

Changing Climate, Changing Culture: Adding the Climate Change Dimension to the Protection of Intangible Cultural Heritage

Hee-Eun Kim*

Abstract: This article explores the interplay between climate change and cultural heritage, in particular the intangible aspects of cultural heritage, in international legal frameworks, either existing or under development. The prime focus of the current climate change regime of the United Nations Framework Convention on Climate Change (UNFCCC) is the reduction of greenhouse gas emissions, leaving certain aspects of cultural heritage rather on the sidelines of debate and policy. However, where climate change combines with generally weak law and policy for culture and traditions, countries vulnerable to climate change may face significant cultural loss in the years to come.

In its inventory of present and contemplated legal protection options, this article draws particular attention to policymaking directed at shaping a “rights-based” system in the form of *sui generis* rights, to complement any existing intellectual property-based protection. If adequately motivated, indigenous people have a key role to play not only in observing change, but also in developing adaptive models to cope.

INTRODUCTION

The Intergovernmental Panel on Climate Change (IPCC), an international scientific body organized to assess the risks of climate change, has found that the “unequivocal warming of the climate system” as observed in the increase of global average temperature, melting of glaciers and sea level rise is “very likely due to

*Stanford Law School. Email: hkim1121@gmail.com

ACKNOWLEDGEMENTS: I wish to thank Professor John H. Merryman of Stanford Law School for his inspiring support and the reviewers and the editors of IJCP for their helpful suggestions.

anthropogenic” (i.e., originating in human activity) greenhouse gas concentration.¹ Consistent with this finding, the prime focus of the current climate change regime led by the United Nations Framework Convention on Climate Change (UNFCCC) is the reduction of greenhouse gas emissions.²

The UNFCCC’s utilitarian focus leaves certain aspects of cultural heritage on the sidelines of debate and policy. To what extent does climate change influence cultural heritage? Capturing a causal link between climate change and ever-changing cultural heritage presents a serious challenge. The distinction between normal climatic variability and anthropogenic causes adds complexity to such a determination. Recent observations that climate change increasingly makes people move appear to provide an existential foundation for linking climate causes and cultural heritage effects. As discussed in the following text, experts warn that one of the gravest effects of climate change concerns human mobility.³ In other words, a significant number of people are likely to be forced to, or to voluntarily leave their homeland because of, for example, shoreline erosion, coastal flooding, and agricultural disruption.⁴ Countries with populations on the verge of such displacement note that the impact of climate change concerns their survival and security, and “the cultural identity of an entire nation is under threat.”⁵

So far, the adverse effects of climate change on cultural heritage tend to be considered primarily in connection with tangible or physical cultural properties, such as buildings, monuments, or archeological sites destroyed by extreme weather events.⁶ Conversely, the effects of climate change on less tangible cultural heritage such as the loss of oral tradition and languages have been receiving less attention.⁷

While the interaction between climate change and cultural heritage has a range of tangible and intangible dimensions, the present article focuses on the “intangible aspects of cultural heritage”⁸ as affected by climate change. It explores legal and policy options to place climate change considerations in the context of ongoing efforts to protect intangible cultural heritage within the relevant international legal frameworks.

The second section of the article provides some factual background on climate change-driven migration in and from countries such as the Small Island Developing States (SIDS).⁹ Where climate change combines with generally weak law and policy for culture and traditions, some SIDS may face significant cultural loss in the years to come. To support this assessment, this section also presents selected statistics and data relevant to climate change displacement and cultural heritage in these regions.

Against this background of climate change displacement and vulnerability of cultural heritage, the third section of the article looks at several existing climate change-related international legal frameworks applicable to the protection of intangible cultural heritage. In terms of the relationship between climate change and cultural heritage, the climate change regime under the UNFCCC primarily recognizes the *usefulness* of traditional knowledge in the context of climate change adaptation. This acknowledges the role of local knowledge systems in the way in

which local communities understand and adapt to changes in climate.¹⁰ This section also touches on the risk management approach of UNESCO and principles under international refugee law to protect cultural rights of refugees.

The fourth section of the article draws attention to lessons from policymaking efforts on shaping a *sui generis* rights-based system for protecting “traditional cultural expressions” or “expressions of folklore”¹¹ complementing any existing intellectual property-based protection through the World Intellectual Property Organization (WIPO) and certain regional intellectual property authorities. On the basis of those efforts, this section explores certain law and policy options to enhance the protection of intangible cultural heritage against cultural loss triggered by climate change displacement.

BACKGROUND: CLIMATE CHANGE DISPLACEMENT AND CULTURAL HERITAGE

Climate Change Makes More People Move

The frequency and severity of certain hazards combined with vulnerability have been generally attributed to climate change.¹² The IPCC, which assesses scientific, technical, and socioeconomic information relevant to the understanding of climate change,¹³ notes migration as one of the likely key consequences of climate change,¹⁴ without asserting any “monocausal relationship.”¹⁵ International agencies concerned with migration and displacement observe that “gradual and sudden environmental changes are already resulting, with anywhere between 50 and 200 million people moving as a result [of rising sea levels, floods, droughts, famine and hurricanes] by the middle of the century, either within their countries or across borders, on a permanent or temporary basis.”¹⁶ (However, in the absence of a harmonized definition of climate change displacement¹⁷ and baseline information on levels of climate change causing displacement,¹⁸ such estimates may vary.)

To answer basic qualitative and quantitative questions,¹⁹ the Inter-Agency Standing Committee (IASC), a mechanism for inter-agency coordination of humanitarian assistance among key United Nations (UN) and non-UN humanitarian organizations,²⁰ set up an expert group in 2008. Taking an existing categorization for internally displaced persons as a basis, this expert group developed a typology classifying causes of movement, nature of movement, and existing legal frameworks for those moving within or beyond borders.²¹

The first category is “sudden-onset disaster displacement”²² such as floods and storms: for example, 36 million people in 2008 (including 15 million in the Sichuan earthquake in China alone).²³ The second category is “slow-onset disaster displacement”²⁴ such as drought.²⁵ The third category, singled out from the second, is displacement linked to sea-level rise.

Climate change displacement linked to sea-level rise is predicted to grow exponentially,²⁶ particularly in SIDS, Africa,²⁷ the Asian mega deltas, and the polar regions.²⁸ Four relocation cases are often dubbed as “the climate canaries”²⁹ heralding such trends: the Cartaret islands in Papua New Guinea,³⁰ the Lateu village in Vanuatu,³¹ the Shishmaref village on Sarichef island in Alaska,³² and the submerged Lohachara island in India’s Hooghly River.³³

While in many cases climate change-displaced persons remain within their country, some may cross borders, into an uncertain legal status.³⁴ In particular, SIDS have been considering the prospect of international climate change relocation. For example, in 2008 the president of the Maldives announced that the government would begin to divert a portion of the country’s tourist revenue to buying a new homeland as an insurance policy against climate change.³⁵ He says Sri Lanka and India are regarded as suitable destinations because of their similar cultures, cuisines, and climates; and Australia is under consideration because of its vast unoccupied land.³⁶

Kiribati is also looking to acquire land elsewhere so as to relocate communities in danger of being uprooted by rising sea levels.³⁷ Its government has been trying to secure enhanced labor migration options such as nursing, with an initial target of about 1,000 citizens annually to work in Australia and New Zealand.³⁸ Through remittances, such migrants can support their extended family members remaining in Kiribati.³⁹

It should be noted that relocation between islands or abroad is increasingly common for Pacific islanders. For instance, Tuvalu is a small coral atoll nation—0.1 times the size of Washington, DC—with the highest point reaching only 16 feet above average sea level.⁴⁰ It is often depicted as one of the areas most vulnerable to climate change.⁴¹ It had an estimated population of 10,000 as of July 2010.⁴² A significant number of additional Tuvaluans have left, including some 3,000 to New Zealand, 300 to Australia, and others to the United States.⁴³ Such migration reportedly is motivated by environmental concerns, such as sea-level rise, tidal flooding, and salinity of limited arable land, in addition to other economic, political, and social reasons.⁴⁴

The Vulnerability of Cultural Heritage to Climate Change Displacement

When climate change causes migration, what does this mean for the cultural heritage of the land left behind? It has been observed that refugee camps generally show a high level of cultural activity.⁴⁵ This phenomenon has been explained as “an empowering way of securing continuity and some semblance of stability” while “enabling [the refugees] to experiment with” new identities, strategies for adaptation and survival.⁴⁶ Indeed, maintaining cultural values and traditions on a longer-term basis after settling in a foreign country poses a significant challenge.

