Session of the Global Platform on Disaster Risk Reduction in Geneva, Switzerland).

[64] *Id.* at 22.

[65] *Id.* at 21.

[66] Berenfeld, *supra* note 52.

## III. CULTURAL HERITAGE IN INTERNATIONAL CLIMATE CHANGE POLICY

The most recent IPCC report, released in 2014, states that "[h]uman influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gas emissions of greenhouse gases are the highest in history."[67] Scientists are convinced that human influence is responsible for "more than half of the observed increase in global average surface temperature from 1951 to 2010,"[68] as a result of "the anthropogenic increase in GHG concentrations and other anthropogenic forcings together."[69] Such emissions have increased since the pre-industrial era as a consequence of economic and population growth, with current emission levels at their highest levels yet.[70] This anthropogenic aspect of climate change is in line with the emphasis the United Nations Framework Convention on Climate Change ("UNFCCC") puts on human influence on climate change and its causes.

As a key factor in the exacerbation of climate change and its effects, it follows that the human aspect is also a fundamental component of how to deal with the problem. In addition, given that territorial boundaries have no effect on the problem of climate change and its consequences, international cooperation is essential to combat it. International cooperation is vital for the sharing of information and access to resources such as financial support, capacity building, and the transfer of technology. Although historically, international cooperation has been focused more on mitigation rather than adaptation, the increasing need for the latter has spurred the formulation of policies, plans, and strategies at various levels. This has also led to a deeper exploration of the means through which effective adaptation could be achieved.

### A. Intergovernmental Panel on Climate Change

Established in 1988 by the World Meteorological Organization ("WMO") and the United Nations Environment Programme ("UNEP"), the IPCC is an international body tasked with the assessment and analysis of the science related to climate change. It provides policymakers with regular reports drafted by hundreds of scientists specializing in the field of climate change, with experts from other relevant or related fields providing

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[67] IPCC, *Climate Change 2014: Synthesis Report*, *supra* note 2, at 2.
[68] *Id.* at 5.
[69] *Id.*
[70] *Id.* at 4.

complementary knowledge and expertise. As the primary scientific body on climate change, the findings and recommendations of the IPCC carry great weight, especially in the formulation of climate change plans and policies. The Parties to the UNFCCC take IPCC findings well into consideration when they negotiate on international climate change policy.

The fifth and most recent IPCC Assessment Report ("AR5") was published in 2014. In this report, the IPCC observed that climate change adaptation has become increasingly incorporated into planning processes, although implementation remains rather limited. It has also been observed that there is an increasing appreciation for the value of social, institutional, and ecosystem-based measures in adaptation, and how they may constrain it. Included among such social-based measures are local and indigenous systems.[71]

Under AR5, IPCC Working Group II also recognizes the value of cultural heritage in adaptation, explicitly stating that:

> Adaptation planning and implementation at all levels of governance are contingent on societal values, objectives and risk perceptions[.] Recognition of diverse interests, circumstances, social-cultural contexts and expectations can benefit decision-making processes. *Indigenous, local and traditional knowledge systems and practices, including indigenous peoples' holistic view of community and environment, are a major resource for adapting to climate change*, but these have not been used consistently in existing adaptation efforts. *Integrating such forms of knowledge with existing practices increases the effectiveness of adaptation.*[72]

That the IPCC makes ready reference to the relevance of intangible cultural heritage—in the form of "indigenous, local and traditional knowledge systems, perceptions and practices"—to climate change adaptation is of undeniable significance.[73]

In 2018, the IPCC released the Special Report on Global Warming of 1.5 degrees Celsius, wherein they highlighted the value of indigenous and local knowledge in hastening the behavioral changes needed to limit global warming through education, information, and community approaches.[74] This

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[71] *Id.* at 26.

[72] *Id.* at 19. (Emphasis supplied.)

[73] *Id.* at 73.

[74] 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,

was further emphasized in 2019 when the IPCC released the Special Report on Climate Change and Land. In this report, they underscored the value of local and indigenous knowledge coupled with scientific knowledge in the promotion of climate literacy. According to the IPCC, these would be particularly effective in raising public awareness and understanding of locality-specific risk and response potential.[75]

It must be understood, however, that recognition in IPCC reports does not constitute recognition in international climate change policy. As elaborated by the IPCC itself, their reports are "policy-relevant but not policy-prescriptive: they may present projections of future climate change based on different scenarios and the risks that climate change poses and discuss the implications of response options, but they do not tell policymakers what actions to take."[76] Thus, although they may analyze, evaluate, and recommend, they do not prescribe.

