Lex Lata and De Lege Ferenda – Legal Challenges of Cultural Property Protection in the Context of Climate Change
What Consideration is Given to Climate and to Climate Change in the UNESCO Cultural Heritage and Property Conventions?

I  A Preliminary Clarification: Climate per se, the Protection of Cultural Property and Heritage versus Climate Change

Before entering into the rather recent debate on climate change, which is a rapid, and in part unexpected, increase in the worldwide temperature, it is methodologically appropriate to make a few remarks as to climate per se and the protection of cultural property and heritage law.

Going beyond any misleading appearance of a monolithic composition of property and heritage, cultural property – and even more if it is combined with Cultural Heritage – includes a huge variety of types and categories of moveables and immovables. Each of them is made of materials that are more or less climate-sensitive and that deserve to be considered individually; conserved and protected in different ways. There is no one-fits-all solution and the Cultural Heritage or property material is, from a climate perspective, as relevant as the heritage or the property itself. For instance, humidity and rain can affect and heavily damage wood (as in structures, doors, frames), textiles (as in carpets) and untreated paper (as in maps and drawings), although it does not affect equally stone in a sculpture. Each category of material that composes cultural property and heritage is to be considered individually. Each has its own degree of sensitiveness to climate and of fragility to climate-related events, such as humidity, rain, draught, etc.

Climate per se naturally changes over seasons. However, the so-called global climate change is something different. It is a new, much greater in scale and faster in growth, phenomenon than the ordinary change of climate over seasons. Reasons for such global climate change vary and include human activities, such as industrial development and the burning of fossil fuels like coal and oil.
These change the natural greenhouse emissions which keep heat radiating from Earth from leaving the atmosphere. The result is an increase in temperature with various consequences, from loss of sea ice and accelerated sea level rise to long draughts and stronger typhoons.

II Climate Change and the Legal Protection of Cultural Property and Heritage

1. Law versus Climate Change

Cultural property and heritage are affected by global climate change as is anything else on earth which is composed of the same material with the same degree of fragility for the type of climate change concerned, such as increasing rain falls, rising sea level, etc. The fact that in many countries Cultural Heritage and property is often protected by legislation does not, per se, exclude the climate change threats. First, with regard to immovable Cultural Heritage, the law cannot remove it from its situs and protect it fully from the impact of nature. Second, with regard to movable cultural property, the law can organize a removal of the property from its situs and its gathering in museums, which does protect from most, not all, impacts of nature. However, museums can hardly protect from flooding or other serious effects of climate change. For instance, some museums in the Czech Republic had to face unexpected floods. Again, the specificity and resistance of each material does matter. For example, book collections are naturally more affected by floods than marble columns or statues. Further, they require cleaning and drying in addition to being disinfected if dangerous bacteria were in the flood water. Preparedness to deal with emergency situations is a must for most museums, foundations and collections. Standards have increased over the years and today such measures include floods and any other emergency situation, whether or not they are climate change-related.

But climate change can do more than flooding a territory, including museums and collections. From a legal perspective, it could go as far as cancelling a territory which is one of the constitutive elements of a State. A flat and small island could be submerged in a few years or decades; its territory disappears, becoming an underwater surface. At law, a State generally does not exist without a territory. Also, international law is based on States with their territories, population and governments. Without such elements a State no longer exists at law. If a population leaves, the State disappears. Any cultural property still on the territory would self-evidently no longer be legally protected by national legislation nor by international law as the latter no longer regards the territory as part of a State
bound by its rules. The State might appear again; nevertheless, if the sea level would decrease, allowing a territory to be re-established with its population and government.

All forms of international legal protection of cultural property and heritage require a State that is bound by either a UNESCO Convention (or other similar conventions) that it has ratified or its own national legislation or is invited by a UNESCO declaration or recommendation to take action and ensure protection of the heritage on its territory. When one takes a closer look at protection this term is open-ended. It hides a variety of forms and effects, from measures of legal protection to those that also include material protection. Unsurprisingly, they entail a variety of thresholds in protection. With regard to those threats that climate change generally generates, the relevant forms of legal protection are limited to those legal measures that also include material protection. Declaring some heritage inalienable, for instance, does not protect it from climate change or from the ordinary and less aggressive and unpredictable annual climate change.

At the very least, climate change makes the protection of cultural property and heritage more needed and more expensive. An increasingly larger number of objects are affected by an increase of temperature and/or of humidity, and their conservation requires more museums to be built and/or, in the existing museums, more suitable equipment in terms of air conditioners, temperature stabilizers and dehumidifiers. Such costs are unproblematic for the national authorities of some countries, while problematic for other countries. Costs increase dramatically and prevention becomes more problematic when the risk is flooding, typhoons, and destruction of buildings where the museum or the collection is located.

2. Intangible Cultural Heritage Convention

Intangible Cultural Heritage is the most precarious form of heritage because it cannot rely per se on a tangible body, be it movable or immovable, that naturally lasts over time, at least some time. The UNESCO 2003 Convention for the Safeguarding of the Intangible Cultural Heritage has currently reached the remarkable number of 161 States Parties. The terminology of intangible Cultural Heritage is still problematic in the countries where for many centuries the term of the tangible Cultural Heritage – be it movable or immovable – has been applied in a monopolistic manner both de facto and de jure. The terminology of intangible Cultural Heritage is unproblematic and rooted in substance, stemming from an anthropological approach to culture of a community.

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1 Adopted 17 October 2003, entered into force 20 April 2006, 2368 UNTS 3.
The international community gathered at UNESCO had to face these challenges, and many others, that the intangible dimension of culture raises, especially for the purposes of creating an international normative instrument. At the end of the negotiations, the result achieved reads as follows:

For the purposes of this Convention,
1. the “intangible cultural heritage” means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces 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. For the purposes of this Convention, consideration will be given solely to such intangible cultural heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development.
2. The “intangible cultural heritage”, as defined in paragraph 1 above, is manifested inter alia in the following domains:
   (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;
   (b) performing arts;
   (c) social practices, rituals and festive events;
   (d) knowledge and practices concerning nature and the universe;
   (e) traditional craftsmanship.2

These practices, representations, expressions, knowledge and skills that communities and groups and at times individuals, recognize as part of their intangible Cultural Heritage can be easily put in danger by climate change. For instance, higher temperatures and longer periods of drought can rarefy and even extinguish some types of plants that were used in traditional knowledge and know how, either as medicine or as raw material.

For instance, in its Decision 7.COM 8.3 the Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage3, the Committee first took note of the following, an information which provides the reader some context:

“Noken is a knotted net or woven bag handmade from wood fibre or leaves by communities in Papua and West Papua Provinces of Indonesia. Men and women use it for carrying plantation produce, catch from the sea or lake, firewood, babies or small

2 Article 2.
3 Established under Article 5 of the Convention.
animals as well as for shopping and for storing things in the home. Noken may also be worn, often for traditional festivities, or given as peace offerings. The method of making Noken varies between communities, but in general, branches, stems or bark of certain small trees or shrubs are cut, heated over a fire and soaked in water. The remaining wood fibre is dried then spun to make a strong thread or string, which is sometimes coloured using natural dyes. This string is knotted by hand to make net bags of various patterns and sizes. The process requires great manual skill, care and artistic sense, and takes several months to master. The number of people making and using Noken is diminishing, however. Factors threatening its survival include lack of awareness, weakening of traditional transmission, decreasing numbers of craftspeople, competition from factory-made bags, problems in easily and quickly obtaining traditional raw materials, and shifts in the cultural values of Noken.4

Among these factors threatening survival, “competition from factory-made bags, problems in easily and quickly obtaining traditional raw materials” are likely to be the result of global warming, probably jointly with other causes. The making of Noken often relies on branches, stems or barks of some kind of small trees that are heated over a fire and then soaked in water. Such small trees grow under certain conditions.

The Committee has decided to inscribe Noken, a multifunctional knotted or woven bag which is a handcraft of the people of Papua, on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding,5 and one of the considerations is:

“The traditional know-how related to the Noken is in need of urgent safeguarding because of risks of a gap in transmission to younger generations, competition from


5 Article 17 – List of Intangible Cultural Heritage in Need of Urgent Safeguarding:
1. With a view to taking appropriate safeguarding measures, the Committee shall establish, keep up to date and publish a List of Intangible Cultural Heritage in Need of Urgent Safeguarding, and shall inscribe such heritage on the List at the request of the State Party concerned.
2. The Committee shall draw up and submit to the General Assembly for approval the criteria for the establishment, updating and publication of this List.
3. In cases of extreme urgency – the objective criteria of which shall be approved by the General Assembly upon the proposal of the Committee – the Committee may inscribe an item of the heritage concerned on the List mentioned in paragraph 1, in consultation with the State Party concerned.
modern and imported products, and the scarcity of traditional materials that are being replaced by synthetic materials.\textsuperscript{6}

Besides this Committee’s decision, in order to facilitate the safeguarding of the intangible Cultural Heritage, the Convention has established an Intangible Cultural Heritage Fund\textsuperscript{7} and a system of international cooperation and assistance.\textsuperscript{8}

The forms of such assistance may include: (a) studies concerning various aspects of safeguarding; (b) the provision of experts and practitioners; (c) the training of all necessary staff; (d) the elaboration of standard-setting and other measures; (e) the creation and operation of infrastructures; (f) the supply of equipment and know-how; (g) other forms of financial and technical assistance, including, where appropriate, the granting of low-interest loans and donations.\textsuperscript{9}

While such forms of assistance can satisfy a variety of scenarios and different kinds of threats to the intangible Cultural Heritage, several of these forms can effectively contribute to reducing the threats that climate change generates for the safeguarding of the intangible Cultural Heritage.

\textit{a) Conventions on Tangible Heritage}

Tangible Cultural Heritage or property is the traditional subject matter of UNESCO standard-setting instruments. Among other instruments, these include:

- Convention on the Protection of the Underwater Cultural Heritage (Paris, 2 November 2001)\textsuperscript{10}
- Convention concerning the Protection of the World Cultural and Natural Heritage (Paris, 16 November 1972)\textsuperscript{11}
- Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property (Paris, 14 November 1970)\textsuperscript{12}

\textsuperscript{7} Article 6.
\textsuperscript{8} Article 5.
\textsuperscript{9} Article 21.
\textsuperscript{11} Entered into force 17 December 1975, 1037 UNTS 151.
\textsuperscript{12} Entered in force 24 April 1972, 823 UNTS 231.

The size of this article clearly does not allow a detailed analysis of these conventions. Generally, climate \textit{per se} is not a variable in the protection of heritage that is expressly considered and taken into account by these conventions.

\textit{b) World Cultural and Natural Heritage}

An important exception is provided by the famous Convention concerning the Protection of the World Cultural and Natural Heritage. With 190 States Parties this Convention has the privilege to stand out as a nearly universally applicable convention. Under this Convention, each State Party submits to the World Heritage Committee an inventory of property forming part of the Cultural and Natural Heritage of their State which has outstanding universal value.

In addition, the Committee has the duty to establish, keep up to date and publish, whenever circumstances shall so require, a List of World Heritage in Danger, \textit{id est} a list of the property appearing in the World Heritage List for the conservation of which major operations are necessary and for which assistance has been requested by a State Party. This List of World Heritage in Danger may include only such property forming part of the Cultural and Natural Heritage as is threatened by serious and specific dangers which include, \textit{inter alia}, “threat of disappearance caused by accelerated deterioration (…), destruction caused by changes in the use or ownership of the land; major alterations due to unknown causes; abandonment for any reason whatsoever; (…) calamities and cataclysms; serious fires, earthquakes, landslides; volcanic eruptions; changes in water level, floods, and tidal waves”.\textsuperscript{15}

It is rather remarkable that this Convention, adopted in 1972 – at a time where climate change was generally not considered \textit{per se}, but simply as part of the broader and general climate annual change – expressly includes weather-related phenomena that would probably be associated with climate change today. However, these causes were codified in 1972. Above all, these provisions do not necessarily provide evidence of what one defines as climate change today. In fact, it has rather been intended as a matter of principles. It has become clear that

\textsuperscript{13} Enterd into force 7 August 1956, 249 UNTS 240.
\textsuperscript{15} Article 11 (4).
States most affected by one or more causes of climate change and comprising of world Cultural and Natural Heritage sites on their territories are most likely to endorse the insertion of those principles by the Committee on the List of World Heritage in Danger.

This article deals only with climate and climate change in the protection of Cultural Heritage and property, which is a dimension that is generally not considered per se. It is generally dealt with as a limited part, not particularly thoroughly examined, of the much broader debate on Managing Disaster Risks, primarily for the World Heritage sites.16

c) Underwater Cultural Heritage

Seas are directly affected by climate change in various ways. For instance, their bio system varies naturally with an increase of temperature. Their level rises as a result of greater ice melt. Stronger winds and typhoons make exceptional waves and tsunamis more frequent.

However, the situation on the seabed is, in part, affected differently by climate change than the situation at sea level is. This remark is not irrelevant when one focuses on the Convention on the Protection of the Underwater Cultural Heritage (Paris, 2 November 2001). This Convention is focused on underwater Cultural Heritage, not generally on the law of the sea. What such heritage includes is made clear by the Convention:

(a) “Underwater cultural heritage” means all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as:
   (i) sites, structures, buildings, artefacts and human remains, together with their archaeological and natural context;
   (ii) vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and
   (iii) objects of prehistoric character.
(b) Pipelines and cables placed on the seabed shall not be considered as underwater cultural heritage.
(c) Installations other than pipelines and cables, placed on the seabed and still in use, shall not be considered as underwater cultural heritage.17

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17 Article 1.
Importantly, any thought that whatever is on the seabed is under threat and needs to be removed is defeated by the clear principle that inspires the whole Convention: “(t)he preservation in situ of underwater Cultural Heritage shall be considered as the first option before allowing or engaging in any activities directed at this heritage.” Self-evidently, this is not to say that preservation in situ excludes any alternative that the preservation of the underwater Cultural Heritage requires under the Convention and in its important Annex.

3. Why is Climate Change Generally not Taken into Account?

With the exception of the 1972 World Heritage Convention, generally Conventions on the protection of Cultural Heritage and property do not expressly take into consideration the climate factor or the more aggressive climate change in today’s terminology. Why is not an easy question, but deserves to be asked. Follow below some possible explanations.

1. Ordinary annual weather change and climate change vary significantly from country to country. Conventions set out rules that address generally any country regardless of its location on the globe and its degree of exposure to such changes.
2. Such variation in annual weather change can be taken into account by each country when it implements nationally the convention and its protection obligations.
3. Behind the term of Cultural Heritage and property, a variety of materials exist and each is more or less sensitive to climate (see above) and, more recently to climate change; inversely, the conventions set out rules that address generally all the categories of heritage and property that fall under their scope of application.
4. Some conventions, especially the less recent ones, have been negotiated at a time when climate change was not yet identified as a matter both distinct from and more unpredictable than, ordinary annual weather change.

III The Way Forward

It follows that the absence of a clear and explicit mechanism with regard to climate change in the UNESCO conventions at the time they were negotiated, as well as in other conventions on the protection of Cultural Heritage and property

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18 Article 2 (5).
negotiated in the same period of time, can be easily explained. Reasonably, this is not a real gap and does not deserve an objective and substantiated criticism. A lot can be done by States Parties to such conventions in implementing them in order to protect Cultural Heritage and property on their territories from the effects of climate change. This is in spite of the absence of such a clear and explicit mechanism in the conventions.

In addition, States Parties do not only adhere to such conventions by implementing them accordingly. It is their commitment towards implementation that may already be considered binding given that these efforts serve as intentional part of a State Party’s obligation to perform in good faith. Climate change, needless to say, may affect different parts of a national territory more than others. However, once a State Party adopts a treaty in force it becomes binding upon it and its entire territory.¹⁹

For future treaty-making undertakings, if and when the international community of States decides that the protection of cultural property and heritage needs to expressly include climate change in international treaties, then the treaties will be drafted differently and openly insert this variable into their mechanisms and provisions.