A survey of the Tuvaluan community in New Zealand observes that, “although community-based culture is still evident through their church activities, island celebration functions and sports events, they are not as strong as back home in the islands.”⁴⁷ Reported reasons include the changes in lifestyle and financial conditions that come with living in New Zealand.⁴⁸ Naturally, the traditional Tuvaluan culture blends with that of New Zealand, with the dispersed nature of Tuvaluan settlement in the country further diluting the community-based culture.⁴⁹

Not only those who have left, but also those still on the islands experience “a deep sense of ‘loss’ or at least an expectation of inevitable looming ‘loss’ of place of the home islands which form the very core of their identities.”⁵⁰ The loss of their culture and traditions is mentioned as one of the biggest concerns of South Pacific islanders preparing to move.⁵¹ Such feelings of “losing ground” are hardly surprising, because the relationship of indigenous peoples to their land is particularly important to their sovereignty and identity: Will they be able to maintain their culture on foreign soil?⁵²

Few available statistics specifically document the extent of climate change-related vulnerabilities of cultural heritage.⁵³ Within the limits of this article, it may be useful to review certain indicators pertaining to SIDS: for example, whether or not a country is a member of UNESCO; the extent of UNESCO-listed cultural heritage; and the number of languages in the SIDS. Partial and secondary as some of these data may be, they do suggest that protecting the SIDS’ cultural heritage from the effects of climate change is more than an academic concern.⁵⁴

In terms of natural and tangible cultural heritage protection, all of the 38 SIDS that are UN members have also joined the UNFCCC and UNESCO. With five exceptions (Bahamas, Nauru, Singapore, Timor-Lesté, and Tuvalu),⁵⁵ they are also members of UNESCO’s World Heritage Convention. Although the number of actually inscribed World Heritage properties is relatively small, SIDS members of the convention count 28 items on the World Heritage List (whereas Belize’s Barrier Reef Reserve System⁵⁶ also features on the list of World Heritage in Danger).

Another illustration of protectable culture is provided by the Convention for the Safeguarding of Intangible Cultural Heritage (the ICH Convention)⁵⁷ established in 2003, together with the Representative List of the Intangible Cultural Heritage of Humanity.⁵⁸ Out of a total of 232 listed items, only six relate to SIDS: “Language, Dance and Music of the Garifuna” in Belize; “La Tumba Francesa” in Cuba; “The Cocolo Dance Drama Tradition” and “The Cultural Space of the Brotherhood of the Holy Spirit of the Congos of Villa Mella,” both in the Dominican Republic; “The Maroon Heritage of Moore Town” in Jamaica; “The Lakalaka, Dances and Sung Speeches of Tonga”; and “Vanuatu Sand Drawing.”⁵⁹

The Vanuatuan item exemplifies the intangible heritage involved, its vulnerability, and safeguarding efforts. Proclaimed a Masterpiece of the Oral and Intangible Heritage of Humanity by UNESCO in 2003,⁶⁰ Vanuatu’s sand drawings are artful geometric patterns produced directly on the ground to transmit traditional knowledge about local history, indigenous rituals, kinship systems, natural phe-

nomena, and farming techniques.⁶¹ Sand drawing also represents a means of communication among the members of various language groups in the north of the Vanuatu archipelago.⁶² Expert sand drawers possess intimate knowledge of the numerous graphic patterns and a deep understanding of their complex layers of meaning.⁶³

To help preserve the practice and meaning of Vanuatu sand drawing, Vanuatu's National Cultural Council, a representative body of cultural policy, initiated a National Action Plan for the Safeguarding of Sand Drawing in 2000.⁶⁴ Sponsored by UNESCO and Japan Funds-in-Trust for the Preservation and Promotion of Intangible Cultural Heritage, the National Action Plan consisted of two components: revitalization, transmission, and promotion; and legal protection, income generation, and inventory-making.⁶⁵ One project outcome is the National Sand Drawing Festival established in 2004.⁶⁶

A further indicator of vulnerable cultural diversity are the local languages in SIDS.⁶⁷ Statistics show SIDS' rich linguistic heritage. For example, Papua New Guinea is one of the most linguistically diverse and complex areas in the world, with close to 850 indigenous languages spoken,⁶⁸ and at least as many traditional communities, among a population of about 6 million.⁶⁹ Among these languages,

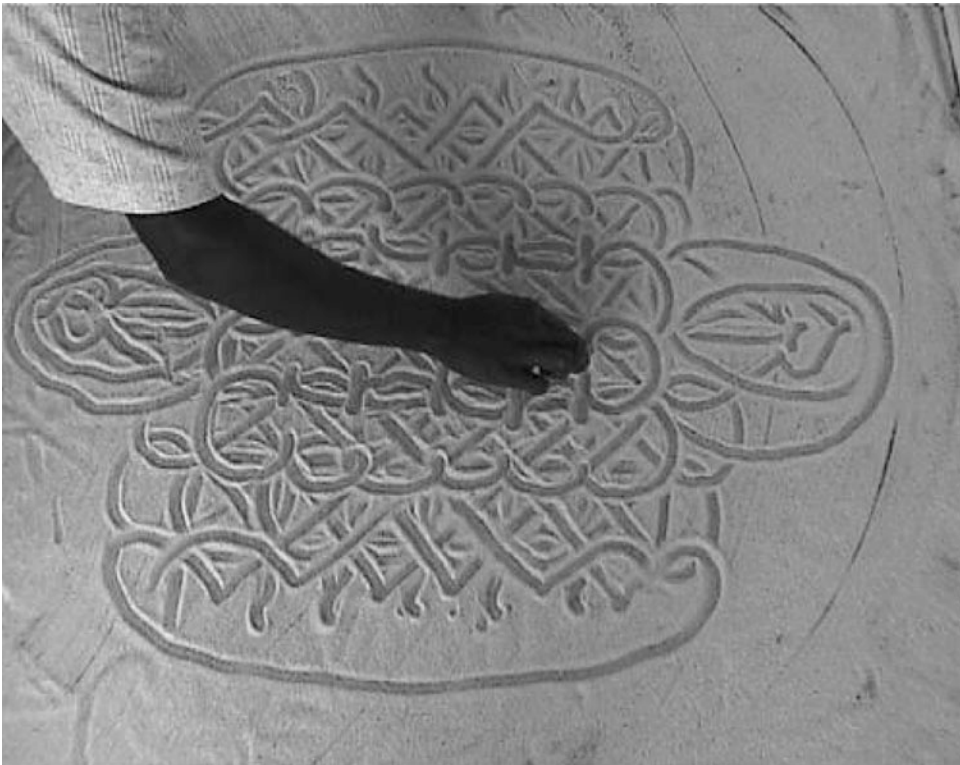


FIGURE 1. Vanuatu Sand Drawing (© Vanuatu National Cultural Council).



FIGURE 2. UNESCO Atlas of the World Languages in Danger—Papua New Guinea. (© UNESCO, <http://www.unesco.org/culture/en/endangeredlanguages/atlas>)

UNESCO's *Atlas of the World Languages in Danger* identifies at least 98 as vulnerable, endangered, or even extinct.⁷⁰ See Figure 2.

Vanuatu, a much smaller country with a population of 240,000, still has 110 languages, 46 of which are considered to be at critical risk.⁷¹ Efforts to revitalize such languages notwithstanding,⁷² such findings appear to reflect a general trend. Table 1 lists the aforementioned selected indicators of protectable cultural heritage in SIDS, together with the net migration rate per country.

CLIMATE CHANGE-RELATED INSTRUMENTS AND INTANGIBLE CULTURAL HERITAGE

The Climate Change Regime Focuses on the Utility of Traditional Knowledge

Historically, traditional knowledge⁷⁶ has been an important source of local innovation to provide solutions for adjusting to the conditions of nature. In this sense, the use of traditional knowledge is often discussed in the context of knowledge

Table 1
Selected Indicators of Protectable Cultural Heritage in Small Island Developing States

Small Island Developing States (SIDS)	Parties to the Intangible Cultural Heritage (ICH) Convention	Parties to the Cultural Diversity Convention	Number of World Heritage Properties Inscribed	Number of Representative Intangible Heritage Listed	Number of Languages (Extant/Extinct) ⁷³	Net Migration Rate per 1,000 Persons (2010 est.) ⁷⁴
Antigua and Barbuda			0	0	2 (2/0)	2.35
Bahamas			0	0	3 (2/1)	0.00
Bahrain			1	0	3 (3/0)	0.00
Barbados	✓	✓	0	0	2 (2/0)	-0.30
Belize	✓		1*	1	8 (8/0)	0.00
Cape Verde			1	0	2 (2/0)	-0.67
Comoros			0	0	6 (6/0)	0.00
Cuba	✓	✓	9	1	3 (3/0)	-1.56
Dominica	✓		1	0	3 (3/0)	-5.44
Dominican Republic	✓	✓	1	2	4 (4/0)	-2.04
Fiji	✓		0	0	10 (10/0)	-7.37
Grenada	✓	✓	0	0	3 (3/0)	-3.67
Guinea-Bissau			0	0	22 (22/0)	0.00
Guyana		✓	0	0	17 (16/1)	-15.83
Haiti	✓	✓	1	0	3 (3/0)	-9.75
Jamaica	✓	✓	0	1	3 (3/0)	-5.52
Kiribati			1	0	2 (2/0)	-2.87
Maldives			0	0	1 (1/0)	-12.60
Marshall Islands			1	0	2 (2/0)	-5.30
Mauritius		✓	2	0	6 (6/0)	-0.03
Micronesia (Federated States of)			0	0	18 (18/0)	-21.01
Nauru			0	0	3 (3/0)	-16.08