### B. United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change is the primary instrument governing international efforts on climate change. Adopted in May 1992, the UNFCCC entered into force in March 1994 and has since then been ratified by 197 Parties. Parties to the UNFCCC are composed of 196 countries and one political-economic partnership, namely the European Union. The ultimate objective of the UNFCCC is to:

> [A]chieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not

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SUSTAINABLE DEVELOPMENT, AND EFFORTS TO ERADICATE POVERTY 22 (Valérie Masson-Delmotte et al. eds., 2019), *available at* https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf

[75] IPCC, *2019: Summary for Policymakers, in* CLIMATE CHANGE AND LAND: AN IPCC SPECIAL REPORT ON CLIMATE CHANGE, DESERTIFICATION, LAND DEGRADATION, SUSTAINABLE LAND MANAGEMENT, FOOD SECURITY, AND GREENHOUSE GAS FLUXES IN TERRESTRIAL ECOSYSTEMS 29 (Priyadarshi Shukla et al. eds., 2020), *available at* https://www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf

[76] IPCC, *IPCC Factsheet: What is IPCC?*, IPCC WEBSITE, Aug. 30, 2013, *available at* https://www.ipcc.ch/site/assets/uploads/2018/02/FS_what_ipcc.pdf

> threatened and to enable economic development to proceed in a sustainable manner.[77]

Parties to the UNFCCC are generally divided into two major groups of countries, with one group composed of countries enumerated in the Annexes to the Convention, and the other composed of countries that have not been identified in the said Annexes. Those enumerated in the Annexes to the Convention are deemed "developed" countries, and as such, take on commitments that "developing" countries—those not identified in the Annexes—do not. Countries under Annex I of the Convention take on mitigation commitments, while those enumerated in Annex II take on commitments to provide financial support to non-Annex I Parties.

Non-Annex I parties are not required to undertake mitigation commitments under the Convention, in consideration of the principles enshrined in the Convention under Article 3, and the understanding that developing country priorities consist primarily of economic development and poverty reduction. Article 3 of the Convention effectively states that as current climate change could be attributed to the emissions of developed country Parties as they pursued their development decades past, historical responsibility dictates that they should take the lead in reducing emissions to limit the adverse effects of climate change.[78] The principle of common but differentiated responsibilities highlights that although each Party must do its part and take action on climate change, such actions vary when taken into consideration with the principles of equity and historical responsibility.

### C. Adaptation Provisions in the UNFCCC

Adaptation, although provided for in the Convention, was not given the same kind of attention as mitigation, likely due to the understanding that the extent of adaptation necessary is indirectly proportionate to the amount of mitigation being done. The more Parties can mitigate, the less necessary adaptation measures become. In the years since the UNFCCC's adoption and entry into force, however, the need for adaptation has become undeniable. It has also become apparent that the need for climate change adaptation is more acutely felt by developing countries, as they bear the brunt of the adverse effects of climate change yet do not have sufficient means to address it.

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[77] United Nations Framework Convention on Climate Change [hereinafter "UNFCCC"], art. 2, May 9, 1992, 1771 U.N.T.S. 107, *available at* https://unfccc.int/sites/default/files/convention_text_with_annexes_english_for_posting.pdf

[78] Art. 3 (1).

Adaptation, despite being rooted in national or local circumstances, benefits from international cooperation through the sharing of information and resources, among others. The UNFCCC makes this apparent, as developed countries under the Convention commit to "assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects."[79]

While there is no mention of cultural heritage—whether tangible or intangible—in the provisions of the UNFCCC on adaptation, the relevance of national circumstances in the form of social, economic, and environmental actions, specific needs, concerns, and situations of developing countries are taken into account. In addition, when the Convention states that Parties are to be guided by certain principles in its implementation, a similar recognition of national circumstances is made. Article 3.4, for instance, makes reference to Parties' right to sustainable development, and requires climate change policies and measures to be appropriate for each country's specific national conditions.[80] Thus, although these provisions do not refer directly to cultural heritage, they add emphasis to the relevance of national or local circumstances to policymaking.

### D. National Adaptation Programmes of Action

In 2001, having noted that Least Developed Countries ("LDCs") were highly vulnerable to the adverse effects of climate change, and in consideration of Article 4.9 of the Convention which required Parties to take into account specific needs and special situations of LDCs as regards funding and the transfer of technology, the work program on National Adaptation Programmes of Action ("NAPA") was established. The NAPA introduced a process for the preparation and implementation by LDCs of adaptation actions particularly focused on agriculture, food security, water resources, coastal zones, and early warning and disaster management.[81]

Through NAPAs, LDCs identified immediate priority adaptation activities and projects that would help them respond to the negative effects of

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[79] Art. 4 (4).