Until then, in addition to the proper implementation of treaty obligations by each State Party, the international community of States may still take action, if it so wishes, by inserting this new variable, climate change, and by dealing with it properly in the Guidelines that States Parties to conventions may establish and that already exist with regard to the Convention concerning the Protection of the World Cultural and Natural Heritage and the Convention for the Safeguarding of the Intangible Cultural Heritage. An alternative option or viable path for the international community of States would be to negotiate ex novo another convention in order to include climate change in the protection of Cultural Heritage and property. Regarded realistically this approach appears rather questionable in terms of needs and benefits as well as imponderability and other constraints.

That option would involve new intergovernmental negotiations and is necessarily time-consuming. It would be faster and more flexible to embed provisions on climate change in the Guidelines as if they were existent or anticipated already in advance for a particular convention or at least for a common declaration of understanding among States Parties towards a prospective convention. Again,

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both options are not necessary if States Parties already include climate change in their protection of cultural property and heritage.

There is no doubt that climate change is internationally a serious matter. Being so, it is common sense for States to protect cultural property and heritage in particular, from the new and most devastating threats that climate change represents. These threats add significantly and in unprecedented terms to those related to the ordinary annual climate changes and effect of climate on the natural decay of elements. Ensuring proper mitigation measures for each category of heritage and property, in view of its material and resistance appears more promising and effective for the sake of expedient protection than engaging in a new negotiation for a new convention and waiting for its adoption and entry into force. First, by proper implementation by States Parties, of treaty obligations and of their national existing legislation if adequate from this perspective; second by devising suitable Guidelines or common understandings on existing conventions.
Protecting the Tangible, Safeguarding the Intangible: A Same Conventional Model for Different Needs

Abstract The model of the World Heritage Convention, adopted by the UNESCO General Conference in 1972, has emerged as one of the most successful ever established by an international convention aimed at protecting a common good, id est human rights, Cultural Heritage or environment. At present, the World Heritage Convention has been ratified by 191 states and 1,007 properties are inscribed on the World Heritage List, the keystone around which the system established by the Convention is centred.

In light of the huge success which has characterized the World Heritage Convention, UNESCO has replicated its model in other legal instruments aimed at safeguarding Cultural Heritage in different contexts and/or of different kinds than the World Heritage Convention itself. This has happened, in particular, with respect to the scheme of enhanced protection established by the Second Protocol of 1999 to the 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict as well as to the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage.

As far as the issue of climate change is concerned, both the World Heritage Convention and the Convention for the Safeguarding of the Intangible Cultural Heritage, through providing for general obligations for states parties to take the necessary measures to ensure protection/safeguarding of the heritage they respectively concern, as well as through establishing systems of international cooperation to this end, in principle provide the necessary tools to face the threats posed by climate change on tangible and intangible Cultural Heritage. In practical terms, however, no adequate attention is devoted by both conventions to...
the threats of climate change. Nevertheless, in this respect the World Heritage Convention is certainly better equipped than the Convention for the Safeguarding of the Intangible Cultural Heritage. In any event, the concrete preservation of Cultural Heritage against the above threats ultimately depends on the willingness and capacity of states parties to the respective conventions to take effective and efficient measures in order to properly address the specific problems faced by each manifestation of Cultural Heritage as a consequence of climate change.

I Introduction

The model of the World Heritage Convention (hereinafter WHC), adopted by the UNESCO General Conference in 1972, has emerged as one of the most successful ever established by an international convention aimed at protecting a common good, id est human rights, Cultural Heritage or environment. At present, the WHC has been ratified by 191 states and 1,007 properties are inscribed on the World Heritage List (WHL), the keystone around which the system established by the Convention revolves.

The scope of the WHC is limited to part of the world’s immovable cultural property of tangible character and natural sites, namely to those properties which are “of outstanding interest” and therefore “need to be preserved as part of the World Heritage of mankind as a whole.” Consequently, adopting a list-based system reflected the logical structure according to which a convention pursuing such a goal should be organized. Although the WHC is organized according to a multi-structured regulation, pursuing the goal of coordinating national and international protection, only the latter is significantly operationalized in the context of the practical implementation of the Convention. In addition, despite the fact that – within the framework of the system of international protection – a specific provision is included stressing that all properties of outstanding universal value, and not only those inscribed on the WHL, should be the object of the

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2 Convention concerning the Protection of the World Cultural and Natural Heritage; adopted 16 November 1972, entered into force 17 December 1975, 1037 UNTS 151.
5 See WHC, Preamble sixth recital.
6 See Articles 4–5.
7 See Articles 6 ff.
general measures of protection contemplated by the WHC, such a provision is in practice disregarded, attention being exclusively devoted to listed properties. In fact, the listing system represents the aspect making the fortune of the WHC. States parties are eager to inscribe as more national properties as possible on the WHL, due to the huge international visibility a property attains after being listed; as a result of a transitive property, the more the number of national properties inscribed on the List, the greater the degree of international visibility achieved by the state. Also, the willingness to retain such a visibility usually persuades states parties to adopt adequate measures of preservation for the properties concerned, although recently exceptions have occurred leading the World Heritage Committee to delist properties in two cases, giving rise to a potentially dangerous trend for the effectiveness of the WHC. This trend, however, at least for the moment, does not challenge the assumption of the WHC as one of the most successful conventional models ever in the panorama of international law.

II The Right Model for the Wrong Convention

In light of the huge success which has characterized the WHC, UNESCO has replicated its model in other legal instruments aimed at safeguarding Cultural Heritage in different contexts and/or of different kinds than the WHC itself. This has happened, in particular, with respect to the scheme of enhanced protection established by the Second Protocol of 1999 to the Hague Convention of 1954 for the Protection of Cultural Property in the Event of Armed Conflict as well as to the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage (CSICH).

The CSICH achieved extensive international support immediately after its adoption. At the moment of this writing, it has been ratified by 161 countries.

8 See Article 12.
10 See notes 24 and 25 below and corresponding text.
282 elements of intangible Cultural Heritage have been inscribed so far on the Representative List of the Intangible Cultural Heritage of Humanity (established by Article 16 CSICH), 38 on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding (provided for by Article 17 CSICH), and 12 programmes, projects and activities have been inscribed on the Register of Best Safeguarding Practices. In symbolic terms, the adoption of the CSICH determined an epochal step in the context of the process of development of international law on Cultural Heritage; in fact, it epitomized the completion of the evolution of UNESCO standard-setting toward embracing a holistic concept of Cultural Heritage, including not only the material aspects of culture but also the intangible ones. The CSICH, therefore, was quite appealing for non-Western countries, in the context of which the understanding of culture is generally conceived, at least for a large percentage, in its intangible aspects. In fact, since the beginning of its negotiating process, the CSICH was particularly promoted and supported by African, Asian and Latin American countries. Another factor determining the huge success achieved by the CSICH is represented by the circumstance that virtually no real state obligations – in the technical sense of the term – are included in its text. The duties of states parties are in fact expressed in quite soft terms and the Convention looks like a sort of manifesto proclaiming the right of states – to be recognized and blessed by the international community – to appropriately safeguard their own intangible Cultural Heritage. Last but not least, a third reason of the success of the CSICH is represented by the perspective that states may use the Convention as a tool for promoting their international visibility, to an equivalent extent of what happens with the WHC; the fact of replicating the model of the latter, based on the listing system, actually makes such a perspective very concrete and appealing.

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16 The very term ‘intangible Cultural Heritage’ is considered to correspond to a ‘loose English translation’ of the Japanese expression mukei bunkazai; see Richard Kurin, ‘Safeguarding Intangible Cultural Heritage: Key Factors in Implementing the 2003 Convention’ (2007) 2 International Journal of Intangible Heritage 9, 10.
The CSICH, however, has (or should have) the purpose of safeguarding the common good of intangible Cultural Heritage to the benefit of the international community, rather than a state interest. In this respect, the fact of structuring the operational part of the CSICH according to the model of the WHC appears to be inadequate to ensure appropriate safeguarding for the specificities of intangible Cultural Heritage. The present writer underlined this aspect at the second meeting of experts, preceding the negotiations leading to the adoption of the CSICH, taking place in Rio de Janeiro in January 2002. He emphasized that ‘the schema of the 1972 World Heritage Convention might not be the suitable model for Intangible Cultural Heritage … a legal approach should perhaps avoid the establishment of a List based on selective criteria of importance. The latter might give rise to arbitrary discrimination among cultures’.

The ‘anti-lists’ position was shared by the majority of independent experts, but since the beginning, the intention within UNESCO was to replicate the model of the WHC. This approach easily took the lead at the diplomatic negotiations because it was shared by the most influential state delegations. In fact, it was never seriously challenged, not even when the Norwegian delegate raised the fact that the listing system is not appropriate for intangible Cultural Heritage.

In objective terms, however, the fact remains that the model in point is not the best one – to say the least – in view of appropriately safeguarding intangible Cultural Heritage in light of its specificities and its cultural and spiritual significance, particularly for the communities specifically affected. Indeed, listing intangible Cultural Heritage betrays the inherent value of such a heritage as mirroring the cultural identity of its creators and bearers. In factual terms, the very circumstance of listing inherently presupposes the taxonomy of different manifestations of the heritage concerned; this unavoidably leads to an instinctive perception that the listed examples are particularly valuable and in some way more important than similar manifestations of intangible heritage not included in the same lists. In other words, the establishment of a hierarchy among the different examples of Cultural Heritage ultimately leads to a (mis)understanding – especially among the general public – that certain examples of intangible Cultural Heritage are

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18 The present writer was a member of the Italian delegation throughout the whole length of the negotiations leading to the adoption of the CSICH.
better than others. While this approach can be appropriate – at least partially – for monumental heritage, it is totally improper for immaterial heritage, exactly for the reason that its main significance rests not on its exterior qualities, but rather on the cultural value it has for its creators and bearers. In fact, the main objective of the CSICH, as specified by its Article 1, is ‘to ensure respect for the intangible Cultural Heritage of the communities, groups and individuals concerned’; this means that the rationale of the safeguarding of the heritage in point is (rectius: should be) grounded on the perception of its significance as an element of the cultural identity of such communities, groups and individuals. Furthermore, one should consider that the action for the safeguarding of intangible Cultural Heritage pursues the goal of preserving the inherent value of the said heritage as a vehicle for the protection of cultural diversity. In this respect, it is evident that whatever value judgment based on external perceptions determined by its different elements is in principle incompatible with the value of diversity. The ultimate danger of the approach in point is represented by the possibility that listing intangible Cultural Heritage may implicitly lead to provoke an instinctive classification of the different communities which create such a heritage, determining an unconscious perception in the public that the communities whose intangible Cultural Heritage is listed are more valuable than others.

Against the reasoning just developed one could object that the Representative List of the Intangible Cultural Heritage of Humanity is contemplated only ‘(i)n order to ensure better visibility of the intangible Cultural Heritage and awareness of its significance, and to encourage dialogue which respects cultural diversity’; therefore, it would not imply any classification among the different elements of intangible Cultural Heritage based on their quality or value. However, even though this can be true in theory, in practice it is unlikely that the existence of a list will not be perceived by the public as creating a value-based classification among the existing examples of intangible Cultural Heritage, especially among those of a similar kind (e.g. examples of music or theatre representations, which are apparently very similar to each other but, in reality, may be profoundly different on account of the fact that they are part of the cultural identity of different communities). The experience of the WHC clearly shows that this conclusion is hardly rebuttable; in fact, although (as previously noted) it includes a provision – Article 12\(^{20}\) – establishing that the protection accorded by the Convention must not be limited to listed properties, in practice such a provision has remained virtually unapplied and attention has been devoted only to properties

\(^{20}\) See note 8 above and corresponding text.
inscribed on the WHL. Furthermore, it can hardly be asserted that the Representa-
tive List of the Intangible Cultural Heritage of Humanity – around which
the safeguarding of the intangible Cultural Heritage at the international level is
centred – may represent a legal guarantee for the heritage concerned; it rather
appears as a tool for states to obtain visibility for the intangible heritage located
in their own territory.

III  The Common Structure of the WHC and the CSICH
and the Threats of Climate Change

It is a fact that the two conventions under debate have many things in common.
This holds true not only with respect to their equivalent structure and content,
but also for the philosophical rationale inspiring them. Indeed, most probably,
the reason why they are almost identical in terms of structure and content is
exactly due to their equivalent rationale. While I do not want to question the fact
that the initiators of the movement leading to the adoption of the WHC were
moved by the noble intention of safeguarding the common good of Cultural
Heritage in the general interest of humanity, at the same time one may easily im-
agine that since the first rounds of negotiations state representatives perceived
its enormous potentialities in terms of raising states’ international visibility and
increasing their attractiveness under different perspectives. The same percep-
tion certainly persuaded most countries in the world to support the adoption
of the CSICH and to extensively ratify it.21 The result is two conventions which
– although having the huge merit of establishing very successful and efficient
legal frameworks for the protection/safeguarding of, respectively, tangible/im-
movable and intangible Cultural Heritage – pay a huge tribute to the tradition-
al idea of state sovereignty. They in fact put in the hands of states parties the
competence/power to determine which elements of heritage are to be protected/
safeguarded and the extent to which protection/safeguarding is actually to be
accorded. The text and recent practice of the WHC make it crystal clear. As for
the former, it is enough to note that no property may be inscribed on the WHL
without an explicit request in this respect by the territorial government,22 as well
as that international assistance may be activated by the World Heritage Com-
mittee only upon request of the state concerned.23 With respect to the latter, one

21  See above, text corresponding to note 13.
22  See Article 11(3), stating that ‘(t)he inclusion of a property in the World Heritage List
  requires the consent of the State concerned.’
23  See Articles 13(1) and 19.
may consider the cases of the two properties recently delisted from the WHL, namely the Oman’s Arabian Oryx Sanctuary and the German Dresden Elbe Valley. The first was delisted in 2007 following a decision of the state party to reduce the area of the property by 90 per cent in order to carry out hydrocarbon prospection in the area. The Dresden Elbe Valley was delisted in 2009 due to the building of a four-lane bridge in the heart of the landscape. In both cases, the decision of the World Heritage Committee was in line with the principles of the WHC, for the reason that the properties concerned had lost their ‘outstanding universal value’ on account of the modifications occurred with respect to their integrity; in fact, according to Article 1 of the Convention, protection is only granted to cultural properties having such a value (the same is established by Article 2 with respect to natural properties). The point to be emphasized, however, is that these cases show that, when a state party decides not to comply with its obligations pursuant to the WHC, no appropriate manner exists to prevent or react against such behaviour. In fact, it is paradoxical that the only available remedy is to delist the property, because, if the rationale of the Convention is to protect cultural (and natural) properties in the general interest of humanity, then delisting produces the effect of creating a prejudice not for the territorial state, but rather for humanity as a whole. It is, therefore, a sort of double injury for humanity, the first being determined by the damage to the integrity of the property determined by the territorial state, the second by the deprivation of significant international protection for it following its delisting. It is even more paradoxical that in the practice the two cases just described have not been treated by other states parties as violations of the obligations established by the WHC, but rather as unfortunate adversities suffered by the territorial states concerned; this is epitomized by the words of the Chair of the World Heritage Committee – María Jesús San Segundo, Ambassador and Permanent Delegate of Spain to UNESCO – following delisting of the Dresden Elbe Valley in 2009: ‘(e)very time we fail to preserve a site, we share the pain of the State Party’. Such an approach discloses a perception according to which, when a state party has other (usually economic) interests to pursue, Cultural Heritage may be legitimately sacrificed, and that state obtains even the solidarity of its consociates. This gives a very clear idea of

the manner states conceive their duty to ensure appropriate protection for Cultural and Natural Heritage in the interest of humanity... As previously noted, the CSICH imitates the approach and the model of the WHC. For both conventions, state sovereignty is therefore the driving force governing their functioning, in a manner which is evidently at odds with the nature of common good of Cultural Heritage of both tangible and intangible character.