(continued)

Table 1 Continued

Small Island Developing States (SIDS)	Parties to the Intangible Cultural Heritage (ICH) Convention	Parties to the Cultural Diversity Convention	Number of World Heritage Properties Inscribed	Number of Representative Intangible Heritage Listed	Number of Languages (Extant/Extinct) ⁷³	Net Migration Rate per 1,000 Persons (2010 est.) ⁷⁴
Palau			0	0	4 (4/0)	0.86
Papua New Guinea	✓		1	0	841 (830/11)	0.00
Samoa			0	0	2 (2/0)	-11.52
São Tomé and Príncipe	✓		0	0	4 (4/0)	-9.52
Singapore			0	0	21 (21/0)	4.79
St. Kitts and Nevis			1	0	2 (2/0)	1.26
St. Lucia	✓		1	0	2 (2/0)	-3.93
St. Vincent and the Grenadines	✓	✓	0	0	2 (2/0)	-11.36
Seychelles	✓	✓	2	0	3 (3/0)	1.04
Solomon Islands			1	0	74 (71/3)	-1.94
Suriname			2	0	17 (17/0)	0.00
Timor-Leste			0	0	~19 ⁷⁵	0.00
Tonga	✓		0	1	3 (3/0)	0.00
Trinidad Tobago	✓	✓	0	0	6 (6/0)	-7.11
Tuvalu			0	0	2 (2/0)	-7.07
Vanuatu	✓		1	1	110 (108/2)	0.00
Total of SIDS	18	11	28	7	N/A	Average: -4.01

*In the World Heritage in Danger.

dissemination and technology transfer for climate change adaptation. For example, the UN Convention to Combat Desertification (UNCCD)⁷⁷ documented the practical relevance of traditional knowledge in member countries⁷⁸ for sustainable management of dryland ecosystems.⁷⁹ The UNFCCC, too, acknowledges the importance of using traditional knowledge in climate change adaptation⁸⁰ and aims to promote its dissemination in developing countries. Local knowledge systems can help communities understand and adapt to change in climate.⁸¹

Conversely, given the primary concern with the reduction of greenhouse gas emissions under the UNFCCC and the Kyoto Protocol, aspects of cultural heritage less utilitarian for the purpose of greenhouse gas reduction, such as traditional cultural expressions (TCEs) or expressions of folklore, hardly figure in the ongoing climate change discussion. For instance, the Kyoto Protocol's Clean Development Mechanism (CDM) projects allow developed countries to invest in greenhouse gas emission reduction projects in developing countries, and in return they receive credit for the remission reduction or removal achieved.⁸² Not surprisingly, there is no current CDM project directly involving the protection of TCEs or expressions of folklore, or indeed of cultural heritage in a broader sense.⁸³

The National Adaptation Program of Action (NAPA), intended to address the urgent adaptation needs of Least Developed Countries under the auspices of the UNFCCC,⁸⁴ also seems to neglect projects directly related to the protection of cultural heritage. A few SIDS—Samoa, the Solomon Islands, and Vanuatu—have submitted NAPA projects in relation to their tourism industry,⁸⁵ but without express reference to the protection of cultural heritage.

UNESCO's Risk Management Approach for Climate Change Adaptation: The ICOMOS Position

The UNESCO World Heritage Centre, in its report on climate change and World Heritage,⁸⁶ recognizes climate change as one of a range of factors affecting our natural and cultural heritage. Set out in the following text is UNESCO's itemization of principal climate change risks and their impact on cultural heritage.⁸⁷

Noting that conservation of World Heritage is essentially about “the management of change” and that the climate is one such area of change, UNESCO recommends a three-part strategy for safeguarding World Heritage against the emerging climate conditions:⁸⁹

- Preventive actions: monitoring, reporting and mitigation of climate change effects through environmentally sound choices and decisions at a range of levels: individual, community, institutional and corporate.
- Corrective actions: adaptation to the reality of climate change through global and regional strategies and local management of plans.

- Sharing knowledge: including best practices, research, communication, public and political support, education and training, capacity building, networking, etc.⁹⁰

Taking a similar approach, the International Council on Monuments and Sites (ICOMOS) concludes that

climate change adaptation for cultural heritage should be mainstreamed into the existing methodologies for preservation and conservation of sites, buildings, settlements, landscapes, movable objects and the living traditions and that appropriate standards and protocols should be developed for the purpose. Equally cultural heritage needs and concerns should be mainstreamed into institutional processes and policies for disaster reduction.⁹¹

Skeptical about such risk management approaches, some scholars observe that, in the climate change regime, cultural heritage struggles to compete against an “avalanche of other urgent resource-demanding concerns.”⁹² Part of the problem, they assert, is the cultural heritage regime itself paying little attention to the “cultural heritage values”⁹³ for mankind. The human and cultural dimension of climate change implies “the need to consider how the loss of tangible heritage places, sites and structures will affect communities and the intangible aspects of culture, or on finding locally appropriate response to this potential loss.”⁹⁴ Such understanding of how climate change jeopardizes entire cultures and ways of life is viewed as a catalyst for action.⁹⁵ For example, if adequately motivated,⁹⁶ indigenous people have a key role not only in observing change, but also in developing adaptive models to cope.⁹⁷

Emerging Climate Change Refugee Policy Proposals and Cultural Heritage

Current international refugee law incorporates the principles of nondiscrimination and national treatment. According to the Convention Relating to the Status of Refugees (the 1951 Refugee Convention),⁹⁸ the host country must not discriminate refugees on race, religion, or country of origin.⁹⁹ Also, the host country is required to provide treatment “at least as favorable as that accorded to their nationals with respect to freedom to practice their religion and freedom as regards the religious education of their children.”¹⁰⁰

The latter principle of national treatment is also applied to the protection of industrial property and of rights in literary, artistic, and scientific works. A refugee must be accorded in the country in which he or she has his habitual residence the same protection as is accorded to the nationals of that country.¹⁰¹ In addition, the 1951 Refugee Convention provides for “intergenerational transmission and the

Table 2
UNESCO: Principal Climate Change Risks and Impacts on Cultural Heritage⁸⁸

<i>Climate Indicator</i>	<i>Climate Change Risk</i>	<i>Physical, Social, and Cultural Impacts on Cultural Heritage</i>
Atmospheric moisture change	<ul style="list-style-type: none"> • Flooding (sea, river) • Intense rainfall • Changes in water-table levels • Changes in soil chemistry • Ground water changes • Changes in humidity cycles • Increase in time of wetness • Sea salt chlorides 	<ul style="list-style-type: none"> • pH changes to buried archeological evidence • Loss of stratigraphic integrity caused by cracking and heaving from changes in sediment moisture • Data loss preserved in waterlogged/anaerobic/anoxic conditions • Eutrophication accelerating microbial decomposition of organics • Physical changes to porous building materials and finishes caused by rising damp • Damage caused by faulty or inadequate water disposal systems; historic rain-water goods incapable of handling heavy rain and often difficult to access, maintain, and adjust • Crystallization and dissolution of salts caused by wetting and drying affecting standing structures, archaeology, wall paintings, frescos, and other decorated surfaces • Erosion of inorganic and organic materials caused by flood waters • Biological attack of organic materials by insects, molds, fungi, and invasive species such as termites • Subsoil instability, ground heave, and subsidence • Relative humidity cycles/shock causing splitting, cracking, flaking, and dusting of materials and surfaces • Corrosion of metals • Other combined effects (e.g., increase in moisture combined with fertilizers and pesticides)
Temperature change	<ul style="list-style-type: none"> • Diurnal, seasonal, extreme events (heat waves, snow loading) • Changes in freeze-thaw and ice storms, and increase in wet frost 	<ul style="list-style-type: none"> • Deterioration of facades due to thermal stress • Freeze-thaw/frost damage • Damage inside brick, stone, or ceramics that has gotten wet and frozen within material before drying • Biochemical deterioration • Changes in <i>fitness for purpose</i> of some structures. • Inappropriate adaptation to allow structures to remain in use

(continued)