[80] Art. 3 (4).

[81] ADAPTATION COMM'N, THE STATE OF ADAPTATION UNDER THE UNITED NATIONS FRAMEWORK CONCERN ON CLIMATE CHANGE: 2013 THEMATIC REPORT 13 (2013), *available at* http://unfccc.int/files/adaptation/cancun_adaptation_framework/adaptation_committee/application/pdf/ac_2013_report_low_res.pdf

climate change threatening their States.[82] The formulation of NAPAs and the activities identified therein would be made eligible for support through the Least Developed Countries Fund, Parties having acknowledged that LDCs have limited abilities to respond to climate change on their own.[83]

The guidelines for the preparation of NAPAs, which were adopted via the Conference of the Parties ("COP") decision in 2001, make reference to traditional knowledge in its section on structure. According to these guidelines, NAPAs must contain an overview of the climate variability of each country, observed and projected climate change, and the actual and potential adverse effects resulting from it.[84] Parties are tasked to use, as bases for the overview, existing and ongoing studies and research, empirical and historical information, and traditional knowledge. Parties are to ensure that their NAPAs are flexible, action-oriented, and country-driven, and give priority to community-level input.[85] As of December 2017, 51 LDCs have submitted NAPAs to the UNFCCC Secretariat, although of the 51, Cabo Verde, Equatorial Guinea, and the Maldives have since exited from the LDC group.[86]

### E. The Nairobi Work Programme

In 2005, the Nairobi Work Programme ("NWP") was established to assist all Parties, particularly developing country Parties, in the improvement of their knowledge, understanding, and assessment of impacts, vulnerabilities, and adaptation. These improvements are meant to inform decision-making on adaptation actions and measures.[87] The NWP has since then served as a knowledge-sharing platform for the UNFCCC and has allowed for the engagement of stakeholders external to the process as well.

In the Decision adopting the work program, a general recognition was given to the importance of local and indigenous knowledge in the preamble, which recognized and encouraged "the activities relating to impacts, vulnerability and adaptation to climate change undertaken by Parties and

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[82] UNFCCC, *National Adaptation Programmes of Action*, UNFCCC WEBSITE, *available at* http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/7567.php

[83] *Id.*

[84] Conference of the Parties to the UNFCCC, Guidelines for the preparation of national adaptation programmes of action, at Annex, § F.2.10, U.N. Doc. FCCC/CP/2001/13/Add.4 (Jan. 21, 2002), *available at* http://unfccc.int/resource/docs/cop7/13a04.pdf

[85] UNFCCC, *National Adaptation Programmes of Action, supra* note 82.

[86] *Id.*

[87] UNFCCC, *Overview of the Nairobi work programme*, UNFCCC WEBSITE, *available at* http://unfccc.int/adaptation/workstreams/nairobi_work_programme/items/5137.php

relevant international and regional organizations and institutions, *and the importance to local and indigenous knowledge*[.]"[88]

Having identified "adaptation planning, measures and actions" as a thematic area of the work program, action-oriented subthemes were adopted, which include:

> Collecting, analysing and disseminating information on past and current practical adaptation actions and measures, including adaptation projects, short- and long-term adaptation strategies, *and local and indigenous knowledge*[.][89]

The value of traditional and indigenous knowledge has consistently been recognized under the NWP, and in 2014 a more substantial assessment was made through a meeting organized under the work program by the Adaptation Committee, four years after its establishment under the Cancun Adaptation Framework.

## F. The Cancun Adaptation Framework

A strong push by developing country Parties for the recognition of climate change adaptation as being of the same importance as mitigation resulted in the adoption, after three years of difficult negotiations, by the COP of the Cancun Adaptation Framework ("CAF") in 2010. Recognition of equal importance was interpreted to mean the solidification of adaptation actions and programs under the Convention and ensuring that the implementation of adaptation commitments was enhanced and supported.