In practical terms, the approach just described implies that the two conventions are much more concerned in developing the strategies states may adopt to maximize the potentialities of Cultural Heritage under the perspective of national interests, rather than in properly facing the threats which may jeopardize the integrity and preservation of the heritage concerned to the benefit of future generations. Among the other issues to which such reasoning applies, climate change is undoubtedly included.

Climate change may determine a huge detrimental impact with respect to both tangible and intangible heritage. As regards to the former, the effects of climate change on World Heritage properties – especially mountains, glaciers and sea areas – over the past years are visible to everyone. For example, Mount Kilimanjaro, in Tanzania, has been surrounded by large quantities of ice for some 10,000 years, but in the last decades the amount of ice has drastically decreased, of more than 85 per cent between 1912 and 2011; ice melting on the top of the mountain is at present a constant and seemingly inexorable process, to the point that it is expected to become ice free soon, predictions ranging from 2020 to 2060.28 Also, in 2004 several properties inscribed on the WHL were affected by the earthquake and tsunami hitting South Asia; cultural properties include the Old Town of Galle and its Fortifications in Sri Lanka as well as Group of Monuments Mahabalipuram and the Sun Temple of Konârak in India; also

natural sites were damaged, including the Ujung Kulon National Park\textsuperscript{32} and the Tropical Rainforest Heritage of Sumatra,\textsuperscript{33} both in Indonesia. Another example is offered by the Everglades National Park,\textsuperscript{34} in the United States, which in 2010 was inscribed on the List of World Heritage in Danger, upon request of the American government, because of serious and continuing degradation of its aquatic ecosystem. The Park had been first inscribed on the same list in 1993, due to damage caused by Hurricane Andrew and a marked deterioration in water flows and quality resulting from agricultural and urban development. Although it had been removed from the List in 2007, its degradation has continued, especially in the form of drastic reduction of water inflows and increment of pollution, leading to a loss of marine habitat and decline in marine species.\textsuperscript{35} Overall, according to a study of the World Heritage Centre – which is quite outdated at the moment of this writing, as it was carried out in 2005 – 125 properties inscribed on the WHL, located in 59 states parties, were affected at the time by climate change, including \textit{inter alia} coastal marine sites, glaciers, mountainous sites and terrestrial biodiversity sites.\textsuperscript{36} The climate threats jeopardizing cultural properties were identified in hurricane, storms, lightening, sea level rise, erosion, flooding, rainfall increase, drought, desertification and rise in temperature.\textsuperscript{37} As for the impacts observed for natural properties, they were the following: glacial retreat and glacier melting, sea level rise, loss of biodiversity, species migration and tree-line shift, rainfall pattern changes and occurrence of droughts, frequency of wildfires, coral bleaching, coastal erosion, sea water temperature and salinity change, as well as hurricane, storms and cyclones.\textsuperscript{38}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{34} See UNESCO, ‘Everglades National Park’ whc.unesco.org/en/list/76 accessed 5 October 2013.
\item \textsuperscript{36} Ibid 42–43.
\item \textsuperscript{37} Ibid 46.
\item \textsuperscript{38} Ibid 44.
\end{itemize}
\end{footnotesize}
Within the WHC framework, climate change is only mentioned in the Operational Guidelines for the Implementation of the World Heritage Convention (Operational Guidelines),\(^ {39}\) inside the Format for the nomination of properties for inscription on the WHL;\(^ {40}\) in particular, at the voice ‘environmental pressures’, in the context of which the major sources of environmental degradation affecting the property proposed for inscription are to be listed and summarized, climate change is identified as a possible example of such pressures.\(^ {41}\) Also, among the ‘selected global conventions and programmes relating to the protection of Cultural and Natural Heritage’, the 1992 United Nations Framework Convention on Climate Change\(^ {42}\) is included. However, also in the Convention’s text – even though the term climate change is not explicitly mentioned – it is dedicated implicit attention. In fact, at Article 11(4), in describing the reasons for which a property already included in the WHL may be inscribed on the List of World Heritage in Danger, certain typical effects of climate change are mentioned, id est calamities and cataclysms, landslides, changes in water level, floods and tidal waves. When a World Heritage property is threatened by one of these (or other climate-change-related) phenomena, it is possible to submit a request for international assistance to the World Heritage Committee;\(^ {43}\) the latter may accordingly decide the forms of assistance to be granted to prevent and/or combat the actual or potential effects determined by climate change over the property concerned.

Probably the options offered by the WHC system are still far from laying down a satisfactory set of rules capable of properly addressing the potential threats of climate change on World Heritage properties. However, it is self-evident that in this respect the WHC is certainly better equipped than the CSICH. This is due to at least two reasons. First of all, a very practical one: the heritage object of protection under the WHC is usually much more visible than intangible heritage; therefore, it is much easier to identify, monitor and visualize the effects of climate change – and possibly to keep them under

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41 Ibid 109.
control — on the former than on the latter. Sometimes intangible Cultural Heritage is simply invisible; consequently, it just disappears (this happens in the world on a daily basis), and sometimes nobody realizes that, if not the communities specifically concerned. Secondly, in reproducing the model of the WHC, the CSICH has established a system which, although characterized by equivalent provisions, is much less effective than the WHC in terms of potential action against the effects of climate change; this is due to the different nature — under many perspectives — of the two categories of heritage concerned. In fact, while tangible heritage has a material structure on which the necessary measures may be directly put into concrete operation — *id est* measures addressing the property as such (e.g. restoration, application of layers of protective materials, reinforcement of the structure of a building, cleaning, etc) — this obviously does not apply to intangible heritage, for its ethereal character. When an element of intangible Cultural Heritage is threatened by climate change, clearly the right remedy cannot be that of modifying the nature and characterization of the element concerned; this would in most cases prejudice its very cultural significance for its creators and bearers. Therefore, the only acceptable option is to act on the root causes of climate change with specific respect to the heritage concerned. It is obvious that this is particularly difficult, because intangible Cultural Heritage is by its very nature a living heritage, and, since climate change usually forces people to modify their living conditions, habits and traditions, it consequently forces an artificial (nonspontaneous) change in the intangible heritage as well, leading it to lose its distinctive cultural significance, if not to disappear. For example, when a community is forced to leave its ancestral lands for climate-change-related reasons (one may think, for instance, about the so-called environmental refugees, *id est* those who are forced to leave an island where they lived which is being submerged due to the increment of the sea level), all elements of intangible Cultural Heritage linked to that specific land will inevitably disappear. Even without any need to refer to such extreme situations, climate change may force communities and even individuals to change their habits so as to adapt them to the new climatic reality, with a consequent loss of intangible Cultural Heritage. Alternatively, it may lead to changes in environmental conditions which are essential for an element of intangible Cultural Heritage to properly fulfil its cultural role as well as to be appropriately preserved and transmitted to future generations. If one takes a look at the two lists established by the CSICH, she/he may easily pick elements of intangible Cultural Heritage which are potentially or actually threatened by climate change. For example, the official Web page of the *Yaokwa, the Enawene Nawe people’s ritual for the maintenance of social and cosmic order* (included
in the List of Intangible Cultural Heritage in Need of Urgent Safeguarding), in Brazil, describes such a ritual as follows:

“(t)he Enawene Nawe people … perform the Yaokwa ritual every year during the drought period to honour the Yakairiti spirits, thereby ensuring cosmic and social order for the different clans. The ritual links local biodiversity to a complex, symbolic cosmology that connects the different but inseparable domains of society, culture and nature. It is integrated into their everyday activities over the course of seven months during which the clans alternate responsibilities: one group embarks on fishing expeditions throughout the area while another prepares offerings of rock salt, fish and ritual food for the spirits, and performs music and dance. The ritual combines knowledge of agriculture, food processing, handicrafts (costumes, tools and musical instruments) and the construction of houses and fishing dams. Yaokwa and the local biodiversity it celebrates represent an extremely delicate and fragile ecosystem whose continuity depends directly on its conservation. However, both are now seriously threatened by deforestation and invasive practices, including intensive mining and logging, extensive livestock activity, water pollution, degradation of headwaters, unregulated processes of urban settlement, construction of roads, waterways and dams, drainage and diversion of rivers, burning of forests and illegal fishing and trade in wildlife”.

While most of the causes threatening the integrity of the practice in point are man-made (although degradation of headwaters and accidental burning of forests may be effects of climate change), it is based on a fragile ecosystem which may be easily disrupted by climate change. Similar considerations may be developed with respect to the Traditions and practices associated with the Kayas in the sacred forests of the Mijikenda, in Kenya, oral traditions and performing arts related to sacred forests, involving the use of natural resources regulated by traditional knowledge and practices, which have contributed to the conservation of local biodiversity.

Another example of interest for the present study is offered by the Sanké mon, collective fishing rite of the Sanké, in Mali, which was inscribed on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding in 2009 because it is endangered by a number of factors, including degradation of the Sanké lake due to poor rainfall, one of the typical effects of climate change.

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The two lists established by the CSICH, however, inescapably offer a very limited picture of the infinite variety of the intangible Cultural Heritage of the world. Many examples of the heritage in point threatened by climate change may therefore be found outside them. It suffices to think about all ice-related traditional practices; for instance, ice-melting in the Arctic is progressively forcing the native Inuit to change their traditional way of life, implying a huge and irreplaceable loss of intangible Cultural Heritage.47

Threats to intangible Cultural Heritage determined by climate change are today a daily reality all over the world, and the CSICH does not include any provision dealing with the problem in point. Also, unlike the Operational Guidelines of the WHC, no mention of climate change is included in the Operational Directives for the implementation of the Convention for the Safeguarding of the Intangible Heritage (Operational Directives).48 Certainly the Convention does not prevent the possibility of taking action in view of safeguarding intangible Cultural Heritage against the effects of climate change. This may be done, first of all, through inscribing an element of such a heritage on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding, allowing the element concerned to have privileged access to international assistance pursuant to Article 20(a) CSICH. Also, according to Article 11(a) states parties have the duty to ‘take the necessary measures to ensure the safeguarding of the intangible Cultural Heritage present in (their) territory’, which may well include measures having the purpose of opposing the effects of climate change. Furthermore, the scientific, technical and artistic studies, as well as research methodologies, to be fostered with a view of effectively safeguarding the intangible Cultural Heritage, in particular the intangible Cultural Heritage in danger, pursuant to Article 13(c), may concern action against climate change. Last but not least, action against climate change may be promoted through putting into practice the general duty of international cooperation contemplated by Article 19,49 by virtue of which states parties ‘undertake to cooperate at the bilateral, subregional, regional and international levels’ in the general interest of humanity.50 These, however, are

49 Including, inter alia, ‘the exchange of information and experience, joint initiatives, and the establishment of a mechanism of assistance to States Parties in their efforts to safe-guard the intangible Cultural Heritage’; see Article 19(1).
50 See Article 19(2).
very generic provisions, and their translation into effective measures aimed at addressing the effects of climate change with respect to intangible Cultural Heritage ultimately rests in the hands of states. In other words, for those effects to be properly faced and neutralized, a particularly structured and specific action would be necessary, which is not contemplated by the CSICH, but ultimately depends on the willingness and capacity of states parties to voluntarily take measures in view of properly addressing the specific problems faced by each element of intangible Cultural Heritage as a consequence of climate change, within the broad scope of the freedom left to them by the Convention in safeguarding their national heritage. After all, as is well known, the correct functioning of the CSICH as a whole depends on the willingness of states parties to make it work; in this respect it suffices to think that (like the WHC) for international assistance to be activated, a request from the territorial state concerned is necessary, even with respect to elements inscribed on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding.

In theoretical terms, the interaction between the safeguarding of intangible Cultural Heritage – as determined by the CSICH – and climate change might also be seen under a totally different perspective than the one examined so far. In particular, the hypothesis could be considered that a given element of intangible Cultural Heritage might favour the process of climate change. Should this happen, that particular element would be excluded from the scope of application of the Convention. This is due to the circumstance that, according to its Article 2, ‘(f)or the purposes of this Convention, consideration will be given solely to such intangible Cultural Heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development’.

In fact, in the event that one element of intangible Cultural Heritage might produce the effect of favouring climate change, it would clearly be incompatible with the requirements of sustainable development. It is very unlikely, however, that a situation of this kind may actually happen in practice, id est that an element of intangible Cultural Heritage may be in itself a force contributing to the progression of climate change.

51 See Article 23 CSICH.
52 Emphasis added.
It is a fact that the model of the WHC and the CSICH is not the best possible one in terms of protecting/safeguarding Cultural Heritage. This holds true in particular with respect to the CSICH, since – as seen in the previous section – the WHC system is certainly better equipped than the latter, both in terms of substantive provisions included along its text as well as in *structural* terms, *id est* for the fact that immovable tangible properties offer more chances to organize targeted action against climate change than intangible heritage. This said, to be successful one must work within the reality existing in the real world, finding the right balance between idealism and realism in order to effectively determine positive changes. The current text and structure of the CSICH are carved in stone, and there is no reasonable prospect to change them. At the same time, however, since the Operational Directives are subject to regular revision and may always be modified, they offer a formidable chance to update the global system of the Convention in order to make it more responsive to the need of preventing and combating the effects of climate change on intangible Cultural Heritage. In fact, the Operational Guidelines are an integral part of the CSICH, and the inclusion in their text of specific provisions addressing the issue of climate change would fill the gap left open by the Convention’s text in not appropriately dealing with such an issue.

Also, since tangible and intangible heritage often represent two indissoluble components of the same complex cultural reality,53 promotion of contextual management of the WHC and the CSICH – including in the field of the fight against climate change – might result particularly appropriate and effective.

At the same time, one should not forget that alternative avenues do exist, which, besides the CSICH, establish the conditions for a legal safeguarding of intangible Cultural Heritage. This happens especially with respect to human rights law, the said heritage being an essential part of the cultural identity of communities and individuals. As I have stated in other writings of mine, the recent developments of international law in the field of cultural rights make it reasonable to hold that at present the most effective legal safeguard available for intangible Cultural Heritage is outside the system of the CSICH, in light of the

53 See, in this respect, the third recital of the CSICH Preamble, emphasizing the ‘deep-seated interdependence between the intangible Cultural Heritage and the tangible cultural and natural heritage.’
deep interaction between the heritage in point and international human rights.\textsuperscript{54} Of course, once a human right exists establishing an international obligation (whereas indirectly) to ensure proper safeguarding of intangible Cultural Heritage of individuals and communities, as part of their cultural identity, such an obligation includes safeguarding the said heritage against the threats of climate change. This argument may be combined – in the form of a mutually-reinforcing relation – with the one concerning the human right to a safe environment, affirmed in contemporary international practice;\textsuperscript{55} indeed, the latter right also presupposes a right to be protected against the effects of climate change (although it may be hard to be translated into practice), extended to all essential elements of the life and environment of human beings, including elements of intangible Cultural Heritage.

One final point: in examining the relation between intangible Cultural Heritage and climate change, it is important to emphasize that it may be seen not only under the perspective of the detrimental effects that the latter may determine on the former. On the contrary, it is also opportune to consider that intangible Cultural Heritage may in some cases help in preventing climate change. Many elements of the heritage in point are in fact related to the sustainable use of natural resources, offering lessons which might be used in order to develop a more sustainable model of life, through replacing with long-established uses of traditional communities certain modern habits which contribute to favour climate change.\textsuperscript{56}

\textsuperscript{54} See Lenzerini (n 15) 118.
\textsuperscript{56} See, for example, Benjamin A Gyampoh et al, ‘Using traditional knowledge to cope with climate change in rural Ghana’ FAO Corporate Document Repository (2001) www.fao.org/docrep/011/i0670e/i0670e14.htm accessed 6 October 2013. The authors, among other things, note that “(t)raditional knowledge – the wisdom, knowledge and practices of indigenous people gained over time through experience and orally passed on from generation to generation – has over the years played a significant part in solving problems, including problems related to climate change and variability. Indigenous people that live close to natural resources often observe the activities around them and are the first to identify and adapt to any changes. The appearance of certain birds, mating of certain animals and flowering of certain plants are all important
V Conclusion

A recent report dealing with the effects of climate change on the life of the Inuit people of Canada notes that their ‘millennia-old traditions are already being altered because of the warming Arctic, and (they) face the possibility of having to completely reinvent what it means to be Inuit’.\(^{57}\) This is an example of a reality, by virtue of which humanity is experiencing an irreplaceable loss of heritage, knowledge and traditions, which ultimately results in a harmful impoverishment of the Cultural Heritage of humankind as a whole. In fact, intangible Cultural Heritage is an essential component of cultural diversity, which, in turn, is a ‘common heritage of humanity’, as it ‘is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind. As a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature’.\(^{58}\) Similar observations may be developed with respect to World Heritage, which, as emphasized by the sixth recital of the WHC Preamble, ‘need(s) to be preserved as part of the World Heritage of mankind as a whole’. The international community cannot further postpone setting up a global, targeted and efficient action having the purpose of fighting the detrimental effects produced by climate change on both tangible and intangible Cultural Heritage. Maybe the time is still right to do that; the risk is that very soon it may be too late.