Table 2 Continued

<i>Climate Indicator</i>	<i>Climate Change Risk</i>	<i>Physical, Social, and Cultural Impacts on Cultural Heritage</i>
Sea-level rise	<ul style="list-style-type: none"> • Coastal flooding • Sea-water incursion 	<ul style="list-style-type: none"> • Coastal erosion/loss • Intermittent introduction of large masses of <i>strange</i> water to the site, which may disturb the metastable equilibrium between artifacts and soil • Permanent submersion of low-lying areas • Population migration • Disruption of communities • Loss of rituals and breakdown of social interactions
Wind	<ul style="list-style-type: none"> • Wind-driven rain • Wind-transported salt • Wind-driven sand • Wind gusts and changes in direction 	<ul style="list-style-type: none"> • Penetrative moisture into porous cultural heritage materials • Static and dynamic loading of historic or archeological structures • Structural damage and collapse • Deterioration of surfaces caused by erosion
Desertification	<ul style="list-style-type: none"> • Drought • Heat waves • Fall in water table 	<ul style="list-style-type: none"> • Erosion • Salt weathering • Impact on health of population • Abandonment and collapse • Loss of cultural memory
Climate and pollution acting together	<ul style="list-style-type: none"> • pH precipitation • Changes in deposition of pollutants 	<ul style="list-style-type: none"> • Stone recession by dissolution of carbonates • Blackening of materials • Influence of biocolonialization
Climate and biological effects	<ul style="list-style-type: none"> • Proliferation of invasive species • Spread of existing and new species of insects (e.g., termites) • Increase in mold growth • Changes to lichen colonies on buildings • Decline of original plant materials 	<ul style="list-style-type: none"> • Collapse of structural timber and timber finishes • Reduction in availability of native species for repair and maintenance of buildings • Changes in the natural heritage values of cultural heritage sites • Changes in appearance of landscapes • Transformation of communities • Changes the livelihood of traditional settlements • Changes in family structures as sources of livelihood become more dispersed and distant

non-interference of this transmission,”¹⁰² a right of association,¹⁰³ and freedom of movement.¹⁰⁴

One limitation of national treatment or most-favored nation clauses is that, if the host country does not offer its nationals adequate protection of cultural identity or heritage per se, *climate change refugees* can hardly expect better protection. Considering that international refugee law does not yet cater to issues specifically associated with climate change displacement,¹⁰⁵ some are advocating the creation of a treaty covering climate change refugees.¹⁰⁶ Proponents of such an agreement argue that as climate change refugees’ intangible cultural heritage “is no longer preserved by the laws and institutions of their home state, the legal protection of [climate change refugees’] cultural autonomy may be regarded as a mechanism of preservation, . . . and safeguarding intangible cultural heritage can further support the relocation of entire population and social groups.”¹⁰⁷ Further, some argue that environmental refugees should be given a right to “constitute themselves collectively and maintain their collective identity.”¹⁰⁸

LESSONS FROM RIGHTS-BASED PROTECTION OF TRADITIONAL CULTURAL EXPRESSIONS

A wide range of public considerations underlies ongoing efforts to protect intangible cultural heritage.¹⁰⁹ While the 2003 UNESCO Convention does not provide a separate definition of *protection* as such,¹¹⁰ the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions (the 2005 UNESCO Convention) defines it as “the adoption of measures aimed at the preservation, safeguarding and enhancement of the diversity of cultural expressions.”¹¹¹ The 1985 UNESCO-WIPO Model Provisions for National Laws on the Protection of Expressions of Folklore against Illicit Exploitation and Other Prejudicial Actions (the 1985 UNESCO-WIPO Model Provisions) states inter alia that “protection should be against any improper utilization of expressions of folklore [or traditional cultural expressions], including the general practice of making profit by commercially exploiting such expressions outside their originating communities without any recompense to such communities.”¹¹²

For practical purposes, protection of intangible cultural heritage needs to focus on two goals: to prevent “misappropriation” by third parties without prior informed consent; and, especially relevant in the context of climate change, to prevent *loss* as such.¹¹³ Increasingly, it is thought that both of these goals can be served by according specific rights to holders of intangible cultural heritage and that tailored rights can motivate them to preserve, practice, and promote their traditional assets even after they leave their homeland. In this regard, this section of the article briefly describes the soft-law making process for the protection of traditional cultural expressions at WIPO and other intergovernmental institutions and situates the climate change dimension in that process.

Rights-Based Mechanisms in Some South Pacific Countries

It has been noted that, for South Pacific islanders,

the concept of ownership (either by individuals, families or communities) of songs, dances and other forms of traditional knowledge and custom has been well-established for a long period of time ... and the knowledge [of such traditional cultural expressions] was a commodity exchanged between local groups in the past.¹¹⁴

To decide ownership disputes, courts often relied on customary law.¹¹⁵ An example is *In the Matter of the Nagol Jump*, in which case a group of applicants tried to prevent others from performing the Nagol jump on the island of Santo (the Nagol jump is a traditional ceremony, similar to bungee jumping, from the island of Pentecost).¹¹⁶ The Supreme Court of Vanuatu decided the case on “substantial justice” and “in conformity with custom”, finding that the Nagol jumping should “return” to its origins in Pentecost.¹¹⁷

In recent years, a growing number of South Pacific countries have been formally integrating the protection of traditional cultural expressions into existing intellectual property law¹¹⁸ and, additionally, have been developing a sui generis protection system generally based on the Secretariat of Pacific Community’s 2002 Model Law on Traditional Knowledge and Expression of Culture (“South Pacific Model Law”).¹¹⁹ Administration and advancement of the South Pacific Model Law are now in the hands of the Pacific Island Forum Secretariat, which has further established the Traditional Knowledge Implementation Action Plan,¹²⁰ with the aim of assisting the Cook Islands, Fiji, Kiribati, Palau, Papua New Guinea, and Vanuatu in their implementation of traditional knowledge and traditional cultural expressions protection. Similar activities address the needs of other SIDS such as Niue, Samoa, and the Solomon Islands.¹²¹

Major Components of Sui Generis Protection

International efforts to provide a sui generis basis for the protection of traditional cultural expressions have focused primarily on instruments of soft law, such as the aforementioned 1985 UNESCO-WIPO Model Provisions.¹²² In 2000 the WIPO General Assembly created the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) to negotiate appropriate protection mechanisms.¹²³ In 2006 the IGC developed draft objectives, principles, and substantive provisions for the protection of traditional cultural expressions/expressions of folklore (IGC Draft).¹²⁴ While the IGC work has progressed to a stage of text-based expert meetings,¹²⁵ regional developments saw not only the creation of the South Pacific Model Law, but also the adoption by the African Regional Intellectual Property Organization (ARIPO) of the Swakopmund Protocol on the Protection of Traditional Knowledge and Ex-

pression of Folklore within the Framework of ARIPO.¹²⁶ The principal elements of these instruments may be summarized as follows.

Subject Matter and Scope of Protection

As defined in the IGC Draft, “traditional culture expressions” or “expressions of folklore” are any forms, whether tangible or intangible, in which traditional culture and knowledge are expressed, appear or are manifested, and comprise forms of expressions or combinations that are verbal, musical, by action, or tangible.¹²⁷ Such expressions should be protected against acts of misappropriation.¹²⁸

The South Pacific Model Law recognizes concepts of “traditional cultural rights” and “moral rights” to traditional knowledge or expressions of culture. Moral rights thereby refer to the right of attribution of ownership,¹²⁹ the right against derogatory treatment,¹³⁰ and the right to equitable benefits from derivative works with commercial nature.¹³¹

Traditional cultural rights are described as encompassing rights in relation to cultural expressions to authorize or prevent their reproduction, publication, public performance or display, broadcast, translation, adaptation, arrangement, transformation, modification, fixation (such as by making a photograph, film, or sound recording), making available online, creation of derivative works, making, using, offering for sale, selling, importing, exporting, or use in any other material form.¹³²

Exceptions and Limitations

The IGC Draft foresees exceptions and limitations to these rights for teaching and learning, noncommercial research or private study, criticism or review, reporting news or current events, use in the course of legal proceedings, the making of recordings and other reproductions of traditional cultural expressions for purposes of their inclusion in an archive or inventory for noncommercial cultural heritage safeguarding purposes, and incidental uses.¹³³ Interestingly, the South Pacific Model Law limits the teaching exception to “face to face” teaching¹³⁴ and does not provide exceptions for the making of recordings for purposes of archiving.¹³⁵

Beneficiaries

The beneficiaries are the indigenous people and traditional and other cultural communities in whom the custody, care, and safeguarding of the traditional cultural expressions are entrusted in accordance with their customary law and practice; and who maintain, use, or develop the traditional cultural expressions as being characteristic of their cultural and social identity and cultural heritage.¹³⁶

Term of Protection

The South Pacific Model Law states that traditional cultural rights as well as moral rights continue in perpetuity, are inalienable, and cannot be waived or transferred.¹³⁷ Conversely, the IGC Draft foresees protection as long as traditional cultural expressions remain registered or notified according to any rules on formalities; and for secret traditional cultural expressions, as long as they remain secret.¹³⁸

Formalities

As a general rule, the protection as such of traditional cultural expressions is not dependent on any formality.¹³⁹ However, registration or notification systems may be envisaged.¹⁴⁰

In terms of user procedures, the South Pacific Model Law identifies two contractual avenues for a prospective user of traditional cultural expression for noncustomary purposes to seek prior informed consent: (1) applying to a ‘Cultural Authority’ in charge of identifying beneficiaries and acting as a liaison between prospective users and the beneficiaries; or (2) directly dealing with the beneficiaries.¹⁴¹