The value of indigenous and traditional knowledge in relation to adaptation was reaffirmed under the CAF. Upon its establishment, the Parties stated among its principles:

> [T]hat enhanced action on adaptation should be undertaken in accordance with the Convention, should follow a country-driven, gender-sensitive, 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*

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[88] Conference of the Parties to the UNFCCC, Five-year programme of work of the Subsidiary Body for Scientific and Technological Advice on impacts, vulnerability and adaptation to climate change, pmbl., U.N. Doc. FCCC/ CP/2005/5/Add.1 (Mar. 30, 2005), *available at* http://unfccc.int/resource/docs/2005/cop11/eng/05a01.pdf (Emphasis supplied.)

[89] *Id.* at 8, annex, ¶ 3 (b) (ii). (Emphasis supplied.)

> *and, as appropriate, traditional and indigenous knowledge, with a view to integrating adaptation into relevant social, economic and environmental policies and actions, where appropriate.*"[90]

The adoption of the CAF also resulted in the establishment of the Adaptation Committee ("AC"), which was tasked to bring together and enhance adaptation action under the Convention. In mid-2014, the AC organized, under the NWP, a meeting on the status of available tools for the use of indigenous and traditional knowledge and practices for adaptation, as well as the needs of local and indigenous communities. The meeting built on a technical paper on best practices and available tools in relation to the use of indigenous and traditional knowledge in adaptation.[91]

The meeting emphasized how greater collaboration between policymakers, scientists, and researchers, local communities and holders of indigenous and traditional knowledge could result in more efficient and effective adaptation policies and actions, as well as more informed decision-making, derived from community buy-in and ownership of the said activities. [92] The need to build the capacity of local communities and indigenous and traditional knowledge holders was highlighted, along with the benefits of complementing scientific knowledge and practices with indigenous and traditional knowledge.[93]

Interestingly, among the other adaptation actions included in the CAF was the improvement of climate change-related disaster risk reduction strategies. Here, reference was made to the Hyogo Framework for Action 2005-2015, stating that Parties were to undertake:

> Enhancing climate change related disaster risk reduction strategies, taking into consideration the Hyogo Framework for Action, where appropriate, early warning systems, risk assessment and management, and sharing and transfer mechanisms such as

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[90] Conference of the Parties to the UNFCCC, The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention [hereinafter "The Cancum Agreements"], ¶ 12, U.N. Doc. FCCC/AWGLCA/2009/L.7/Add.1 (Dec. 15, 2019), *available at* https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=4. (Emphasis supplied.)

[91] United Nations Framework Convention Secretariat, Report on the Meeting on Available Tools for the Use of Indigenous and Traditional Knowledge and Practices for Adaptation, Needs of Local and Indigenous Communities and the Application of Gender-sensitive Approaches and Tools for Adaptation, ¶ 4, U.N. Doc. FCCC/SBSTA/2014/INF.11 (May 8, 2014), *available at* http://unfccc.int/resource/docs/2014/sbsta/eng/inf11.pdf

[92] ¶¶ 16-17.

[93] ¶¶ 20(c), 21(b).

> insurance, at the local, national, subregional and regional levels, as appropriate[.][94]

The value of indigenous or traditional knowledge has long been recognized in disaster risk reduction, and although inherently different from climate change, both fields of study overlap with climate change-related or induced disasters. According to the Hyogo Framework, the collection, compilation, and dissemination of knowledge and information on hazards, vulnerabilities, and capacities is essential to the reduction of disasters and the damage they cause.[95]

In March 2015, the Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted as the successor instrument to the Hyogo Framework, to continue building on the work that has already been undertaken.

### G. National Adaptation Plans

In 2011, a year after the adoption of the CAF, the National Adaptation Plan ("NAP") process was established under the CAF to address the adverse effects of climate change on a medium- to long-term scale. It is meant to enable the integration of adaptation into policies, programs, and activities at the national level, thereby building adaptive capacity and resilience, particularly through the mainstreaming of adaptation actions into development plans and processes.[96] It picks up from the NAPA work program, which primarily addressed immediate adaptation actions, but widens the range of Parties who can engage in such a process.

While primarily directed at LDCs, the NAP process engages other Parties who are developing countries as well, inviting them to employ modalities, principles, and guidelines identified under this process in the formulation of their national plans.[97] Given that the NAP process is overseen by the AC and falls under the CAF, indigenous and traditional knowledge plays a role in ensuring the robustness of adaptation actions.

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[94] *The Cancun Agreements, supra* note 90, ¶ 14 (e).