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The Cultural Dimension of Climate Change: Some Remarks on the Interface between Cultural Heritage and Climate Change Law

Abstract Climate change is one of the major environmental challenges of the twenty-first century whose aggravating effects impact biodiversity, landscapes, the life of peoples and Cultural Heritage. This chapter analyses the different ways climate change threatens Cultural Heritage and examines the existing international legal framework. The aim is to investigate whether, and to what extent, Cultural Heritage law interacts with the international instruments that address the degradation of global climate conditions. The main argument is that these legal regimes are inadequate to protect cultural and environmental resources. Rather than advocating normative or structural reforms, this chapter offers a plea for a new attitude on the part of States, one that aims at sustainable models of economic growth for the sake of the protection of Cultural Heritage of great value to all of humankind.

I Introduction

Climate change is one of the most urgent challenges to humankind and to the sustainability of the world’s environment. Despite the uncertainties associated with scenarios and models, it is certain that climate change entails a number of threats: increasing temperatures; change of the frequency, intensity and distribution of extreme events such as droughts, precipitations, floods and tropical cyclones; rising sea level; and increased marine acidification due to rise of carbon dioxide levels in the atmosphere and dissolved in the oceans. There is also no scientific doubt that human activities contribute significantly to climate change.1

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1 Solar radiation that reaches Earth warms the surface, which then re-radiates heat back into the atmosphere. Since the atmosphere presents a barrier to both incoming and outgoing radiations, the atmosphere retains a greater proportion of heat radiated from Earth. Human activities perturb this natural filtering (greenhouse) effect by adding greenhouse gases (GHG), such as carbon dioxide and methane, which are the products of fossil fuel combustion resulting from transport-related emissions and...
This linkage was uncovered in 2007 by the Intergovernmental Panel on Climate Change (IPCC), which asserted that “there is very high confidence that the global average net effect of human activities since 1750 has been one of warming”. However, already the 1992 United Nations Framework Convention on Climate Change (UNFCCC) established that climate change can be “attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.

Besides climatic events, human-induced climate change results in global, long-term and accelerating social and economic changes, which threaten human well-being. Further, it has the potential to threaten international peace and security, the stability of nation States and the enjoyment of fundamental human rights. Indeed, climate change will undermine – and is already undermining – the realization of a broad range of individual rights, including the right to health, to life, to food, to water, to shelter, to property, and the rights associated with culture.

While many scholarly works have examined the connection between climate change and internationally protected human rights, this chapter will look at the cultural dimension of climate change. In other words, this chapter will focus on the interface between Cultural Heritage law and climate change regulation, addressing the following questions: is Cultural Heritage protection from climate change threats envisaged by international law? Where does international

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2 IPCC, Fourth Assessment Report: Climate Change (CUP 2007) 37. The IPCC is the leading international scientific body for the assessment of climate change. It was established by the United Nations Environment Programme and the World Meteorological Organization in 1988 to provide scientific assessments of climate change and its potential environmental and socio-economic impacts, see IPCC, ‘Organization’ www.ipcc.ch/organization/organization.shtml#.UZJEsUq5-Yk accessed 24 January 2014.


Cultural Heritage law coincide with or confront obligations under the climate change regime? Where must climate change policies resist with Cultural Heritage law imperatives? Are climate change regime and Cultural Heritage law mutually supportive? This study will thus permit to examine the content and the links between the legal regimes designed by States and international organizations to reduce the vulnerability of Cultural Heritage and the global climate. These resources have emerged as global public goods, id est values that are fundamental for the international community as a whole and that transcend the interests of individual States.

The 1972 Stockholm Declaration on the Human Environment constitutes the first body of norms and principles governing the collective action of States and other international actors with the goal of safeguarding the essential elements of the environment as a global public good, including climate and the biosphere. Subsequently, Resolution 43/53 of the General Assembly underlined that “certain human activities could change global climate patterns, threatening present and future generations”; that “emerging evidence indicates” that the effects of global warming “could be disastrous for mankind if timely steps are not taken at all levels”; and that climate change is a “common concern of humankind”.

Likewise, the UNFCCC acknowledged that “change in the Earth's climate and its adverse effects are a common concern of humankind”. The idea of Cultural Heritage as a ‘public good’ can be traced back to the Convention for the Protection of Cultural Property in the Event of Armed Conflict, according to which “damage to cultural property belonging to any people whatsoever means damage to the cultural heritage of all mankind, since each people makes its contribution to the culture of the world”.

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6 In economic literature, a global public good is one that is characterized by non-rivalry, id est anyone can use a good without diminishing its availability to others, and nonexcludability, id est no one can be excluded from using the good. The term is used in international law discourse to refer to values that are fundamental for the international community as a whole and that transcend the interests of individual States. See Inge Kaul, Isabelle Grunberg and Marc A Stern (eds), Global Public Goods. International Cooperation in the 21st Century (OUP 1999); and 'Symposium: Global Public Goods and the Plurality of Legal Orders' (2012) 23 Eur J Int’l L 643.


8 Preamble, first recital.

The same idea was echoed by the Declaration Concerning the Intentional Destruction of Cultural Heritage, which establishes that

“[...] cultural heritage is an important component of the cultural identity of communities, groups and individuals, and of social cohesion, so that its intentional destruction may have adverse consequences on human dignity and human rights”.

This chapter proceeds in five stages. It begins by looking at the ways in which climate change impacts on tangible Cultural Heritage, id est art objects, monuments, archaeological sites, landscapes (section II). It then explores Cultural Heritage law (section III) and the international instruments that address the degradation of global climate conditions (section IV) in order to lay the foundation for the examination of their interaction and some of the related problems (section V). The chapter concludes by offering a plea for a new attitude on the part of States, one that meets with the existing international rules and principles and that aims at meaningful sustainable models of economic growth for the sake of the protection of cultural properties of great value to all of humankind as well as future generations (section VI).

II The Impacts of Climate Change on Cultural Heritage

The deleterious effects of climate change will have consequences for the products of human creativity. In the case of built Cultural Heritage, the potential impacts of climate change range from (i) direct physical effects and (ii) effects on social and cultural structures and habitats. This means that the alteration of the climatic equilibrium of the planet does not only severely affect monuments, sites and biodiversity, but has also an impact on people. Therefore, the assessment of the effects of climate change must account for the interactions within and between natural, cultural and societal systems.

10 Preamble, fifth recital. The Declaration was adopted on 17 October 2003 by the General Conference of the UNESCO as a reaction to the demolition of the monumental statues of the Buddhas of Bamiyan committed by the Taliban in 2001.

11 UNESCO, ‘Case Studies on Climate Change and World Heritage’ (World Heritage Centre 2007) whc.unesco.org/en/activities/473 accessed 27 January 2014. This publication presents 26 case studies from selected natural and cultural WHC sites to illustrate the observed and expected impacts of climate change. The World Heritage Centre was established in 1992 and is tasked with managing the day-to-day affairs of the WHC. See whc.unesco.org/en/world-heritage-centre accessed 27 January 2014.

The adverse impacts of climate change on social and cultural structures can be illustrated by considering the buildings, sites and landscapes where people live, work, worship and socialize. Climate change alters the way people relate to these spaces. For instance, under the pressure of desertification, flooding or sea level rise, populations are forced to migrate, leading to the abandonment of property. This abandonment raises an important concern in contexts where traditional knowledge and skills are essential to ensure a proper maintenance of these properties. Biological changes (with species shifting ranges) can also have an impact on conservation, with the reduction of availability of native species to repair structures and buildings. Moreover, the migration of people leads to the break-up of communities and thus to the eventual loss of social structures, traditional knowledge, cultural identity, rituals and the cultural memory of former inhabitants. For instance, the melting of ice caps and the arctic ground ice as a result of temperature increase in high northern latitudes has already had an impact on the traditional livelihoods and means of survivals of the local indigenous peoples.

Direct physical damages are due to the fact that Cultural Heritage is closely related to the climate. In its Case Studies, the UNESCO World Heritage Centre has distinguished the archaeological heritage from the built heritage in order to identify the most important direct physical effects of climate change.

With respect to the archaeological heritage, the following changes in environmental conditions have been considered: (i) modification in precipitation regimes, regardless of whether the trend marks an increased frequency of droughts or floods or an increased year-to-year variability; (ii) increased soil temperature in response to increased atmospheric temperature, which may provoke subsoil instability, ground heave and subsidence as well as landslides; (iii) sea-level rise,

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13 Several islands in the Southern Pacific have already been abandoned after the rising ocean flooded parts of their shorelines and saltwater seeped into the ground water. As 70 per cent of the world population lives in coastal areas, the majority will be affected directly by that development. Stefan Gruber, ‘The Impact of Climate Change on Cultural Heritage Sites: Environmental Law and Adaptation’ (2008) 8/117 Sidney Law School Legal Studies Research Paper papers.ssrn.com/sol3/papers.cfm?abstract_id=1285741 accessed 26 July 2013, 15–16. See also Hee-Eun Kim, ‘Changing Climate, Changing Culture: Adding the Climate Change Dimension to the Protection of Intangible Cultural Heritage’ (2011) 18 Intl J Cultural Property 259.
14 UNESCO, ‘Case Studies on Climate Change and World Heritage’ (n 11) 65.
15 Mutter and Barnard (n 1) 275–276.
16 UNESCO, ‘Case Studies on Climate Change and World Heritage’ (n 11).
which threatens coastal areas with the subsequent coastal erosion and permanent submersion of low lying areas and the increase in the sea salt chlorides load of coastal soils; (iv) changes in sediment moisture, which are expected to affect data preserved in waterlogged, anaerobic or anoxic conditions; (v) changes in wetting and drying cycles, which will induce crystallization and dissolution of salts and thus affect buried archaeology, wall paintings, frescos, rock art and other decorated surfaces. Essentially, these changes of temperature or water content may jeopardize the conservation of archaeological evidences – even those not known today – and exacerbate decay mechanisms since they perturb the balance in the hydrological, chemical and biological processes of the soil where archaeological sites are located.  

Regarding historic buildings the study of the World Heritage Centre evidences that they have a greater intimacy with the ground than modern ones. The built heritage has been designed with the local climate in mind. Historic buildings are more porous and draw water from the ground into their structure and lose it to the environment by surface evaporation. Their wall surfaces and floors are the point of exchange for these reactions. Therefore, increases in soil moisture might result in greater salt mobilisation and consequent damaging crystallisation on decorated surfaces through drying. Moreover, extreme and sudden variations or changes in the amplitude of the diurnal or seasonal variation of temperature and humidity can cause the splitting, cracking, flaking and dusting of materials and surfaces. Timber and other organic building materials may be subject to increased biological infestation such as the migration of pests to altitudes and latitudes that may not have been previously concerned with such threats. Flooding is another important concern. Buildings may be damaged due to the erosive character of rapid flowing water or because they were not designed to withstand prolonged immersion. In addition, post-flood drying may encourage the growth of damaging micro-organisms such as moulds and fungi. Likewise, sea-level rise leads to coastal erosion and threatens coastal properties with total loss.

Another serious threat is desertification. This has been defined as

[...] land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities. 

17 Ibid 52–53.  
18 Ibid 64–65.  
Thus, desertification is not only caused by natural causes. Anthropogenic factors such as deforestation, pollution, inappropriate irrigation and poor land governance play a significant part. However, climate change also plays an important role. In the peripheral areas of deserts, sand dunes are normally stabilised by vegetation. Higher temperatures and less rainfall contribute to droughts in such areas, leading to the decline of vegetation and hence to the migration of sand dunes. Once the sand dunes become mobile, all vegetation in their vicinity is at high risk and an unstoppable chain reaction begins. Windstorms, which are increasing in number, extension and frequency due to climate change, further exacerbate the situation.\(^{20}\)

One of the case studies presented in the report by the World Heritage Centre deals with the three mosques of Djingareyber, Sankoré and Sidi Yahia in Timbuktu, Mali. These sites, which were inscribed in the List of World Heritage in Danger (2012), set up under Article 11 of the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (WHC),\(^{21}\) bear testimony to the physical and social impacts of climate change (desertification). On the one hand, projected changes show that in the future the area of Timbuktu will face a decrease in average rainfall and an increase in atmospheric temperature, which will surely contribute to desert encroachment and sand blown damage.\(^{22}\) Another climate factor that deserves attention is the increase in extreme precipitation events. Heavy rains in 1999, 2001 and 2003 damaged or caused the collapse of traditional earthen buildings and mud mosques. Moreover, the desertification in the region of Timbuktu is an important source of stress to the three mosques because it might lead the migration of the local population, including the local craftsmen, which are involved in the restoration process of the mud structures of the mosques.\(^{23}\)

However, there are other climate change-related direct physical impacts that have not been reported by the World Heritage Centre.

First, environmental degradation leads to conditions for the recrudescence of thefts, illicit excavations and exportations of cultural objects. In effect, just as in times of war and of political disorder, the opportunity for illicit trafficking in art increases with the impoverishment of the local population or its departure,

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20 Gruber (n 13) 12.
21 Adopted 16 November 1972, entered into force 17 December 1975, 1037 UNTS 151.
22 This threat justified the inscription of Timbuktu on the List of World Heritage in Danger between 1990 and 2005. The site was subsequently re-inscribed in this list in 2012 due to the armed conflict that threatened mosques and tombs.
23 UNESCO, ‘Case Studies on Climate Change and World Heritage’ (n 11) 74–75.
for example, because of climate change-related events such as desertification and agricultural disruption. As part of the same problem, it appears that this scenario also entails that climate change may affect the efforts currently deployed by national governments, UNESCO and other specialised institutions to enhance (Cultural Heritage) law enforcement in these areas. In addition, climate change induced events may impinge on the implementation of UNESCO’s mantras that stolen or illicitly exported cultural materials must be returned to the country of origin and that archaeological assets should be preserved in situ.

Second, it may be argued that the geophysical changes resulting from climate change could lead to future armed conflicts, which in turn might impact – as either unwanted or premeditated consequences – cultural sites and properties. The argument about the connection between climate change and conflict boils down to an argument about resource scarcity and competition over the means to sustain livelihoods.

Third, extreme weather events in major art trade hubs like New York and London jeopardize the preservation of movable works of art. These are not unlikely events. In 2012, New York was hit by hurricane Sandy and in 2011 by hurricane Irene, two of the most devastating hurricanes in recent history. These can be related to climate change because, in a warming world, tropical climate conditions expand toward the poles. Consequently, storm tracks that have been associated with the tropics are moving northward (and similar northward shifts will occur in the Pacific). Therefore, areas that previously experienced very few hurricanes and cyclones will start to experience them in greater numbers. Christiane Fischer, President of AXA Art in the Americas observed that

“Sandy was the costliest event for the art insurance industry by far. We all will need to adjust our disaster planning strategies to protect important works [...] from becoming victims of water damage”.