Sanctions, Remedies and Exercise of Rights

The IGC Draft states that accessible, appropriate, and adequate enforcement and dispute-resolution mechanisms, border measures, sanctions, and remedies, including criminal, civil, and administrative remedies should be available in case of breach of protected traditional cultural expressions.¹⁴² In addition, the South Pacific Model Law specifically refers to public apology, alternative dispute resolution (ADR), and customary law options.¹⁴³

Relationship with Intellectual Property Protection and Other Forms of Protection

The IGC Draft provides that the envisaged *sui generis* protection does not replace, but is complementary to, protection under intellectual property laws and programs for the safeguarding, preservation, and promotion of cultural heritage, and other available legal and nonlegal measures.¹⁴⁴ Likewise, the South Pacific Model Law affirms that traditional cultural rights do not affect any rights existing under intellectual property law or other national law.¹⁴⁵ It may thereby be noted that while creators of works derived from traditional cultural expressions benefit from intellectual property protection, under the South Pacific Model Law such third parties would also be subject to obligations to the original right holders.¹⁴⁶

International and Regional Protection

In dealing with the “technical question of how rights and interests of foreign holders” in traditional cultural expressions should be recognized in national laws,¹⁴⁷ the IGC Draft takes the notion of national treatment¹⁴⁸ as a starting point and proposes to supplement it with mutual recognition, reciprocity or assimilation.¹⁴⁹ The South Pacific Model Law refers to enforcement through reciprocal arrangement.¹⁵⁰

Adding the Climate Change Dimension

Building on the principal components of *sui generis* protection of traditional cultural expressions cited as an example, this final part adds three brief and diverse

considerations that might usefully figure in negotiation and implementation of these instruments, with a view to safeguarding intangible cultural heritage in the face of climate change and climate change displacement.

Cross-Border Protection

The cross-border aspect of climate change displacement lends weight to the international dimension of protection of intangible cultural heritage. Acknowledging such international protection as priority,¹⁵¹ the IGC in its norm-setting process for traditional cultural expressions explored, *inter alia*, whether it should seek to determine at the international level how their misappropriation and use should be suppressed, and through what kind of legal instruments.¹⁵² Taking the existing international protection of copyright as an example, the Berne Convention prescribes minimum standards of protection that are binding on all member states. However, with views differing among participants in the IGC process on the desirable degree of protection for traditional knowledge or traditional cultural expressions, and its relation to the existing international intellectual property rights system, the IGC Draft eventually opted for “a neutral form so as not to preempt the policy choices.”¹⁵³

National treatment is helpful where the host country provides sufficient protection for the intangible cultural heritage of its nationals. Likewise, reciprocal arrangements, such as those adopted in the South Pacific Model Law, are useful if the host country and the country of origin share an effective standard of protection of such rights. The challenge is how to accommodate national self-determination in this regard while ensuring international protection. Further awareness of the cultural impact of climate change migration might stimulate the development of a minimum standards approach coupled with an international registration system, perhaps somewhat comparable maybe to the system for appellations of origin established by the Lisbon Agreement.¹⁵⁴

More Funding Initiatives

Legal protection alone cannot maintain intangible cultural heritage. Funding is essential, for example to support education, promotion, recording and archiving. One of the first initiatives in this direction is the WIPO Voluntary Fund for Accredited Indigenous and Local Communities, launched in 2010.¹⁵⁵ One year earlier, the 2005 UNESCO Convention¹⁵⁶ created the International Fund for Cultural Diversity (IFCD). The purpose of the IFCD is to promote sustainable development and poverty reduction in developing countries through support for projects and activities aiming to foster the emergence of a dynamic cultural sector.¹⁵⁷ The first batch of funding requests has been received, but only few came from SIDS and none were related to climate change.¹⁵⁸ Here again, further awareness of the threat that climate change poses to intangible cultural heritage may improve the financial basis for giving effect to legal protection.

Training, Good Practices, National Policies: It Takes a Village

A 2007 survey of practices and protocols regarding the safeguarding of cultural heritage and related intellectual property issues revealed a strong interest on the part of museums, libraries, and archives in South Pacific countries in receiving training on such issues and developing good practices and guidelines.¹⁵⁹

To respond to such needs, WIPO operates the Creative Heritage Project,¹⁶⁰ which aims to offer practical training to local communities, museums, and archives in developing countries on recording, digitizing, and disseminating their creative cultural expressions as well as on intellectual property issues.¹⁶¹ A pilot program undertaken with a Maasai community and National Museums of Kenya confirmed the introduction of intellectual property rights management as a useful tool for promoting the safeguarding and legal protection of intangible heritage.¹⁶²

Becoming increasingly aware of their cultural interests, some South Pacific countries are taking the lead in researching the impact of climate change on their cultural heritage. For example, Vanuatu has adopted a cultural research policy¹⁶³ under which the Vanuatu National Cultural Council approves research projects consistent with the country's research priorities, such as language documentation, cultural and historic site documentation, documentation of indigenous histories, and case studies of contemporary social change. Research projects must substantially involve indigenous communities, scholars and students,¹⁶⁴ and commercial proceeds of any research products are to be shared between the council and the researcher.¹⁶⁵

CONCLUSION

The impact of climate change on cultural heritage hardly figures in current climate change policymaking, with its dominant focus on greenhouse gas emissions and their direct consequences. Likewise, the conventional perspective of cultural heritage risk management concerns especially the loss of tangible heritage sites and structures, and to a lesser extent how such loss will affect communities and the intangible aspects of culture. However, as climate change displacement materializes, these human dimensions will demand increasing attention.

One perspective on cultural property is as part of "the cultural heritage of all mankind,"¹⁶⁶ whatever the place of origin or present location.¹⁶⁷ Another view of cultural property is as "a national cultural heritage" invoking in nations or communities a special interest to attribute unique character to their cultural objects and to legitimize demands for retaining cultural property.¹⁶⁸

The emergence of international climate change issues in cultural heritage, intangible as well as tangible, could complicate such distinction of interests. Accommodation may need to be made for climate change-related regulation, international human rights law concerning climate change refugees, and intellectual property rights or sui generis rights relevant to the protection and promotion of traditional

knowledge and traditional cultural expressions, especially in terms of cross-border protection.

ENDNOTES

1. IPCC, *Climate Change 2007*, 30.
 2. United Nations Framework Convention on Climate Change, article 2, opened for signature 9 May 1992, S. TREATY DOC. No. 102-38, 1771 U.N.T.S. 107 (hereinafter UNFCCC).
 3. See for example, Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5. Animals are also forced to leave their homelands. An interview by Yale Environment 360 with Stephanie Pfirman (geologist) describes how an ice refuge zone could become a key habitat for polar bears, ringed seals, and other ice-dependent Arctic creatures.
 4. Myers and Kent, *Environmental Exodus*, 134.
 5. H.E. Apisai Ielemia, Prime Minister of Tuvalu, General Debate at the 63rd UN General Assembly. See also O'Neil, *Culture Change*, which explains that even in the absence of climate change, cultural identity in modern times is vulnerable to change because of challenges such as globalization and technological development.
 6. See for example, European Commission, *Cultural Heritage—Environment—Research*, which states that the European Commission's research efforts "focus on better assessing and understanding the mechanisms by which damage to cultural heritage occurs, and on finding the best possible measures and means to ensure that tangible cultural heritage is protected."
 7. See for example, Brinicombe, Lucy. Oxfam. "Cancún Climate Change Conference: Indigenous Voices Gather Strength." Guardian.co.uk Environmental Blog (guardian.co.uk/environment/blog) 8 December 2010 (accessed), which comments that despite indigenous people such as native American and Inuit communities being among those most influenced by climate change, "up until today, their voice has been but a whisper." (<http://www.guardian.co.uk/environment/blog/2010/dec/08/cancun-climate-change-conference-indigenous>)
 8. According to Article 2 of the Convention for the Safeguarding of the Intangible Cultural Heritage, intangible cultural heritage means

the practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts 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. . . . Intangible cultural heritage 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; and (e) traditional craftsmanship.
- See the Convention for the Safeguarding of the Intangible Cultural Heritage, art. 2, 17 October 2003, in force 20 April 2006 2368 U.N.T.S. 1 [hereinafter 2003 UNESCO Convention].
9. The United Nations Department of Economic and Social Affairs (UN DESA) lists 52 small island developing states, 32 UN Members and 14 non-UN Members or Associate Members of the Regional Commissions.
 10. Colette, *Climate Change and World Heritage*, 30.
 11. According to Article 1(a) of the WIPO Revised Draft Provisions for the Protection of Traditional Cultural Expressions/Expressions of Folklore, *traditional cultural expressions* or *expressions of folklore* are any forms, whether tangible and intangible, in which traditional culture and knowledge are expressed, appear or are manifested, and comprise the following forms of expressions or combinations thereof:

1. verbal expressions, such as stories, epics, legends, poetry, riddles and other narratives; words, signs, names, and symbols;
2. musical expressions, such as songs and instrumental music;
3. expressions by action, such as dances, plays, ceremonies, rituals and other performances, whether or not reduced to a material form; and,
4. tangible expressions, such as productions of art, in particular, drawings, designs, paintings (including body painting), carvings, sculptures, pottery, terra-cotta, mosaic, woodwork, metalware, jewelry, baskets, needlework, textiles, glassware, carpets, costumes; handicrafts; musical instruments; and architectural forms; which are:
 - a. the products of creative intellectual activity, including individual and communal creativity;
 - b. characteristic of a community's cultural and social identity and cultural heritage; and
 - c. maintained, used or developed by such community, or by individuals having the right or responsibility to do so in accordance with the customary law and practices of that community.