[95] International Strategy for Disaster Reduction, Hyogo Framework for Action 2005-2015: Building Resilience of Nations and Communities to Disasters, ¶ 18, U.N. Doc. A/CONF.206/6 (Jan. 2005), available *at* http://www.unisdr.org/2005/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf

[96] Conference of the Parties to the UNFCCC, National adaptation plans, ¶ 1, U.N. Doc. FCCC/CP/2011/9/Add.1 (Dec. 11, 2011), *available at* https://unfccc.int/files/adaptation/cancun_adaptation_framework/national_adaptation_plans/application/pdf/decision_5_cp_17.pdf

[97] *Id.*, ¶¶ 28-31.

In December 2014, the Adaptation Committee referred to the mid-year meeting concerning the available tools for the use of indigenous and traditional knowledge for adaptation in a report to the COP, offering the following recommendation:

> Invite Parties to underline the importance of indigenous and traditional knowledge and practices, in a manner commensurate with modern science, for the effective planning and implementation of adaptation, *including by encouraging the integration of indigenous, traditional and local knowledge into the NAP process.*[98]

This resulted in the reiteration of the value of traditional and indigenous knowledge in Decision 3/CP.20, which was adopted in the same session. In this decision, the COP stated that it:

> Reiterates that the national adaptation plan process is a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable group, communities and ecosystem, and *should be based on and guided by the best available science and, as appropriate, traditional and indigenous knowledge, with a view to integrating adaptation into relevant social, economic and environmental policies and actions, where appropriate.*[99]

Building on this, the AC then produced a report in June 2015 following a workshop on the formulation and implementation of NAPs, which identified the link between traditional knowledge and science as a gap in the NAP process.

## H. The Paris Agreement

In the early 2000's Parties to the UNFCCC realized that mitigation commitments were woefully inadequate in holding the increase in global average temperature to a manageable level, and set into motion a process "to develop a protocol, another legal instrument or an agreed outcome with legal

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[98] Conference of the Parties to the UNFCCC, Report of the Adaptation Committee, ¶ 5 (a), U.N. Doc. FCCC/CP/2014/10/Add.2 (Dec. 12, 2014), *available at* http://unfccc.int/resource/docs/2014/cop20/eng/10a02.pdf (Emphasis supplied, emphasis omitted.)

[99] Conference of the Parties to the UNFCCC, National adaptation plans, ¶ 3, U.N. Doc. FCCC/CP/2014/10/Add.2 (Dec. 12, 2014), *available at* http://unfccc.int/resource/docs/2014/cop20/eng/10a02.pdf (Emphasis supplied.)

force under the Convention applicable to all Parties" in 2011.[100] The new agreement was to be adopted by the COP in December 2015 and was meant to shape international climate change policy from 2020 onwards. Through this new agreement, Parties were to address mitigation, adaptation, finance, technology development and transfer, capacity building, and transparency of action and support—among others—in a balanced manner, and following the principles of the Convention and national circumstances.[101]

In December 2015, what is now widely known as the Paris Agreement was adopted. It entered into force in November 2016, and as of the time of this writing, 189 out of the 197 Parties to the UNFCCC have ratified it. The Paris Agreement mandates five-year cycles of improvement built around three long-term goals: mitigation, adaptation, and means of implementation. The long-term goal on mitigation makes reference to "[h]olding the increase in the global average temperature to well below two degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels[.]"[102] The long-term goal on adaptation, on the other hand, pertains to "[i]ncreasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production[.]"[103] The third long-term goal speaks of finance, and "[m]aking finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."[104]

Article 7 of the Paris Agreement goes into further detail on climate change adaptation and makes express reference to intangible cultural heritage. It states that:

> Parties acknowledge that adaptation action should follow a country-driven, gender-response, 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*

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[100] Conference of the Parties to the UNFCCC, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action, ¶ 2, U.N. Doc. FCCC/CP/2011/9/Add.1 (Dec. 11, 2011), *available at* http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf#page=2

[101] Conference of the Parties to the UNFCCC, Lima Call for Climate Action, ¶¶ 2 and 3, U.N. Doc. FCCC/CP/2014/10/Add.1 (2014), *available at* http://unfccc.int/resource/docs/2014/cop20/eng/10a01.pdf#page=2

[102] Paris Agreement, art. 2 (1) (a), Dec. 12, 2015.

[103] Art. 2 (1) (b).

[104] Art. 2 (1) (c).

> *adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.*[105]

The recognition of the role of cultural heritage in a treaty meant to shape international climate change policy from the year 2020 onwards is particularly significant, given that earlier recognition of the same can be found primarily in IPCC reports and COP Decisions. While COP decisions compel compliance among Parties in good faith as instruments furthering the implementation of Convention, some do not consider them to be as decisively binding in terms of legal nature as treaties like the UNFCCC and the Paris Agreement.