During hurricane Sandy, Christie’s Fine Art Storage Services, a wholly owned subsidiary of the auction house that stores and protects artworks for private and

26 On London, see the case study in UNESCO, ‘Case Studies on Climate Change and World Heritage’ (n 11) 66–69.
27 IPCC (n 2) 46, 53; Mutter and Barnard (n 1) 275–277.
institutional owners in Brooklyn, was hit by at least one storm surge. Christie’s storage facility is not the only one to have clients’ works damaged. The storm threatened manifold businesses, including Chelsea’s art galleries, where streets were flooded. It is impossible to know the exact loss as most sources requested anonymity because of the sensitivity of the information. It has been estimated, however, that total losses run in the hundreds of millions.29

III Cultural Heritage-Related International Instruments

International Cultural Heritage law has developed throughout time thanks to the standard-setting activity of UNESCO and other international organizations in direct response to the pressure placed upon sites and objects by different forces. The destruction and illicit trade of cultural assets during the two World Wars triggered the adoption of the Convention for the Protection of Cultural Property in the Event of Armed Conflict.30 The exposure of clandestine excavations and illegal trafficking in cultural objects prompted further international instruments: the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property31 and the Convention on Stolen or Illegally Exported Cultural Objects.32 Population growth, industrial development and urbanization lead to the adoption of the Recommendation concerning the Preservation of Cultural Property Endangered by Public or Private Works (1968), the WHC, the Recommendation concerning the Protection, at a National Level, of the Cultural and Natural Heritage (1972), and the Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas (1976). As far as the WHC is concerned, it is routinely affirmed that the idea of safeguarding monuments, sites and groups of buildings of ‘outstanding universal value’ emerged as a result of the international campaign organized in the 1960s by UNESCO to rescue the Abu Simbel Temples in the Upper Nile Valley. These would have flooded following the construction of the Aswan High Dam by the Government of Egypt. Pursuant to a request for assistance from Egypt and Sudan, UNESCO accelerated archaeological research on the site and the temples

30 See n 9.
32 Adopted 24 June 1995, entered into force 1 July 1998, 34 ILM 1322. This treaty was adopted by the International Institute for the Unification of Private Law (UNIDROIT) upon request of UNESCO.
were ultimately dismantled, moved to dry ground and re-assembled. Subsequently, the Convention on the Protection of the Underwater Cultural Heritage was adopted to counter the increasing commercial exploitation of underwater Cultural Heritage, which is due to the availability of new technologies that enable discovery and access to previously inaccessible sites.

All in all, these treaties aim to prevent the impoverishment of art-rich countries’ patrimony and to guarantee the protection of Cultural Heritage for the sake of its transmission to future generations. However, they were adopted before climate change emerged as a harmful phenomenon. This is the reason why climate change is not mentioned in UNESCO agreements. At best, these legal instruments contain references to some of the effects of climate change or to atmospheric pollution. For instance, Article 11(4) WHC states that cultural property can be inscribed in the List of World Heritage in Danger if “threatened by serious and specific dangers, such as the threat of disappearance caused by accelerated deterioration”, abandonment, landslides, changes in water level, floods and tidal waves, calamities and cataclysms. Article 6 of the 1978 Recommendation for the Protection of Movable Cultural Property emphasizes that cultural property

[...] is liable to deterioration as a result of [...] atmospheric pollution [...], which in the long run may have more serious effects than accidental damage or occasional vandalism.34

The same holds true for the treaties adopted under the aegis of the Council of Europe. The Convention for the Protection of the Architectural Heritage of Europe affirms that,

(with a view to limiting the risks of the physical deterioration of the architectural heritage, each Party undertakes: (1) to support scientific research for identifying and analysing the harmful effects of pollution [...] ; (2) to take into consideration the special problems of conservation of the architectural heritage in anti-pollution policies.35

The Framework Convention on the Value of Cultural Heritage for Society affirms that the States Parties undertake to

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35 Adopted 3 October 1985, entered into force 1 December 1987, CETS No 121, Article 8.
[...] enrich the processes of economic, political, social and cultural development and land-use planning, resorting to cultural heritage impact assessments [...]  

At its 29th session (Durban, 2005), the WHC Committee\(^\text{37}\) examined the issue of climate change for the first time. This issue was brought to the attention of the Committee by non-governmental organizations (NGOs) and individuals from several countries. Between 2004 and 2006, these non-State actors had filed five petitions requesting the inscription on the List of World Heritage in Danger for the following WHC sites: Sagarmatha National Park in Nepal; Huascaran National Park in Peru; Great Barrier Reef in Australia; Belize’s Barrier Reef Reserve System; and the Waterton-Glacier International Peace Park.\(^\text{38}\) Two other petitions were filed in 2007 in regards to the Blue Mountains Area in Australia\(^\text{39}\) and La Amistad Park in Panama and Costa Rica.\(^\text{40}\) Lastly, in 2009, two NGOs filed a

\(^{36}\) Adopted 27 October 2005, entered into force 1 June 2011, CETS No 199, Article 8.

\(^{37}\) In the machinery of the WHC, the Committee consists of representatives from 21 of the States Parties to the Convention, which are elected for terms up to six years by the General Conference. It is tasked with: (i) inscribing in the WHC List the sites of ‘outstanding universal value’ designated by the States Parties; (ii) monitoring the state of conservation of WHC properties; (iii) establishing the terms for use of the WHC Fund; (iv) allocating financial assistance upon requests from States Parties; and (v) establishing a List of World Heritage in Danger. See Articles 8–14 WHC.

\(^{38}\) The WHC does not expressly authorize petitions of this nature by NGOs or individuals. The petitioner on the Huascaran National Park case relied on a UNESCO document (UNESCO, ‘World Heritage Information Kit’ (World Heritage Centre 2008) whc.unesco.org/documents/publi_infokit_en.pdf accessed 27 January 2014). It indicates that “private individuals, non-governmental organizations, or other groups may also draw the Committee’s attention to existing threats. If the alert is justified and the problem serious enough, the Committee may consider including the site on the List of World Heritage in Danger” (18). The other petitions simply cited the power of the WHC Committee to add sites to the List of World Heritage in Danger as a justification. For an analysis of these petitions see Erica J Thorson, ‘The World Heritage Convention and Climate Change: The Case for a Climate-Change Mitigation Strategy beyond the Kyoto Protocol’ in William C G Burns and Hari M Osofsky (eds), Adjudicating Climate Change: State, National, and International Approaches (CUP 2009) 255.


petition focusing on the threat posed by black carbon to an array of WHC sites. These petitions argued that, pursuant to their obligations under the WHC, States Parties should make drastic cuts in their GHG emissions, regardless of their commitments under the UNFCCC and the Kyoto Protocol.

With Decision 29 COM 7B.a of 2005, the WHC Committee took note of the petitions and of the ‘genuine concern’ of the petitioners and acknowledged “that the impacts of climate change are affecting many and are likely to affect many more World Heritage properties […] in the years to come”.

It then encouraged States Parties to incorporate responses to these threats in management plans developed for WHC sites. Furthermore, it requested the World Heritage Centre, in collaboration with the WHC’s Advisory Bodies, interested States Parties and the petitioners, to convene a working group of experts to

“review the nature and scale of the risks posed to World Heritage properties arising specifically from climate change; […] jointly develop a strategy to assist States Parties to implement appropriate management responses […]”

and to

“prepare a joint report on ‘Predicting and managing the effects of Climate Change on World Heritage’ to be examined by the Committee at its 30th session (Vilnius, 2006)”.

As a result, the Committee did not inscribe the sites in question in the List of World Heritage in Danger as requested by the petitioners.

The expert meeting took place in March 2006 at the UNESCO headquarters in Paris and resulted in the preparation of a Report on Predicting and Managing the Effects of Climate Change on World Heritage (‘the Report’) and a Strategy

44 These are the International Council for Monuments and Sites (ICOMOS), the International Union for Conservation of Nature (IUCN) and International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM).
45 UNESCO (n 43) Paragraph 7.
48 See n 12.
to Assist State Parties to Implement Appropriate Management Responses (‘the Strategy’). The Report (i) provided a detailed assessment of the potential – direct, social and cultural – impacts of climate change on World Heritage cultural sites; (ii) required the adoption of management strategies for site-based mitigation and adaptation responses; and (iii) considered the development of synergies and partnerships with other international treaties, such as the UNFCCC and the Kyoto Protocol, the Ramsar Convention on Wetlands, the UNESCO’s Programme on Man and the Biosphere and the Convention on Biological Diversity. The Strategy focused on three types of actions to safeguard WHC properties: (i) preventive actions, including monitoring, reporting and mitigation of climate change impacts; (ii) corrective actions, with a focus on global, regional and local adaptation strategies; and (iii) the sharing of knowledge, including best practices, education and capacity building.

The WHC Committee endorsed these two documents at its 30th session (Vilnius, 2006) and called on all the States Parties to implement the Strategy so as to protect the outstanding universal values, integrity and authenticity of WHC properties from the adverse impacts of climate change. The Committee further requested the World Heritage Centre to develop a policy document on the impacts of climate change on WHC properties. The Committee stated that this document should focus on: (i) synergies between conventions; (ii) identification of future research needs in this area; (iii) legal questions on the role of the WHC with regard to appropriate responses to climate change; (iv) linkages to other UN and international bodies dealing with the issues of climate change; (v) alternative mechanisms, other than the List of World Heritage in Danger, to address climatic change and other international concerns. The Policy Document on the Impacts of Climate Change on World Heritage Properties was presented and discussed by the WHC Committee at its 31st session (Christchurch, 2007) and

50 Convention on Wetlands of International Importance especially as Waterfowl Habitat; adopted 2 February 1971, entered into force 21 December 1975, 996 UNTS 245.
subsequently approved by the 16th General Assembly of the States Parties in 2007, which also encouraged UNESCO and the WHC Advisory Bodies to disseminate and promote the application of the Policy Document, the Report and the Strategy, including to the general public.

At its 32nd session (Quebec City, 2008) the WHC Committee decided to adopt “criteria for assessing properties which are most threatened by climate change for inclusion on the List of World Heritage in Danger”\textsuperscript{55} This led to the amendment of the Operational Guidelines.\textsuperscript{56} Now, Paragraph 179(b)(vi) of the Operational Guidelines establishes that a WHC site can be inscribed on the List of World Heritage in Danger when the Committee finds that the property is faced with a potential threat which could have deleterious effects on its inherent characteristics, such as “threatening impacts of climatic, geological or other environmental factors”.\textsuperscript{57} New Paragraph 181 reads:

“(T)he threats and/or their detrimental impacts on the integrity of the property must be those which are amenable to correction by human action. In the case of cultural properties, both natural factors and man-made factors may be threatening, while in the case of natural properties, most threats will be man-made and only very rarely a natural factor (such as an epidemic disease) will threaten the integrity of the property. In some cases, the threats and/or their detrimental impacts on the integrity of the property may be corrected by administrative or legislative action, such as the cancelling of a major public works project or the improvement of legal status”.

The amendment of the Operational Guidelines is important in that it permits to emphasise that the legal, factual and political context in which the provisions of an international treaty are applied may have changed as compared to the circumstances prevailing at the time of its adoption. In the case of the WHC, which has been in existence for more than forty years, the correct implementation of its norms has not required the revision of its text.\textsuperscript{58} Rather, the WHC Committee has taken into account the evolving context of natural and Cultural Heritage and new developments in international law through the continuing revision of the Operational Guidelines.\textsuperscript{59} An example is provided by the addition of the category

\textsuperscript{55} UNESCO, World Heritage Committee Decision 32 COM 7A.32 (31 March 2009) WHC08/32.COM/24Rev para 5.


\textsuperscript{57} Paragraph 180(b)(v) lists the same potential danger for natural properties.

\textsuperscript{58} Article 37 WHC regulates the issue of the revision.

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cultural landscape to the heritage defined in Articles 1 and 2 WHC. Another example is represented by the addition of a new criterion for listing natural sites to take into consideration the value of biodiversity following the adoption of the Convention on Biological Diversity. According to Article 11: List of World Heritage Sites in Danger and Deletion of a Property from the World Heritage List, in Francesco Fracioni (edited with the assistance of Federico Lenzerini), *The 1972 World Heritage Convention. A Commentary* (OUP 2008) 175, 189.

Accordingly, the Operational Guidelines may represent, in accordance with Article 31(3) of the Vienna Convention on the Law of Treaties (VCLT), a “subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions” (letter a) or “subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation” (letter b).

In light of the foregoing survey, it appears that the WHC Committee’s response to the impacts of climate change on WHC properties is quite disappointing. In effect, although it acknowledged that numerous sites are threatened by climate change, it opted for a soft approach motivated by the alleged primary role of the IPCC and of the UNFCCC in addressing the problem of climate change at the international and national level. Accordingly, beyond the monitoring of sites pursuant to Article 29 WHC, the Committee now has only two options to react to a threat to or possible destruction of WHC properties: the inscription on the List of World Heritage Sites in Danger or the deletion of the site in question when it loses its outstanding universal value. The listing may not only attract interna-

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60 Amendment of the Operational Guidelines approved by the WHC Committee at its 16th session (Santa Fe, 1992) (14 December 1992) WHC-92/CONF.002/12.
63 See Decision 29 COM 7B.a (n 43) Paragraph 5; and the survey in the Report (n 12) Paragraphs 39–46, which indicates that of “the 110 responses received from 83 States Parties, 72 per cent acknowledged that climate change had an impact on their natural and Cultural Heritage”, and that a “total of 125 World Heritage sites were mentioned specifically as threatened by Climate Change”.
64 The Strategy (n 49) states that the “UNFCCC is the UN instrument through which mitigation strategies at the global and States Parties level is being addressed” (Paragraph 18).
65 As of July 2013, the WHC Committee has delisted two sites only: the Dresden Elbe Valley in 2009 (Decision 33COM 7A.26) and the Arabian Oryx Sanctuary in 2007 (Decision 31COM 7B.11). On the List of World Heritage Sites in Danger see Buzzini and Condorelli (n 62); on the Fund, see Federico Lenzerini, ‘Articles 15–16: World Heritage Fund’ in Fracioni and Lenzerini (n 62) 269.
tional assistance, but it also allows the Committee to assign financial resources from the Fund established under Article 15 WHC.\textsuperscript{66} Moreover, the listing and the threat of deletion represent powerful tools to discourage States Parties from jeopardising the outstanding universal value of their properties.\textsuperscript{67}

However, although these options are very strong, in-danger listing and deletion do not seem adequate to pursue the objectives set forth in Cultural Heritage treaties, \textit{id est} the conservation and protection of the world’s heritage for the sake of its transmission to future generations. Stated differently, it appears that these measures cannot effectively prevent the deterioration or disappearance of sites of outstanding universal value.

Apart from the fact that the limited size of the Fund does not allow major or multiple investments regarding properties endangered by climate change, it is worth considering that the deterrent effect of the listing would diminish if it were more common. In other words, an increase in in-danger listings related to climate change threats by the WHC Committee would likely weaken the credibility of this measure.\textsuperscript{68}

\section*{IV Climate Change-Related International Regime}

The centrepiece of global efforts to combat climate change is the UNFCCC. It was signed in 1992 at the United Nations Conference on Environment and Development in Rio de Janeiro – together with the Convention to Combat Desertification and the Convention on Biological Diversity – as global warming had become a priority on the international political agenda. The UNFCCC defines climate change as

\[\ldots\text{a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.}\textsuperscript{69}\]

\textsuperscript{66} Paragraph 189 of the Operational Guidelines (n 56) provides that the “Committee shall allocate a specific, significant portion of the World Heritage Fund to financing of possible assistance to World Heritage properties inscribed on the List of World Heritage in Danger”.

\textsuperscript{67} Gruber (n 13) 9.

\textsuperscript{68} Gruber (n 13) 9. As of July 2013, 44 properties are inscribed on the List of World Heritage in Danger, whereas 1,007 are inscribed on the World Heritage List.

\textsuperscript{69} Article 1.
Therefore, the Convention distinguishes between anthropogenic climate change and the variability of climatic conditions attributable to natural causes. The ultimate objective of the UNFCCC is to achieve

\[(S)\text{tabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system […] within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.}\]

The Convention also sets out some guiding principles. In particular, it refers to the precautionary principle – according to which the lack of scientific certainty should not be used as an excuse to postpone action when there is a threat of serious or irreversible damage – and to the principle of common but differentiated responsibility – which is based on the facts that developed and developing States contributed differently to global environmental problems and that some States have less ability to cope with environmental problems.