See WIPO, *Revised Draft Provisions*, 11. The terms *traditional cultural expressions* and *expressions of folklore* can be used interchangeably. For further discussion about traditional cultural expressions, see the fourth section of the article.

Cf. The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions defines *cultural expressions* broadly as “cultural expressions are those expressions that result from the creativity of individuals, groups and societies, and that have cultural content.” See Convention on the Protection and Promotion of the Diversity of Cultural Expressions, 20 October 2005, U.N. Doc. CLT-2005/CONVENTION DIVERSITE-CULT REV., art. 4(1) [hereinafter 2005 UNESCO Convention].

12. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5, which states that, for example, “the overall trend shows that the number of recorded natural disasters has doubled from approximately 200 to over 400 per year over the past two decades” (citing Emergency Events Database (<http://www.em-dat.be>)) (accessed 25 November 2010).

13. Intergovernmental Panel on Climate Change (IPCC) (<http://www.ipcc.ch>).

14. See generally IPCC, *First Assessment Report (1999)*; also IPCC, *Fourth Assessment Report (2007)* and IPCC, *Climate Change 2007: Synthesis Report*.

15. See for example, UNHCR *et al.*, *Forced Displacement*, 2, which states that “there is no mono-causal relationship between climate change and displacement. . . . However, . . . there is a clear link between the effects of climate change and displacement”.

16. IOM *et al.*, *Climate Change, Migration*, 1, noting, however, the absence of “scientifically verified estimates of climate change-related displacement or of overall population flows triggered by the effects of climate change.” See also Kang, *Climate Change, Migration and Human Rights*, 3–4, citing *the Stern Report on the Economics of Climate Change*, 56. See also Docherty and Giannini, “Confronting a Rising Tide,” 353–54, which states that estimates of the number of climate refugees vary depending on the definition of the class of the displaced and the source of the data, and that while some research urges caution in attempting to predict a number, other studies present figures ranging from 50 million to 200 million displaced persons before 2100.

17. Docherty and Giannini, “Confronting a Rising Tide,” 353–54.

18. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 6.

19. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 6.

20. Inter-Agency Standing Committee (IASC) (<http://www.humanitarianinfo.org>).

21. Informal Group on Migration/Displacement and Climate Change of the IASC, “Climate Change, Migration and Displacement,” 1–4. A fourth category, “armed conflict/violence over shrinking natural resources,” falls outside the scope of this article.

22. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5–7.

23. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5–7.

24. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5–7, which points out that, although some 26.5 million were reported to have been affected by 12 droughts in 2008,

estimates for displacement are not readily available because of the complexity in determining the element of force and ascribing causation.

25. See for example, Myers, "Environmental Refugees," 609–11, stating that

out of the 25 million environmental refugees in 1995 around the world, there were roughly 5 million in the African Sahel, where a full 10 million had fled from droughts, only half returning home. . . . In other parts of Sub-Saharan Africa, 7 million people had been obliged to migrate in order to obtain relief food.

26. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 5–7.

27. See for example, Annan, *Keynote Speech at the Global Conference*, 4 November 2010, highlighting that "feeding Africa, at a time of climate change, is one of the major development challenges of our time" and "without concerted action, we will see many more people forced to leave their land, increased famines, tensions and instability."

28. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 7.

29. IOM, *Migration and Climate Change*, 25–26, commenting that the world's media have been competing to find the "first conclusive 'victim' of climate change—who, like a miner's canary, will mark the beginning of a period of irreversible climate impacts."

30. IOM, *Migration and Climate Change*, 25–26, stating that "in 2005, it was officially decided to evacuate the 1,000 residents of the Carteret Islands, a group of small and low-lying coral atolls administered by Papua New Guinea, to the larger island of Bougainville, 100 kilometers away."

31. IOM, *Migration and Climate Change*, 25–26, noting that "about a hundred residents of Lateu, on the island of Tegua on Vanuatu, were relocated farther inland, following storm-damage, erosion and salt damage to their original village."

32. IOM, *Migration and Climate Change*, 25–26, explaining that "a combination of melting permafrost and sea-shore erosion at a rate of up to 3.3 meters a year have forced the inhabitants to relocate their village several kilometers to the south."

33. IOM, *Migration and Climate Change*, 25–26, stating that

Lohachara island in the Hooghly river delta, once home to 10,000 people, and which had first started flooding 20 years ago, had finally been entirely submerged. One of a number of vanishing islands in the delta, the loss of the islands and other coastal land in the delta has left thousands of people homeless.

34. Biermann and Boas, "Preparing for a Warmer World," 60–67, addressing the need of a global governance system regarding "climate change refugees" or "climate refugees." These refugees can be defined as "people who have to leave their habitats, immediately, or in the near future, because of sudden or gradual alterations in their natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, and drought and water scarcity." For further discussions on "climate change refugees," see Docherty and Giannini, "Confronting a Rising Tide"; and Hodgkinson *et al.*, *The Hour When The Ship Comes In*.

35. See for example, Randeep Ramesh, "Paradise Almost Lost: Maldives Seek to Buy a New Homeland," *Guardian*, 10 November 2008, 1.

36. Ramesh, Randeep, "Paradise Almost Lost," *Guardian*, 10 November 2008, 1.

37. "Kiribati Seeks Relocation as Climate Change Sets In," *Solomon Times Online*, 16 February 2009, (<http://www.solomontimes.com/news.aspx?nwID=3584> (accessed 8 November 2010)); see also UNHCR News Stories, *Pacific Islanders Face the Reality of Climate Change . . . and of Relocation* (<http://www.unhcr.org/print/4b264c836.html>) (14 December 2009) accessed.

38. Norwegian Refugee Council (NRC), *Climate Changed: People Displaced*, 15.

39. Loughry and McAdam, "Kiribati—Relocation and Adaptation," 51–52.

40. Central Intelligence Agency (CIA), *The World Factbook 2009*.

41. See for example, Favre and Stanley, "Five Takes on Climate," 306, introducing five documentaries about climate and cultural change in Tuvalu: "The Disappearing of Tuvalu: Trouble in Paradise," "Paradise Drowned: Tuvalu, The Disappearing Nation," "Tuvalu: That Sinking Feeling," "Before the Flood," "Time and Tide."

42. Fauvre and Stanley, "Five Takes on Climate," 306. By comparison, the population of the Maldives was 395,650 and that of Kiribati 99,485.
43. Gemenne and Shen, *Environmental Change and Forced Migration*.
44. Gemenne and Shen, *Environmental Change and Forced Migration*.
45. See for example, Conquergood, "Health Theater in a Hmong," 174–80, opening with a description of a Hmong woman in a refugee camp in Thailand singing about the loss of her husband, children, house, farm, animals, and country in the traditional form of a Hmong folk song.
46. Conquergood, "Health Theater in a Hmong," 180.
47. Gemenne and Shen, *Environmental Change and Forced Migration*, 21–23.
48. Gemenne and Shen, *Environmental Change and Forced Migration*, 21–23.
49. Gemenne and Shen, *Environmental Change and Forced Migration*, 21–23; watch also Panos Pictures, "Tuvalu—Island on the Frontline."
50. Henry and Jeffrey, "Waterworld: The Heritage Dimensions," 13–14, provide an interview of locals in the Federated States of Micronesia.
51. Loughry, "Climate Change: The Tipping Point," 2.
52. See for example, von Lewinski, *Indigenous Heritage and Intellectual Property*, 508, citing Felicia Sandler, "Music of the Village."
53. See for example, UNESCO Institute for Statistics, *Measuring the Diversity*, which discusses the difficulties of measuring the diversity of cultural expressions in one country or among countries and providing a number of related working documents. But also see for example, UNESCO Institute for Statistics, *The 2009 Framework*, which proposes the use of an industry classification system for this purpose.
54. On the impacts of climate change on SIDS and their vulnerabilities, see Barnett and Campbell, *Climate Change and Small Island*; Intergovernmental Panel on Climate Change, *Fourth Assessment Report (2007)* (analyzing key future impacts and vulnerabilities category by category e.g., water resources, coastal systems and resources, agriculture, fisheries and food security, biodiversity, human settlement and well-being, economic, financial and sociocultural impacts, and infrastructure and transportation); United Nations Framework Convention on Climate Change (UNFCCC), *Vulnerability and Adaptation*; UN DESA, *SIDS Network* (<http://www.sidsnet.org>); IPCC, *Climate Change 2007: Synthesis Report*.
55. States Parties to the World Heritage Convention number 187 as of June 2010.
56. See for example, Shane D. Williams, "Oceania Celebrates GOB's Ban on Trawling," *Guardian.bz* (9 December 2010) (<http://www.guardian.bz/all-news/59-other-news/2648-oceania-celebrates-gobs-ban-on-trawling>). Williams discusses the government of Belize's banning of trawling, a method of fishing in which a huge net is dragged under water by one or more boats. Trawling has contributed to the destruction of Belize's barrier reef, the second largest in the world.
57. States Parties to the 2003 Convention number 133 as of July 2010.
58. Details of UNESCO's safeguarding projects, including recording and training, can be found at (<http://www.unesco.org/culture/ich/en/lists>).
59. The term *sandroing* is also used, which is in Bislama, the local language.
60. See UNESCO, *Vanuatu Sand Drawings* and also UNESCO's "Vanuatu Sand Drawings" video.
61. Vanuatu National Cultural Council, *The National Action Plan*.
62. Vanuatu National Cultural Council, *The National Action Plan*.
63. Vanuatu National Cultural Council, *The National Action Plan*.
64. Vanuatu National Cultural Council, *The National Action Plan*.
65. Vanuatu National Cultural Council, *The National Action Plan*.
66. UNESCO, *Vanuatu Sand Drawings*.
67. See for example, UNESCO World Report, 11–22, identifying languages, education, cultural contents on media, crafts markets and tourism as "key vectors of cultural diversity."
68. For more on the languages of Papua New Guinea, see Aikhenvald and Stebbins, "Languages of New Guinea," 239–66.
69. Central Intelligence Agency (CIA), *The World Factbook 2009*.
70. Moseley, *Atlas of the World's Languages*.