## IV. CONCLUSION

That cultural heritage is an incredibly rich resource for climate change adaptation has become readily apparent at the international level. Initial recognition has slowly evolved into attempts to further ensure its integration into domestic policy. The absence of cultural heritage in the Framework Convention on Climate Change itself is more than compensated for by the numerous reports and Decisions that have been produced and adopted since the UNFCCC took effect. In addition, the Paris Agreement solidifies the link between cultural heritage and climate change adaptation, recognizing the former's value in an indisputably legally binding international instrument.

It must be said that the list of areas or workstreams in the international climate change adaptation policy identified in this paper is by no means exhaustive. In addition, there are other processes and work programs that could potentially prescribe the inclusion of traditional or indigenous knowledge in adaptation-related actions. The value of indigenous and traditional knowledge—and indeed cultural heritage in general—would be particularly significant in relation to work on loss and damage, for instance. It would also be interesting to see how effective a prescription by the financial mechanisms of the UNFCCC for the use of cultural heritage in the formulation and implementation of adaptation plans would be, if the mobilization of financial support were to be directly linked to their utilization.

It is also important to note that while cultural heritage as a resource for climate change adaptation is repeatedly recognized, it is referred to mostly in relation to the provision of context or background information. The enhancement, appropriateness, and assessment of adaptation actions and the

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[105] Art. 7 (5). (Emphasis supplied.)

building of knowledge on adaptation should be done in a manner that complements scientific knowledge. This is emphasized in Article 7 of the Paris Agreement, which stated that adaptation actions "*should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems*[.]"[106]

Researchers have observed that although scientists in some instances have taken into consideration indigenous knowledge in relation to climate change, the knowledge was at times perceived as rigid sets of traditions that could not be integrated into innovative solutions or decision-making.[107] This may be partly due to the treatment of indigenous knowledge or traditions as data alone, taken out of local context, and without historical perspective.[108] It has also been suggested that scientists may be hesitant to utilize indigenous or traditional knowledge in their studies due to their failure to be able to predict complexities arising from climate change.[109] Even indigenous peoples have recognized that due to the changes wrought by climate change, traditional climatic indicators are no longer as reliable as they were in the past.[110]

Nonetheless, cultural heritage remains a viable and important resource for climate change adaptation. It puts forward key considerations that would help ensure that scientific assessments, their implications, and their consequent recommendations on climate change are relevant and could be implemented at the local level.[111] It also serves to balance scientific data, as community knowledge could serve to verify and fine-tune climate models and projected scenarios.[112] To ensure that climate change adaptation plans are robust and effective, it is best to integrate natural and social science with traditional knowledge.[113]

The place- and context-specific character of adaptation requires the formulation of adaptation plans and measures that are truly informed and crafted to suit the subjects of implementation. Taking cultural heritage into account in the formulation and implementation of adaptation actions would

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[106] Art. 7 (5). (Emphasis supplied.)

[107] Kate DeAngelis, *Building resilience to climate change through indigenous knowledge: The case of Bolivia*, *in* INSIDE STORIES ON CLIMATE COMPATIBLE DEVELOPMENT 3 (Climate & Development Knowledge Network ed., 2013), *available at* https://cdkn.org/wp-content/uploads/2013/03/Bolivia_InsideStory.pdf.

[108] *Id.*

[109] *Id.*

[110] *Id.* at 1.

[111] *Id.*

[112] *Id.* at 3-4.

[113] *Id.* at 3.

enhance effectiveness, efficiency, and sustainability, building as they do on what has been ingrained or developed over time. It likewise makes adaptation more inclusive, as the concerns of the particularly vulnerable, such as women, children, and indigenous communities, are included in the context within which planning and implementation occur. Lack of informed planning and policymaking increases the likelihood of producing maladaptive plans and actions, which may result in irreversible changes or greater loss.[114]

Finally, it is important to note that recognizing cultural heritage as a resource in climate change adaptation could aid in the accomplishment of the objectives of the WHC and ICHC as well. It could work towards the mobilization and leveraging of resources, for instance, that would further ensure the protection and safeguarding of heritage. Cultural heritage is in danger of disappearing, and climate change could perhaps be one of the most threatening reasons behind this. Recognizing its value in climate change adaptation could stem this tide of loss.

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[114] IPCC, *Climate Change 2014: Impacts, Adaptation and Vulnerability*, *supra* note 6, at 28.