According to Article 4(1) of the UNFCCC, States Parties are required to:

(i) develop, periodically update, publish and make available to the Conference of the Parties national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases; (ii) formulate, implement, publish and regularly update national and, where appropriate, regional programmes for mitigating climate change; (iii) promote and cooperate in the development and diffusion of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases; (iv) develop strategies for adapting to the impacts of climate change; (v) promote the sustainable management of resources; (vi) enhance GHG sinks and reservoirs (such as forests); and (vii) take climate change into account in their relevant social, economic, and environmental policies and cooperating in scientific, technical, and educational matters, as well as public awareness. Moreover, the UNFCCC stipulates that industrialized countries should support climate change activities in developing countries by providing financial assistance and sharing technologies. The Convention’s objective is to help developing countries to limit GHG emissions in ways that do not hinder their economic development. The Conference of the Parties uses the

\[\text{Article 2.}\]

\[\text{Article 3 UNFCCC states that “on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities […] the developed country Parties should take the lead in combating climate change and the adverse effects thereof”.}\]
information provided through the national reports to assess and review the effective implementation of the UNFCCC and to evaluate the aggregated effect of the steps taken by States Parties.

The UNFCCC has achieved almost universal participation. However, it is a binding treaty with no binding obligations. One reason is that the UNFCCC was concluded in a moment where there existed uncertainties on the phenomena of global warming and climate change. Another reason is that various States – most notably the United States – refused to accept legally binding reduction targets for GHG emissions. Consequently, the UNFCCC merely calls on the (industrialized) States Parties to ‘aim’ to return their GHG emissions back to 1990 levels without setting precise targets. In sum, developed States agreed to voluntary caps on emission of man-made GHG.

However, by 1995, the GHG emissions of most developed States were already well above 1990 levels. The realization that more substantive measures were necessary to confront global warming and the other dangerous effects of climate change led to the adoption of the Kyoto Protocol to the UNFCCC at the Third Conference of the Parties in 1997. Essentially, the Protocol was introduced to expand the scope of the UNFCCC in order to achieve an ambitious reduction – rather than stabilization – of GHG emissions.

The Kyoto Protocol sets up a regulatory regime providing concrete and specific binding obligations: it called 37 industrialized States and the European Union to “reduce(e) their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012”. In addition, the Protocol required States Parties to begin negotiating commitments for subsequent periods by 2005. In line with the UNFCCC and in accordance with the principle of common but differentiated responsibilities, developing countries were not required to

72 As of July 2013, it has been ratified by 194 States and 1 regional economic integration organization, the European Union.
73 Article 4(2)(b).
76 Article 3(1).
77 Article 3(9). The second commitment period (2013–2020) was decided on 8 December 2012, with the adoption of the Doha Amendment to the Kyoto Protocol. See UNFCCC, ‘Doha Amendment’ unfccc.int/kyoto_protocol/doha_amendment/items/7362.php accessed 27 January 2014.
make any commitment because it was considered that the largest responsibility for the levels of GHG emissions in the atmosphere laid with industrialized countries. Moreover, similarly to the UNFCCC, the Kyoto Protocol contains rules providing for concessions to wavering States, which substantially dilute the Parties’ commitments. States’ actual emissions have to be monitored. Therefore, States are required to submit reports about annual emission inventories.

Under the Kyoto Protocol, States must meet their reduction targets for GHG emissions primarily through national measures. In addition to these means, the Protocol introduced three market-based mechanisms: (1) Joint Fulfilment of Commitments and Implementation (Joint Implementation); (2) the Clean Development Mechanism (CDM); (3) Emissions Trading.\(^\text{78}\)

The mechanism of Joint Implementation\(^\text{79}\) allows any Party included in Annex I (States with an emission reduction or limitation commitment under the Kyoto Protocol) to transfer to, or acquire from, any other Annex I Party Emission Reduction Units (ERUs) resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of GHG in any sector of the economy. Therefore, Joint Implementation projects provide a reduction in emissions by sources or an enhancement of removals by sinks that is additional to what would otherwise have occurred. One of the purposes of Joint Implementation projects is to involve private-sector money in the transfer of technology and know-how.

The CDM\(^\text{80}\) allows any Party included in Annex I (States with an emission reduction or limitation commitment under the Kyoto Protocol) to implement an emission-reduction project in developing countries. Such projects can earn saleable Certified Emission Reduction (CER) credits that can be counted towards meeting Kyoto targets. The projects must qualify through a rigorous and public registration process. Approval is given by the Designated National Authorities.

Emissions trading\(^\text{81}\) is a mechanism whereby any Party included in Annex I (States with an emission reduction or limitation commitment under the Kyoto Protocol) may trade their emission allowances with other States Parties. These emissions allowances correspond to emission units permitted but not used by States.

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\(^{79}\) Article 6 Kyoto Protocol.

\(^{80}\) Article 12 Kyoto Protocol.

\(^{81}\) Article 17 Kyoto Protocol.
Thus, the emissions trading mechanism created a new commodity. However, since carbon dioxide is the principal GHG, people speak of carbon trading rather than emission reductions. Carbon is now traded like any other commodity. Apart from actual emissions units, other units can be traded under the Kyoto Protocol’s emissions trading scheme: ‘removal units’ on the basis of land use, land-use change and forestry activities such as reforestation; ‘emission reduction units’ generated by a joint implementation project; certified emission reductions generated from a clean development mechanism project activity. Transfers and acquisitions of these units are tracked and recorded through the registry systems under the Kyoto Protocol.

These market-based mechanisms are meant to: (i) enable industrialized States Parties to meet their emission targets in a cost-effective way; (ii) to stimulate technology transfer and ‘green’ investments; (iii) encourage the private sector and developing countries to contribute to emission reduction efforts.

All in all, the UNFCCC and the Kyoto Protocol require State action. In this respect it is necessary to distinguish between adaptation and mitigation. Adaptation refers to “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.” Therefore, it focuses on reducing vulnerability to the impacts of climate change.

Solutions to adapt to the effects of climate change take many shapes and forms depending on the context and the specific impacts of climate change. For instance, it can range from building flood defences, setting up early warning systems for cyclones and switching to crops that fare better under drought conditions to redesigning communication systems, business operations and government policies. On the other hand, mitigation corresponds to any “anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases.” Therefore, it refers to actions that lead to reducing the emissions of GHGs.

V What Relationship between Cultural Heritage and Climate Change?

Having explored the legal regimes for the protection of Cultural Heritage and the global climate, it is now necessary to examine the interface between these areas of international law. The main goal of this analysis is to discuss whether these legal systems should become mutually supportive at both the legal and policy levels.

However, the analysis that follows will focus only on the WHC. This is for three main reasons: the issue of climate change has been examined and internalized by the WHC Committee; the direct, social and cultural effects on several WHC sites have been vastly documented; it is critical to the survival of many items of Cultural Heritage that the WHC works closely with the climate change regime. At this juncture, it must also be emphasized that this convention applies to heritage as defined in Articles 1 and 2 situated on the territory of States Parties, whether or not this heritage has been inscribed on the WHC List under Article 11.86

1. The Story So Far

The foregoing examination reveals that climate change law neither addresses the impacts of climate change on Cultural Heritage nor contains references to UNESCO treaties. For instance, there is no Kyoto Protocol's CDM projects directly involving Cultural Heritage.87 One could find various explications to this lacuna. First, it can be argued that in 1992, when the UNFCCC was concluded, the scientific community had not yet realized what consequences could arise from the changing climate. Second, it can be submitted that the protection of Cultural Heritage is not reflected in climate change instruments because it has been too difficult for environmental negotiators to include this issue into the already thorny climate change negotiations. Third, it can be argued that in the face of catastrophic predictions regarding climate change, the less appalling consequences regarding individual sites have been overlooked.

By way of contrast, although the WHC does not mention climate change specifically, the WHC Committee has underlined the key role of the IPCC, the

86 Guido Carducci, ‘Articles 4–7: National and International Protection of the Cultural and Natural Heritage’ in Francioni and Lenzerini (n 62) 103, 113.
87 See UNFCCC, ‘Project Search’ cdm.unfccc.int/Projects/projsearch.html accessed 27 January 2014.
UNFCCC and the Kyoto Protocol in various documents. The Report affirms that “mitigation at the global and States Parties level is the mandate of the UNFCCC and its Kyoto Protocol”\(^{88}\) and that the WHC Committee “could collaborate with the UNFCCC secretariat on Climate Change issues by presenting information at the Conference of the Parties (COP) and subsidiary bodies meetings […]”\(^{89}\). Moreover, the Strategy states that the “UNFCCC is the UN instrument through which mitigation strategies at the global and States Parties level is being addressed” and that the “World Heritage community could participate in climate change mitigation” by providing “information to IPCC and UNFCCC on the impacts of climate change” on WHC sites and by assisting them in tailoring mitigation strategies and in encouraging site-based reduction of GHG emissions.\(^{90}\)

The Policy Document calls for increased cooperation between WHC bodies and other international conventions and organizations working on climate change. For instance, it states that the World Heritage Centre and the Advisory Bodies “will seek to take advantage of synergies to better coordinate and enhance effective implementation” of the WHC “by capitalizing upon each organization’s strengths, and aiming to avoid overlap and duplication with, and respect the individual mandates of, other international organizations and mechanisms”; and that the “World Heritage Centre will strengthen its relationship with the UNFCCC and IPCC Secretariats, which are the key international organizations working on climate change”\(^{91}\). Moreover, the Policy Document establishes that climate change should be considered in the application of the WHC and the Operational Guidelines, \textit{id est} in the preparation of nominations, in the drafting and implementation of the management plans by States Parties, in the monitoring by the WHC Committee and in the reporting by States Parties.\(^{92}\) Finally, the Operational Guidelines call for “appropriate co-ordination and information-sharing between the World Heritage Convention and other Conventions, programmes and international organizations related to the conservation of Cultural and natural heritage”, including the UNFCCC.\(^{93}\)

In sum, it appears that Cultural Heritage law and climate change regulation are not mutually supportive. To use a metaphor, it is as if, within the UN family,
one of the sisters is so absorbed in her own pursuits to the point of ignoring one of her sisters and their commonalities.

2. Synergies between Treaty Regimes

Various questions arise as a result of the existing state of affairs: does it make sense to argue for the establishment of reciprocal linkages between Cultural Heritage and climate change law? Would a more coordinated international legal response permit to enhance the protection of these two fundamental *global public goods*? What are the most reasonable solutions to build synergies between these two areas of international law?

The main reason in favour of the establishment of synergies between Cultural Heritage and climate change law is that this could bring about various advantages. This is due to the fact that State obligations under these regimes appear to be complementary: while the main goals of climate change regulation are about environmental protection, sustainable development and the preservation of ecosystems for present and future generations, the main objective of the Cultural Heritage regime is the preservation of all tangible and intangible manifestations of culture having artistic, historical and symbolic values, and their transmission to future generations. Today, cultural assets can be seen as part of the environment where they have been created and as an essential component of the identity and history of the people who created them or for whom they were created. This role of Cultural Heritage as part of public space opens the way to a holistic approach to heritage, *id est* an approach that brings together Cultural and Natural Heritage.

The Policy Document cites some key advantages. First, it emphasises that WHC properties could be used “as a means to raise awareness about the impacts of climate change upon World Heritage to act as a catalyst in the international

94 Humphreys (n 5) 11.
95 On this commonality see Article 1 of the 2001 Universal Declaration on Cultural Diversity, which famously states that “[…] cultural diversity is as necessary for mankind as biodiversity is for nature. In this sense, it is the common heritage of humanity and should be recognized and affirmed for the benefit of present and future generations”. Resolution adopted on the report of Commission IV at the 20th plenary meeting (2 November 2001) Records of the General Conference 31st Session Paris, 15 October to 3 November 2001 Volume 1 Resolutions.
debate and obtain support for policies to mitigate climate change”. In other words, the iconic character of WHC sites can be seen as an asset for raising public concern and building up support to take preventive and precautionary measures in the context of climate change. The idea is that the loss of WHC sites is likely to be more tangible and immediate to people than meteorology and physical science. Second, there is the comparative advantage of WHC sites, id est the fact that they “can serve as laboratories where monitoring, mitigation and adaptation processes can be applied, tested and improved”. The World Heritage Centre can thus promote, in cooperation with the States Parties, “the use of WHC properties in the activities of other conventions, international bodies and programmes working on climate change” because “(a)ctions taken at these iconic properties […] can influence the adoption of good management practices elsewhere”.

To mobilise the policy value and the legal force of Cultural Heritage in the development of synergies with the climate change regime, the injection of Cultural Heritage concerns into climate change negotiations is crucial. One way to do so is through the adoption of a more proactive approach on the part of the WHC Committee. This could exercise pressure on the States and international organizations claiming leadership in matter of climate change demanding that the WHC be explicitly taken into consideration in the definition of mitigation strategies. Such an approach would be in line with the findings of the increased cooperation between WHC bodies and the international organizations working on climate change contained in the Policy Document and with Article 13(7) WHC, which provides that the WHC Committee “shall cooperate with international and national governmental and non-governmental organizations having objectives similar to those of this Convention”.

3. A Critical Appraisal

Although the establishment of synergies and linkages between the two areas of law under examination seems both desirable and necessary, this proactive hypothesis needs be considered in light of the following issues: (a) the functioning of the climate change regime; and (b) the nature and extent of States’ obligations under the WHC.

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98 Ibid 4.
99 See n 91.
a) The Functioning of the Climate Change Regime

It is a fact that both the UNFCCC and the Kyoto Protocol (and the post-Kyoto regime) aim at combating anthropogenic global warming through cost-effective policies and measures. In this respect, Article 3(3) of the UNFCCC establishes that States Parties

\[(S)\text{hould take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.}\]

This approach has been heavily criticized. In particular, it has been maintained that the reductions agreed upon with the Kyoto Protocol (and the post-Kyoto regime) are inadequate and too modest to stabilize concentration of GHG emissions and to reverse current global warming and climate change trends. It has also been held that the Kyoto Protocol “can be considered as only a first and relatively small step towards stabilizing the climate”.\(^\text{100}\) The main problem is that the Protocol required only a small percentage of GHG emissions reduction – 5 per cent below 1990 levels between 2008 and 2012 – and only from industrialized States. This is an extremely modest requirement that, even if it were carefully fulfilled, could not curb the problem.\(^\text{101}\) Indeed, to avoid temperature increases beyond 2°C above preindustrial temperatures, States should commit to greater reductions in GHG emissions than those called for by the Kyoto Protocol.\(^\text{102}\)

The market-based mechanisms introduced by the Kyoto Protocol – Joint Implementation, CDM, Emissions Trading – have also attracted several criticisms. On the one hand, it has been argued that the solution to climate change should not lie in the dogma of market freedom and price mechanism. Many critics maintain that this approach is absurd because it encourages profit from pollution and subjects the development of green technologies to the approval of the market. These market-based mechanisms tend to reduce the natural world to a purely economic resource.\(^\text{103}\) On the other hand, the mechanisms intro-

\(^\text{100}\) Scott Barrett, Why Cooperate? The Incentive to Supply Global Public Goods (OUP 2007) 91.

\(^\text{101}\) Leal-Arcas (n 78) 245.

\(^\text{102}\) Thorson (n 38) 265.

\(^\text{103}\) Adelman Sam, ‘Rethinking Human Rights: The Impact of Climate Change on the Dominant Discourse’ in Stephen Humphreys (ed) (n 1) 159, 164.
duced by the Kyoto Protocol obviate the fact that human life emerged from, and is dependent upon, the Earth’s natural resource base and that human beings have a unique capacity to alter the environment.\textsuperscript{104} In addition, by relying on market-based mechanisms, States and international organizations neglect the bitter lesson of the contemporary financial crisis and banking scandals that the market can no longer be trusted to self-regulate. In connection with this, it should be mentioned that chemical, wind, gas and hydro companies routinely abuse these systems by claiming emission reduction credits for projects that should not qualify.\textsuperscript{105}

Accordingly, it appears that the abovementioned WHC Committee’s deference to the UNFCCC system is misplaced.