71. Moseley, *Atlas of the World's Languages*.

72. See for example, Max Planck Institute for Psycholinguistics, *Dokumentation Bedrohter*, including a documentation project of “Vera’a”, one of the endangered languages of Vanuatu, with less than 300 speakers.

73. Language data are based on Lewis, *Ethnologue: Languages of the World*. In Table 1, “extant” languages include both “living languages” and “languages being spoken as a second language without mother-tongue speakers,” and “extinct” languages means no known speakers exist.

74. Central Intelligence Agency (CIA), *The World Factbook 2009*, defines the net migration rate as “the difference between the number of persons entering (+) and leaving (–) a country during the year per 1,000 persons, based on midyear population,” and stating that “[t]he net migration rate indicates the contribution of migration to the overall level of population change. It does not distinguish between economic migrants, refugees, and other types of migrants nor does it distinguish between lawful migrants and undocumented migrants.”

75. The Central Intelligence Agency (CIA), *The World Factbook 2009*, states that, in addition to Portuguese, Indonesian, and English, there are about 16 indigenous languages. Among those indigenous languages, Tetum, Galole, Mambae, and Kemak are spoken by significant numbers of people.

76. See generally, Taubman and Leistner, “Traditional Knowledge,” 59–173; and Taubman, “Saving the Village,” 521–564.

77. United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, opened for signature 17 June 1994 33 I.L.M. 1328 (hereinafter UNCCD).

78. Articles 17, 18, and 19 of UNCCD.

79. See generally, UNCCD, *Promotion of Traditional Knowledge*, on a wide range of traditional knowledge regarding for example, control of wind or water erosion, water conservation, improvement of soil fertility, plant protection, forestry, social structures, and housing architecture.

80. See generally, UNFCCC, *Technologies for Adaptation*.

81. Colette, *Climate Change and World Heritage*, 30.

82. Kyoto Protocol to the UNFCCC, art. 12, adopted 10 December 1997, 37. I.L.M. 22 (entered into force 16 February 2005) [hereinafter Kyoto Protocol]. The Kyoto Protocol states that the purpose of the clean development mechanism is “to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objectives of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3 [of the Kyoto Protocol].”

83. UNFCCC, *CDM in Numbers*.

84. Article 4(9) of UNFCCC.

85. UNFCCC, *NAPA Tourism*.

86. Colette, *Climate Change and World Heritage*, 10–11; World Heritage Committee, 30th Sess., Vilnius, Lithuania, 8–16 July 2006, Decision 30COM 7.1 Issues Related to the State of Conservation of World Heritage Properties: the Impacts of Climate Change on World Heritage Properties, WHC-06/30.COM/19 (23 August 2006).

87. Colette, *Climate Change and World Heritage*, 10–11.

88. Colette, *Climate Change and World Heritage*, 10–11.

89. Colette, *Climate Change and World Heritage*, 10–11.

90. Colette, *Climate Change and World Heritage*, 10–11.

91. International Council on Monuments and Sites (ICOMOS), *Resolution at the International Workshop*.

92. Christoff, “Places Worth Keeping?” 43, opines that “the belief that current policies and institutions are sufficient to deal with the challenges of mitigation and adaptation is bolstered by unwillingness to visualize and conceive of the enormity of the potential changes we face even at low levels of global temperature increase . . .”

93. Pearson, “Climate Change Its Impacts,” 40.

94. McIntyre-Tamwoy, “The Impact of Global,” 8.

95. Christoff, "Places Worth Keeping?" 44.

96. See for example, Alivizatou, *Curating Intangible Cultural Heritage*, citing the Vanuatuan politician Ralph Regenvanu's remarks that

tourism can distort cultural expressions. The question, however, is if the community who is the bearer and practitioner of the tradition decides to alter the tradition for the purpose of making money, is that a distortion? Or maybe is the intervention of UNESCO, museums and anthropologists saying that they can't do that the real distortion?

97. See for example, Rowland, "Saving the Past from the Future," 21.

98. Convention Relating to the Status of Refugees, opened for signature 28 July 1951, 189 U.N.T.S. 150 [hereinafter 1951 Refugee Convention].

99. Article 3 of the 1951 Refugee Convention.

100. Article 4 of the 1951 Refugee Convention.

101. Article 14 of the 1951 Refugee Convention.

102. Hodgkinson *et al.*, *The Hour When The Ship Comes In*, 44–45.

103. Article 15 of the 1951 Refugee Convention.

104. Article 26 of the 1951 Refugee Convention.

105. See for example, Docherty and Giannini, "Confronting a Rising Tide," 353–54; Biermann and Boas, "Preparing for a Warmer World," 60–67; Hodgkinson *et al.*, *The Hour When The Ship Comes In*, 44–45.

106. See for example, IOM *et al.*, *Climate Change, Migration*, 1.

107. See for example, Hodgkinson *et al.*, *The Hour When The Ship Comes In*, 44–45.

108. Hodgkinson *et al.*, *The Hour When The Ship Comes In*, 44–45 (citing Julien Betaille *et al.*, Draft Convention on the International Status of Environmentally-Displaced Persons, 4 *Revue Européenne de Droit de L'Environnement* 395 [2008]).

109. Cf. Torsen, "Intellectual Property and Traditional," 201, observing that "[t]o some extent, the very goal of any eventual instrument is not entirely clear"; but that WIPO, WTO, and the World Bank are "providing opportunities to wrestle with these and other issues."

110. But the 2003 UNESCO Convention defines *safeguarding* as "measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage."

111. Article 4(7) of the 2005 UNESCO Convention.

112. UNESCO and WIPO, Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions with a Commentary, 4 (1985).

113. See for example, WIPO, *Climate Change and the Intellectual Property System*, 40–45.

114. Forsyth, "Intellectual Property Laws," states that rights to certain songs and carvings were protected by *tabu* and often magic and could be purchased with payments of food, mats and other forms of currency; Kalinoe, "Ascertaining the Nature," 27, and "Promulgating Traditional Knowledge," 6; and Marahare, "Towards an Equitable Future," 2.

115. Forsyth, "Intellectual Property Laws."

116. Forsyth, "Intellectual Property Laws."

117. Forsyth, "Intellectual Property Laws." Cf. The Vanuatu Cultural Centre, the institution mandated to regulate commercial filming of cultural subjects in Vanuatu, has declared "a moratorium or ban on all commercial filming by foreign film companies of the Nagol jump on Pentecost effective from January 1, 2006," in response to "growing concerns about the increasing distortion of this traditional ceremony due to growing commercialization." See Vanuatu Cultural Centre, *Moratorium on Commercial Filming of Nagol*.

118. WIPO, *Legislative Texts on the Protection*, indicates that, for example, Fiji, the Federated States of Micronesia, Papua New Guinea, Samoa, and Vanuatu have incorporated the protection of traditional cultural expressions in their copyright laws and Palau in its Historical and Cultural Preservation Act of 1995. However, opinion is divided as to whether the intellectual property system offers

optimal protection of traditional cultural expressions. See Marra, “IP & Traditional Cultural,” who describes how, during a side event of the 17th Session of WIPO IGC on 8 December 2010, some indigenous communities expressed reluctance to accept copyright protection of their traditional cultural expressions because copyright affords only temporary protection, instead of the perpetual protection to which they feel their culture is entitled.