From a political perspective, while the UNFCCC is optimally positioned to address the effects of climate change at the national and international levels, it has not fulfilled its promise to date. For this reason, the UNFCCC – and by extension the Kyoto Protocol – has been characterized as a quintessentially failed regime\textsuperscript{106} because it results from consensus-driven and welfare-based solutions.\textsuperscript{107} As a result, the climate change regime falls short of setting the necessary reductions in GHG emissions. Therefore, there is a real threat that much of the world’s Cultural and Natural Heritage will be lost if the WHC Committee waits for the UNFCCC to ‘solve’ the climate change problem.

From a legal perspective, deference to the UNFCCC by the WHC Committee seems grounded on the principle \textit{lex specialis derogat legi generali}, \textit{id est} the principle that more detailed and specific norms ought to prevail against more general rules. In other words, the WHC Committee may have held the position that, as the UNFCCC was established to mitigate anthropogenic GHG emissions, States should use this regime also to address the problem of the impacts of climate change on Cultural Heritage.\textsuperscript{108} However, the \textit{lex specialis} principle is only relevant when legal norms clash. But in the case of the relationship between the UNFCCC and the WHC, it does not seem applicable because there is no language in the former treaty that evinces the intent to displace potentially

\begin{thebibliography}{10}
\bibitem{104} Dinah Shelton, ‘Equitable Utilization of the Atmosphere: A Rights-Based Approach to Climate Change?’ in Stephen Humphreys (ed) (n 1) 91, 115.
\bibitem{105} John Vidal, ‘Billions Wasted on UN Climate Programme’ \textit{Guardian} (London, 26 May 2008).
\bibitem{106} Burns (n 47) 160.
\bibitem{107} Humphreys (n 5).
\bibitem{108} Burns (n 47) 158.
\end{thebibliography}
parallel mandates under other regimes to address climate change.\(^{109}\) It can be presumed that the parties would have included such language if this was their intent. Moreover, it has been rightly pointed out that the \textit{lex specialis} is the WHC because it contains the more detailed and specific norms in matters of protection of cultural assets in contrast to the more generalized mandate of the UNFCCC to protect the climate system.\(^{110}\)

\(b\) \textit{The Nature and Extent of States’ Obligations under the WHC}

The WHC defines the obligations of States Parties mainly in Articles 4, 5 and 6. Article 4 states:

Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of (cultural heritage sites) situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation […] which it may be able to obtain.

Thus States Parties accept the commitment to take all necessary actions to preserve any item of Cultural or Natural Heritage situated on their territory because their “deterioration or disappearance […] constitutes a harmful impoverishment of the heritage of all the nations of the world”.\(^{111}\) Nevertheless, the WHC leaves it mostly to the States Parties to decide how to meet their obligations. Article 5 reads:

To ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party […] shall endeavor, in so far as possible, and as appropriate for each country: (a) to 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 programmes; (b) to 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) to develop scientific and technical studies

\(^{109}\) The \textit{principle lex posterior derogat legi priori}, which is codified in Article 30 VCLT and which provides that where two treaties are concluded relating to the same subject matter the later treaty prevails, is inapplicable as between the WHC and the UNFCCC because they do not relate to the same subject matter. Catherine Redgwell, ‘The World Heritage Convention and other Conventions Relating to the Protection of the Natural Heritage’ in Francioni and Lenzerini (n 62) 377, 395.

\(^{110}\) Burns (n 47) 159–160.

\(^{111}\) WHC, preamble, second recital.
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) to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and (e) to foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field.

Articles 4 and 5 are broad, potentially leaving much room for State Party discretion as to the exact nature of the respective responsibilities. The language used – “to the utmost of its own resources”, “where appropriate”, “endeavor”, “in so far as possible” – indicates that these articles do not impose legally binding obligations.\(^{112}\)

Article 6 is less discretionary. It provides that “it is the duty of the international community as a whole to co-operate” for the protection of WHC sites\(^{113}\) and that the “States Parties undertake […] to give their help in the identification, protection, conservation and presentation of the Cultural and Natural Heritage […] if the States on whose territory it is situated so request”.\(^{114}\) Finally, it establishes that each “State Party […] undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage […] situated on the territory of other States Parties to this Convention”.\(^{115}\) The scope of Article 6(3) is both broad and narrow: it is narrow because only deliberate measures are covered; it is broad because it concerns any measure which may directly or indirectly damage Cultural Heritage.

All in all, Articles 4, 5 and 6 comprise the responsibility to cooperate to protect Cultural Heritage sites and to ensure that actions taken within a national territory do not cause damage or deterioration of items of Cultural Heritage situated in any other national territory.\(^{116}\) Moreover, these provisions can be seen as the basis for States to address the causes and the potential and identified effects of climate change on WHC sites. Therefore, they certainly comprise the obligation to adopt site-specific mitigation and adaptation measures.\(^{117}\) Furthermore, it

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112 Thorson (n 38) 259.
113 Paragraph 1.
114 Paragraph 2.
115 Paragraph 3.
116 Thorson (n 38) 259.
can be argued that these norms oblige WHC States Parties to support the goals of the UNFCCC and the Kyoto Protocol.\textsuperscript{118}

In the light of current climate change trends, however, the crucial question is whether Articles 4, 5 and 6 also entail an obligation for the States Parties to the WHC to make GHG emission reductions that go beyond the reductions called for by the Kyoto Protocol (and the post-Kyoto regime). Various reasons can be found in support of a positive answer to this question.

The first is that WHC obligations are independent of the obligations under the UNFCCC and the Kyoto Protocol.\textsuperscript{119} Second, the WHC and the UNFCCC are not mutually exclusive. As said above, there is no language in the text of the UNFCCC that evinces the intent of the States Parties to exclude other legal regimes from addressing climate change when this is deemed necessary to effectuate the objectives of those regimes.\textsuperscript{120} The third reason relates to the principle of no harm (or principle of prevention). This entails the duty of a State not to allow or tolerate any activity within its jurisdiction that may cause damage to the environment of other States or of areas beyond its national jurisdiction, unless the transboundary environmental impacts of this activity prove to be insignificant.\textsuperscript{121} This principle, which belongs to customary law, was first enunciated in the \textit{Trail Smelter} case\textsuperscript{122} and was later incorporated in the 1972 Stockholm Declaration on the Human Environment,\textsuperscript{123} the 1992 Rio Declaration on Environment and Development\textsuperscript{124} and in the preamble of the UNFCCC. This principle was also taken up by the International Court of Justice in its Advisory Opinion on \textit{Nuclear Weapons}\textsuperscript{125} and in the judgments \textit{Gabčikovo-Nagymaros}\textsuperscript{126} and \textit{Corfu Channel}.\textsuperscript{127} Fourth, it can be argued that Articles 4, 5 and 6 entail an obligation to make GHG emission reductions beyond the limits established under the Kyoto Protocol (and the post-Kyoto regime) because, as demonstrated above, these re-

\begin{flushright}
\textsuperscript{118}Gruber (n 13) 6. \\
\textsuperscript{119}Thorson (n 38) 267. \\
\textsuperscript{120}Burns (n 47) 159–160. \\
\textsuperscript{122}Trail Smelter Arbitration (United States v. Canada) (Arbitration Tribunal) (1941) RIAA (1949) 1905. \\
\textsuperscript{123}Principle 21. \\
\textsuperscript{124}Principle 2. \\
\textsuperscript{125}Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) (1996) ICJ Rep 226. \\
\textsuperscript{126}Gabčikovo-Nagymaros Project (Hungary/Slovakia) (1997) ICJ Rep 1. \\
\textsuperscript{127}Corfu Channel Case (UK v. Albania) (Merits) (1949) ICJ Rep 4.
\end{flushright}
ductions are inadequate. Additionally, the adoption of general GHG emissions reduction is necessary because site-specific mitigation and adaptation measures are inherently insufficient. Although the outstanding and fragile character of WHC properties justifies the adoption of site-level climate change strategies, any climate change intervention occurring within the boundaries of a WHC site cannot cope with the slow but devastating consequences of climate change on that site because GHG emissions normally occur outside WHC sites. Even if a State would impose a total ban on GHG emissions within the boundaries of a WHC site, this would continue to be threatened. Thus, site specific mitigation cannot realistically ameliorate the climate change threats to a WHC site in any meaningful way.\textsuperscript{128} Moreover, there is a ‘timescale mismatch’ between mitigation measures and results. Even if every State were to implement drastic measures to reduce GHG emissions, it will be many decades before there are palpable effects because of the inertia of the climatic system.\textsuperscript{129} In this respect, the strategy acknowledges that “(t)he benefit of mitigation at World Heritage sites is […] likely to be negligible on a quantitative basis”.\textsuperscript{130} In addition, it can be argued that WHC States Parties are under an obligation to make general GHG emission reductions because of the principle \textit{pacta sunt servanda}. According to this, “(e)very treaty in force is binding upon the parties to it and must be performed by them in good faith”.\textsuperscript{131} Accordingly, States Parties are bound to implement the WHC through the adoption of measures effectively capable of realizing the purpose of this Convention.

However, the affirmation that the WHC contains a legally binding obligation for the States Parties to adopt GHG emission limits that are more compelling than those called for by the Kyoto Protocol is not uncontroversial. In effect, the adoption of this proactive interpretation unveils at least two problematic aspects.\textsuperscript{132}

The first relates to the identification of the means to define the GHG emissions limits for States Parties to the WHC. Since the amendment of the text of the WHC is unlikely, one can consider two options: the adoption of an additional

\textsuperscript{128} Thorson (n 38) 270.
\textsuperscript{129} Burns (n 47) 156–157.
\textsuperscript{130} UNESCO, ‘Strategy’ (n 49) Paragraph 124.
\textsuperscript{131} Article 26 VCLT.
protocol or a further amendment of the Operational Guidelines. Apart from GHG emission limits, these new legal instruments should also provide measures of implementation, including sanctions in case of violations of mitigation measures. The second pertains to the *clausula rebus sic stantibus* codified in Article 62 VCLT. This provision makes it possible for a State to cite a “fundamental change of circumstances” as a ground for terminating, withdrawing from or suspending the operation of a treaty. Termination or withdrawal are possible only if (a) the circumstances that have changed were essential to the consenting of the parties to their legal obligations;133 (b) the effect of the change is to radically transform the extent of the obligation in question;134 (c) the obligation is unrelated to a boundary matter;135 (d) the fundamental change is not caused by the defaulting State’s previous breach.136 Article 62 VCLT is relevant for the purposes of the present study because climate change was not perceived as a global threat when the WHC was adopted. In effect, the Convention does not cover the phenomenon of climate change. Accordingly, it can be reasonably argued that if the WHC were interpreted to impose an obligation to implement general GHG cuts, the States that currently oppose GHG emissions reduction targets would likely invoke Article 62 VCLT to terminate, withdraw from or suspend the operation of the WHC on the grounds that the absence of requirements of GHG emission reduction in the WHC constitutes an essential basis of consent to be bound by it. In other words, Article 62 would authorize the States Parties to the WHC to terminate, withdraw from or suspend the operation of this treaty because its implementation would differ from the original commitment. Needless to say, if the main GHG emitting States would decide to abandon the WHC in order to flout GHG, the mission of the WHC would be inevitably undermined.137

**VI Conclusion**

Climate change is a global problem that transcends territorial boundaries. Its impacts are now being felt and others cannot be halted due to the extent of historical and current emissions and the time lag between emissions and their effects on the climate. Thus far, the response of the international community has been disheartening, with UN negotiations on the reduction of GHG emissions

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133 Article 62(1)(a) VCLT.
134 Article 62(1)(b) VCLT.
135 Article 62(2)(a) VCLT.
136 Article 62(2)(b) VCLT.
137 Burns (n 47) 161.
proceeding at glacial pace due to the stand-off between major economic pow-
ers. Likewise, UNESCO bodies have failed to provide decisive responses. Moreover, this chapter has demonstrated that there is no constructive inter-
action between Cultural Heritage and climate change law. The international 
treaties that address the degradation of global climate conditions do not take 
account of the problem of the impacts of climate change on Cultural Heritage.

The main argument advanced here is that the evolution of the current state of 
affairs towards recognition of Cultural Heritage concerns by climate change law is both desirable and necessary. This complementarity would make it possible to 
emphasise that climate change is about losing the legacy – sites, monuments and 
social structures – handed over to us by our forbearers as a result of the dam-
age that peoples are doing to nature. More importantly, as demonstrated by the 
studies endorsed by the WHC Committee, the building of a mutually supportive relationship between these areas of law would make it possible to raise public 
concern, build up support for preventive and precautionary measures and de-
velop best practices and pilot projects in vulnerability assessments, monitoring, 
mitigation and adaptation processes.

However, although it would be germane that the legal instruments dealing 
with climate change were modified – so as to recognise that this phenomenon impacts Cultural Heritage – efforts should be first and foremost directed at 
addressing the shortcomings of the existing climate change regime. The above 
analysis indicates that otherwise any revision in the sense advocated above 
would be useless.

Needless to say, a meaningful reform of climate change law can be achieved only if States – especially industrialized and developing countries – accept to 
revise their agenda of unsustainable development. In effect, thus far national 
governments have proven to be unwilling to grasp the scale and urgency of the problem. States have been more concerned with pursuing economic, political

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139 Of course, important differences persist among States. Certain States are deter-
mined to comply with climate change targets for the sake of the protection of global climate for present and future generations. The EU and its Member States have unilaterally decided to go beyond their emission reduction targets included in the Kyoto Protocol. With Decision No. 406/2009/EC of 23 April 2009 of the European Parliament and of the Council, the EU has set a target of cutting GHG emissions by 20 % in 2020 from 1990 levels. Other States do not accept binding commitments, as these would severely harm the national economy and their freedom to pursue
or military interests to prioritize the respect and the protection of global public goods. It is the continuing prevalence of State-centred perspectives that has hindered the development of legal obligations codifying the commitment of every State to engage in the promotion and protection of the global environment.\textsuperscript{140}

In sum, today climate change can be seen as a potentially unique opportunity to develop more rational and egalitarian international governance structures and normative reforms not at variance with the principle of ‘sustainable development’. As well known, the Brundtland Commission defined it as the “(d)evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs”.\textsuperscript{141} This principle emphasizes that environmental protection is in everyone’s interest and calls for the development of a global regulatory regime aiming at: (i) limiting or recasting the principle of State sovereignty; States should take account of the negative duty not to harm internationally recognized global public goods and should thus stop regarding polluting the atmosphere as a sovereign prerogative; State sovereignty should become a vehicle (not a barrier) for ensuring the protection and conservation of global public goods; humanity faces a threat that cannot be addressed if States do not accept to subordinate perceived national interests to supranational interests;\textsuperscript{142} (ii) setting coherent and enforceable adaptation policies and mitigation targets; (iii) financing the development of new technologies that substitute fuels and preserve forests; (iv) redesigning international markets and trade; and (v) providing information about the impacts of climate change to the public at large.

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\item \textsuperscript{142} Adelman (n 103) 167.
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Because climate change affects – and will continue to affect – the ecological systems that sustain life, not only the economic development of States, the opportunity to build international consensus around new international governance structures and normative reforms must be grasped now. Various recent alarming reports demonstrate that procrastination is not an option.\textsuperscript{143} Sherwood Rowland, Nobel Prize laureate for his research on the effects of chlorofluorocarbon gases on the ozone layer, asked “(w)hat is the use of having developed a science well enough to make predictions if all we are willing to do is stand around and wait for them to come true”?\textsuperscript{144}

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World Cultural Heritage Sites and Climate Change: Management Issues

Since 2005 climate change has been on the World Heritage Committee’s agenda as one of the greatest dangers to World Heritage sites. The committee responded to this emerging threat at its 29th session in 2006 by launching an initiative to assess the impacts of climate change on World Heritage. Increased global temperature has been identified as just one of the consequences of the impacts of human activities on the climate equilibrium of the planet, with modifications of precipitation patterns, droughts, storminess, ocean temperature and acidification, sea level rise, etc. Aside from physical threats on natural and cultural sites of outstanding universal value, climate change will impact intangible heritage. Strategies and appropriate management responses are requested, especially for Cultural Heritage where the level of awareness and research is not as high as it is for Natural Heritage.

Also, European and German cultural sites are affected by climate change even though it is not always clear, without ambiguity. For instance, the recent floods sweeping across Central and Eastern Europe, in June 2013, are indirectly tracked back to climate change and directly to other man made interventions such as canalization of rivers and damage of riparian zones. Often it is a combination of causes. Water related hazards account for 90 per cent of all disasters, and their frequency and intensity are rising. The floods affecting Eastern and Central European sites illustrate that cultural, and especially urban, heritage is particularly at risk and needs to be better protected against such events, especially considering its crucial role for the economy of local communities and their overall well-being. More effective coordination policies for heritage conservation and flood risk prevention at the national and local levels require the full

* Federal Foreign Office Germany (Auswärtiges Amt), department of multilateral cultural and media policy; member of the UNESCO World Heritage Committee.
integration of heritage concerns into risk strategies and programs, before any hazards occur.

Management plans for World Heritage sites are key-tools in the effective stewardship of World Heritage sites under threat from climate change. As a regularly updated working document, such a plan should describe actions and include measures in response to climate change, *id est* education and traditional skills, monitoring and maintenance, research to support national/regional decision-making planning for emergency preparedness, re-evaluation of management priorities and training on the various problems. Moreover, risk and vulnerability maps of the site, which overlay flood data and heritage site locations, so that an overview of the risks can be obtained and detailed adaption strategies developed, are important.

By now, nearly every management plan for a German World Heritage site identifies threats and describes measures for preventive protection. Flood defence and action plans have been developed for most of the German sites inscribed on the World Heritage List and on the tentative list. They describe the area, indicate the fold areas, quantify possible damage and suggest general and local measures.

Floodplains based on 100 to 500-year-experiences and empirical data are important for risk preparedness. Traditional knowledge and long-time-experience illustrate that unforeseeable natural disasters are not a new natural phenomenon, they occur from time to time. For generations, one of the most effective measures to protect a building against floods was the careful examination of the building’s foundation and to take care for sufficient flood zones. The floodplain (*Figure 1*) for the Cultural Heritage site *Carolingian Westwork and Civitas Corvey* documents that the Benedictine monkhood were fully aware of such a hazard; in 822 Corvey abbey was founded exactly at the point in a curve of the River Weser which, for over 1200 years, has never been affected by floods. A 100-year water level fluctuation affects only select parts of the open spaces within the monastery grounds, surrounded by walls, in the area of the physical structure of Corvey.
In order to avoid negative impacts of flooding and to minimize damages, alarm and operation plans, content attendance and resource availability as well as suitable preventive measures like raising the level of dikes and mobile flood-walls are necessary. In the World Heritage city *Old Town of Regensburg and Stadtamhof* for example, an interdisciplinary competition was held in 2003 for technical and design solutions for flood protection in the municipal area. The result focused primarily on stationary and mobile solutions as well as different combinations of these. In and around the area of the less effected Old Town river-bank, man-made mobile metal elements (*Figure 2*) are planned. In other areas, both mobile barrier sections, as well as stretches with combinations of stationary plinth walls and mobile barrier systems, are planned. In realizing the flooding protection system, special attention had to be paid to ensure that these stationary elements would not degrade the visual qualities.
Flood protection systems have to be compatible with the integrity of World Heritage sites. The buffer zone of the nominated site Speicherstadt and Kontorhaus district with Chilehaus (Hamburg) is a good example of the reconciling of flood and heritage protection requirements. Existing flood defenses along the Customs Canal are designed and integrated as viewpoints into the canal structure (Figure 3).

Figure 3: Existing flood defences along the Customs Canal and their utilisation as viewing points
Cases like these demonstrate that climate change is a global threat which needs answers and management responses on the state, city, or even neighborhood level. Besides preventive protection measures for every site, a general policy is necessary to address and minimize the impact of climate change. In Germany, this issue has been taken very seriously; especially the promotion to expand renewable energy has been increased by the national and federal governments in the last years. Appropriate laws and regulations ensure a guaranteed feed-in remuneration for electricity produced by solar panels, photovoltaic systems, biogas plants and wind mills as well as the connection to and distribution through the power grid. Building insulation is subsidized by the state. The political goal is to reduce the emissions caused by fossil fuels in order to slow down the global warming and to cover 80 per cent of the demand by energy produced from renewable energies in 2050. The measures already taken show their effects: Investments made in renewable energy generation plants pay off in the short and medium term due to state support and fiscal privileges. The awareness building has been successful; state subsidy programmes have contributed significantly to convince the public. First important steps for the energy turnaround and on the way from the fossil fuel and nuclear age to the solar and efficient energy age are done.

There is probably no country in Europe in which the use of renewable energies is that visible as in Germany. In some regions and historic cities wind farms, photovoltaic and biogas plants as well as insulated buildings are dominant elements. It sometimes looks as if the “Land der Dichter und Denker” has been turned into a “Land der Dichter und Dämmer”. This ironical remark points to the other side of the coin; renewable energy generation plants could have serious impacts on World Heritage sites especially in regard to their integrity and visual qualities. In the reflection reports on the trends of conservation – annually presented to the World Heritage Committee – wind farms have long since been recognized as possible threats for the integrity of a site due to the need to be on exposed sites to catch the wind. Their impact can be highly detrimental in visual terms to the setting of World Heritage properties, particularly in flat open landscapes and mountain ridges where they can disturb long views, panoramas and silhouettes. Solar panels and photovoltaic systems could change completely the roof landscapes of historic cities and traditional villages as well as agricultural landscapes. Building insulation meant to destroy the surface of historic façades, in the end the character of a complete traditional ensemble could get lost.

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3 See UNESCO, World Heritage Committee Decisions, always Number 7c on the list of documents.
Heritage assets and conservation requirements concur often with measures and projects for saving energy and producing renewable energy. A balancing of different public and private interests, as to slow down the global warming and to reduce energy costs, is necessary. The way ahead is to look for alternative solutions. Heritage Impact Assessment based on a clear articulation of the attributes of Outstanding Universal Value (OUV) and sound indisputable topographical data is essential for defining the potential visual impacts of windmills and other renewable energy generation plants in properties of outstanding universal value and their buffer zones.

In general, not enough attention is given to the fact that use and reuse of monuments is to be seen as ecologically sound and economically advantageous because of the potential energy sources in buildings, the reduction of land consumption for construction, and the know-how transfer of traditional skills. Subsidy programmes are very narrow, focused on renewable energy generation; built heritage is not as appreciated as non-renewable resources. In a nutshell, it may be concluded that to a large extent management issues with regard to World Cultural Heritage and climate change remain unresolved or even still untackled.
Roland Bernecker*

Concluding Remarks

The impact of climate change on our Cultural Heritage is a fact. 72 per cent of the State Parties to the World Heritage Convention\(^1\) report damages that can be linked to the effects of climate change, 125 sites in 59 countries are affected. Extreme events related to climate change will increase in frequency and in intensity. In addition, we have to consider slow events like changes in corrosive processes, the effects of which are less obvious. The threat is not just one to the buildings and the material side of things: losses and damages we incur concern socio-economic patterns as well. The loss of memory and of historic wisdom in dealing with our cultural and natural resources may lead to the disruption of peaceful coexistence.

The rich and diverse presentations of the conference “Climate Change as a Threat to Peace: Impacts on Cultural Heritage and Cultural Diversity” have shown that culture is a crucial, yet dramatically neglected dimension of sustainability. More research will be necessary, especially in order to assess local impacts of climate change, to analyse risks and to better capture the relevance of socio-economic factors. At the conference, a concrete proposal was made to establish a World Monitoring Report on the state of World Heritage Sites, similar to UNESCO’s Global Monitoring Report on Education. This would help not only to collect information, which is already available on a large scale, but also to process this information adequately. At present, this does not happen for lack of funds. Such a report could also help to use the prestigious World Heritage Sites to better communicate the destructive effects of climate change.

At the same time, we have to reconsider the concepts of prevention, adaptation and monitoring with regard to the impact of climate change on culture and peace. We have to broaden our view and rework the concepts we use in describing and analysing Cultural Heritage. What does preservation and safeguarding of Cultural Heritage, what does change, what does management mean? Climate change itself has to be put in the more comprehensive frame of what might be

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\(^1\) Convention concerning the Protection of the World Cultural and Natural Heritage; adopted 16 November 1972, entered into force 17 December 1975, 1037 UNTS 151.
better captured in the expression *global change*. We are not only facing more extreme weather conditions. The dimension of a changing climate is to be seen in relation to significant demographic developments and the important effects of a highly dynamic global urbanisation. An interdisciplinary and holistic approach is necessary when we reassess the conceptual frame of our analysis and reconsider the function of heritage in the context of global changes.

A major issue in this regard is the close link between natural and cultural resources. Both categories of heritage are integrated in the World Heritage Convention of 1972, but not until 1992 was the new concept of cultural landscapes as sites representing both dimensions officially introduced. We are still at the beginning of learning to understand interdependencies.

Moreover, throughout the course of the conference an important issue repeatedly emerged: Cultural Heritage and cultural diversity are an important factor in developing more sustainable societies. In this context, the notion of *resilience* appeared as crucial. It means the capacity to resist to, absorb and recover from effects of hazards. In view of increasing threats, resilience is becoming more important. We must shift from a paradigm of simple growth and efficiency to better deal with risks and uncertainty. Cultural diversity is a recognised principle in dealing with uncertainty and it further increases resilience. The fragility of monocultural patterns is well known. Again, viable solutions have to be developed in the specific context at the local level. Urban resilience, the development of *smart cities* with intelligent use of ICTs, is an inspiring concept in the perspective of enhancing the resilience of our societies.

We are suffering today from a technology bias in the search for solutions for the problems we are facing. We tend to increase the complexity and specificity of our technical tools in order to solve problems. Cultural resources are neglected, as is the need to redefine some of our basic problems in a cultural way. Cultural heritage in its different dimensions is reflecting human experience in the permanent effort to build resilient communities. To care for heritage means to value our long-term collective experience. The World Heritage Convention is not dealing only with sites, but also with values.

One layer of the day’s discussions addressed the legal issues linked to the preservation of Cultural Heritage. With 190 State Parties, UNESCO’s World Heritage Convention is universally ratified. In Article 4, the convention clearly defines the obligation of State Parties which I consider worthwhile reproducing here *in extenso*:

> Each State Party to this Convention recognises that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its
Concluding Remarks

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The question is how the obligation laid down in this provision could be enforced with regard to the destructive effects of climate change. Do we really, besides the ethical pressure, dispose of some kind of legal leverage to bring governments to action? The World Heritage Convention itself does not address the issue of climate change directly. The only practical way to add this dimension would be a revision of the Operational Guidelines where the threats posed by climate change and necessary action could be included. The same is valid for other cultural conventions as for example the Intangible Heritage Convention which is totally unequipped with regard to climate change.

Other international treaties should be analysed for points of convergence and supportiveness in providing a legal hold for advancing concrete requests. The current negotiation of newly defined Sustainable Development Goals could be an entry point to better integrate the issue in the international agenda. Seen that the impact of climate change on Cultural Heritage does constitute, in a broader perspective, a possible threat to peace, the proposal was made to bring this issue to the Security Council of the UN. The Security Council would be in a position to declare its own competence in this matter and to take immediate action.

The more basic question was voiced of if and how the challenges posed by climate change present an opportunity to limit State sovereignty in the view of better securing global public goods.

When we consider the destructive impact of anthropogenic climate change on World Heritage Sites, we run into a highly symbolic paradox: Cultural sites of outstanding universal value, globally recognised as the greatest achievements of human creativity and as the most treasured expressions of cultural identities, are threatened by the effects of human inventiveness in developing unsustainable lifestyles. While we inscribe outstanding natural sites in UNESCO’s World Heritage List, thus formally accrediting their critical value as biological and aesthetic resources for humanity, these sites are threatened by a feverish exploitation of the natural resources of our planet. Anthropogenic climate change seems to be a result of the same cultural disposition, which allowed humanity to construct Cultural Heritage of outstanding universal value. Today, our

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inventiveness and our hunger for improvement not only compromise our future, but consume our past.

We have to better explain why – when addressing the challenges of climate change and global peace – Cultural Heritage is a fundamental issue. The concern of heritage conservation is most evidently losing ground. In my view, we have to be more specific when we talk about Cultural Heritage, focusing more on the values we need to preserve. We have to be more concrete and more compelling when we ask for maintaining awareness of the human dimension, awareness of who we were in the past, who we are today, and what the world will look like in the future.

In reflecting upon the loss of bonds with our heritage, we have to become more serious. The World Heritage Convention is about values. These values are the essence of how we live, what is vital for us. My impression is that in the relentless race for an ever-increasing effectiveness, we are becoming inattentive to our past, negligent of the interdependencies with our natural environment and that we too zealously stress the human substance of our societies. This will make us more vulnerable.

It is interesting to note that vulnerability is a central feature in understanding the World Heritage Convention. In the 1960s, humanity was offered the opportunity to learn to consider its presence on earth as a somewhat surprising, at least fragile, contingency. On July 20th 1969, an estimated 600 million people followed the landing on the moon of Apollo 11 on TV. For the first time in history, a human being stood on firm ground outside the geosphere and had an inverted look on it. To us humans living here, the earth has become the epistemological angle of all cosmic events. Standing on the moon with Neil Armstrong, we had to perceive the blue planet as an object, shining with beauty and life, but surrounded by an infinite black space which seemed unrelated to human destiny, indifferent to our efforts and hopes. In the year 1968, Richard Buckminster Fuller, an American architect and futurist, published the legendary book, *Operating Manual for Spaceship Earth*, in which he sets forth the metaphor of the earth as a mechanical vehicle that requires constant maintenance and that will cease to function if we do not keep it in good order. “We are all astronauts”, says Fuller, and there is no emergency exit from our spaceship.

In line with Buckminster Fuller’s metaphor, the international community started in the same years to worry in more concrete terms about the maintenance of this vehicle. On June 5 to 16, 1972, the first United Nations Summit on the Human Environment took place in Stockholm. It was the summit that led to the establishment of the United Nations Environmental Programme. The perception that we had to take care of planet earth had become an issue of high
intergovernmental relevance. It is for this Stockholm summit that finally natural sites were included in the World Heritage Convention, adopted some five months later in Paris.

In addition to this emerging change of perspective on our terrestrial conditions, the possibility of a comprehensive nuclear destruction had become a realistic scenario. Some weeks ago I visited the former German government bunker in Ahrweiler near Bonn, constructed between 1960 and 1972, in order to allow a continuation of central elements of the political administration for at least 30 days after a nuclear attack. The bunker was fully functional until 1997 and is now a heritage site. Not only the approximate cost of 1.5 billion € for this impressive construction indicates how seriously the highest levels of the political establishment considered the probability of a nuclear war, it is also the detailed thoroughness of its implementation, its technological ambition and the bureaucratic soberness of its functionality that still today create a strongly embarrassing feeling of how close humanity seemed to have come to the moment the bunker was build for.

The inventory of human achievements we collect in the prestigious World Heritage List was adopted the same year the construction of the bunker was finished. One might see the World Heritage Convention as the collective response to these developments that confronted us as cruelly as never before with the fundamental vulnerability of the human condition. The basic idea, the starting point of the World Heritage Convention, is the concept of “one humanity”, of the “unity of human values” as it is put in the Venice Charter of 1964. The concept of a common heritage of humanity is indeed the most sublime reply to the undefeatable vulnerability and fragility of human life on earth. Climate change is adding a new dimension to the vulnerability of the ecosystem we depend upon.

The World Heritage Convention reframes the competitive set of national cultural pride into the global perspective of shared universal values, which help us to find common responses to growing global challenges. Not to loose these values is a necessary contribution to peace.