119. Secretariat of the Pacific Community (SPC), *Regional Framework for the Protection* (hereinafter, “South Pacific Model Law”).

120. Pacific Islands Forum Secretariat (PIFS), *Traditional Knowledge*, provides that the Action Plan consists of two components: first, to develop a national system of protection setting out new rights and obligations in traditional knowledge that will complement existing forms of protection for intellectual property; second, to develop cultural industries to promote the commercialization of traditional knowledge.

121. E-mail from Douveri Henao, Trade Policy Officer, PIFS, 12 December 2010; see also UN Secretary-General, *Five-year Review*, 34, noting that several SIDS have undertaken initiatives to protect traditional knowledge, skills, and cultural expressions.

122. UNESCO and WIPO, *Model Provisions*.

123. WIPO General Assembly, 26th Sess. (12th Extraordinary Sess.), at 23, WIPO Doc. WO/GA/26/10 (3 October 2000). See also WIPO General Assembly, 26th Sess. (12th Extraordinary Sess.), *Matters Concerning Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore*, WIPO Doc. WO/GA/26/6 (25 August 2000).

124. See generally, WIPO, *Revised Draft Provisions*.

125. See for example, most recently, WIPO IGC, 17th Sess., 6–10 December 2010, Decisions of the Seventeenth Session of the Committee, WIPO Doc. WIPO/GRTKE/IC/17 (10 December 2010).

126. Adopted by the Diplomatic Conference of the African Regional Intellectual Property Organization (ARIPO) in Swakopmund, Namibia on 9 August 2010; see also WIPO, “Director General Welcomes.”

127. IGC Draft, Article 1.

128. IGC Draft, Article 3.

129. South Pacific Model Law, Article 13.

130. South Pacific Model Law, Article 12.

131. South Pacific Model Law, Article 12.

132. South Pacific Model Law, Article 7.

133. IGC Draft, Article 5.

134. South Pacific Model Law, Article 7(4).

135. See generally, WIPO, *Intellectual Property and the Safeguarding*.

136. IGC Draft, Article 2.

137. South Pacific Model Law, Articles 9, 10 and 13(4).

138. IGC Draft, Article 6.

139. IGC Draft, Article 7. See also *Explanatory Memorandum for the South Pacific Model Law*, 1–3.

140. IGC Draft, Article 7.

141. South Pacific Model Law, Articles 20, 21, 22, 23, and 24. See also *Explanatory Memorandum for the South Pacific Model Law*, 1–3.

142. IGC Draft, Article 8.

143. South Pacific Model Law, Article 31.

144. IGC Draft, Article 10.

145. South Pacific Model Law, Article 11.

146. South Pacific Model Law, Article 12.

147. IGC Draft, Article 11.

148. See for example, the Berne Convention for the Protection of Literary and Artistic Works, art. 5(1), 9 September 1886, as last revised at Paris, 24 July 1971, S. Treaty Doc. No. 99-27 (1986) [hereinafter Berne Convention], which states that

[a]uthors shall enjoy, in respect of works for which they are protected under this Convention, in countries of the Union other than the country of origin, the rights which their respective laws do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention.

149. See for example, WIPO, *Revised Draft Provisions*, 48.

150. South Pacific Model Law, Article 39, commentary explains that country A may enter into a reciprocal arrangement with country B whereby A agrees to extend the same protection to traditional cultural expressions originating from B (but present in A) and vice versa. Under such arrangement, an expression of culture such as a sculpture which was brought from B to A for an exhibition for the duration of its stay in A would be protected in the same way as a sculpture is normally protected in A.

151. See for example, WIPO IGC, 7th Sess., 6–10 June 2010, *Practical Means of Giving Effect to the International Dimension of the Committee's Work*, WIPO Doc. WIPO/GRTKE/IC/8/6 (Apr. 4, 2005).

152. WIPO, *Practical Means*, 3.

153. WIPO, *Practical Means*, 13.

154. See WIPO, *Lisbon System for the International Registration*.

155. WIPO, "IGC Makes Significant Progress."

156. As of June 2010, there are 116 ratifications of the 2005 Convention.

157. See UNESCO, *Measuring the Diversity*.

158. Intergovernmental Committee for the Protection and Promotion of the Diversity of Cultural Expressions Fourth Ordinary Session Paris, UNESCO Headquarters 29 November–3 December 2010, Item 10A of the Provisional Agenda: Implementation of the International Fund for Cultural Diversity (IFCD).

159. Talakai, *Intellectual Property and Safeguarding*, 10.

160. The WIPO *Creative Heritage Project* provides project descriptions including: "IP Management by Museums, Libraries and Archives," "IP and Handicrafts," "Creative Heritage Gateway," "Community Cultural Documentation," and "IP Management related to Arts Festivals."

161. Wendland, "Seeking Tangible Benefits," 129.

162. Wendland, "Seeking Tangible Benefits," 129 (while pointing out challenges with regard to policies, ownership issues, local politics, sustainability, and scalability).

163. Vanuatu National Cultural Council, *Vanuatu Cultural Research Policy*, at art. 3.

164. Vanuatu Cultural Research Policy, Article 7.

165. Vanuatu Cultural Research Policy, Article 12.

166. Convention for the Protection of Cultural Property in the Event of Armed Conflict, 14 May 1954, 249 U.N.T.S. 240 [hereinafter 1954 Hague Convention].

167. Merryman, "Two Ways of Thinking," 837.

168. Merryman, "Two Ways of Thinking," 832; see also Merryman, *Thinking About The Elgin Marbles*, 82–109.

BIBLIOGRAPHY

Aikhenvald, Alexandra Y., and Tonya N. Stebbins. "Languages of New Guinea." In *The Vanishing Languages of the Pacific Rim*, edited by Osahito Miyaoka, Osamu Sakiyama, and Michael E. Krauss, 239–66. Oxford: Oxford University Press, 2007.

Alivizatou, Marilena. "Curating Intangible Cultural Heritage: The Case of the Vanuatu Cultural Centre," *2009 Lamphun Field School: Intangible Cultural Heritage and Museums* (25 August 2009): 44, http://www.sac.or.th/databases/fieldschool/wp-content/uploads/2009/ppt/Curating-ICH-Case-of-Vanuatu-Cultural-Centre_Alivizatou_Aug-25.pdf (2009) accessed 14 December 2010.

Annan, Kofi A. "Feeding Africa at a Time of Climate Change—a Major Development Challenge of Our Era" (keynote speech, the Global Conference on Agriculture, Food Security and Climate Change,

the Hague, the Netherlands, 4 November 2010) (<http://www.agra-alliance.org/content/news/detail/1227>) accessed 4 December 2010.

Barnett, Jon, and John Campbell. *Climate Change and Small Island States: Power, Knowledge and the South Pacific*. London: Earthscan, 2010.

Biermann, Frank, and Ingrid Boas. "Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees." *Global Environmental Politics* 10, no. 1 (February 2010): 60–67, doi:10.1162/glep.2010.10.1.60.

Central Intelligence Agency (CIA). *The World Factbook 2009*. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>) (2011) accessed 14 December 2010.

Christoff, Peter. "Places Worth Keeping? Global Warming, Heritage and the Challenges to Governance." *Historic Environment* 21, no. 1 (2008): 41–44.

Colette, Augustin, ed. *Climate Change and World Heritage: Report on Predicting and Managing the Impacts of Climate Change on World Heritage and Strategy to Assist State Parties to Implement Appropriate Management Responses*. Paris: UNESCO World Heritage Centre, 2007.

Conquergood, Dwight. "Health Theater in a Hmong Refugee Camp: Performance, Communication, and Culture." *The Drama Review* 32 (Autumn 1988): 174–80.

Docherty, Bonnie, and Tyler Giannini. "Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees." *Harvard Environmental Law Review* 33 (2009): 353–54.

European Commission. *Cultural Heritage—Environment—Research*. (http://ec.europa.eu/research/environment/index_en.cfm?pg=cultural) (3 September 2010) accessed 7 December 2010.

Farrell, Ben. *Pacific Islanders Face the Reality of Climate Change . . . and of Relocation*. (<http://www.unhcr.org/print/4b264c836.html>) (14 December 2009) accessed 1 October 2010.

Fauvre, Anne, and Keith Stanley. "Five Takes on Climate and Cultural Change in Tuvalu." *The Contemporary Pacific* 19 no. 1 (Spring 2007): 306.

Forsyth, Miranda. "Intellectual Property Laws in the South Pacific: Friend or Foe?" *Journal of South Pacific Law* 7 (2003). (<http://www.pacii.org/journals/fjSPLvol07no1/8.shtml>) accessed 14 December 2010.

Gemenne, François, and Shawn Shen. *Environmental Change and Forced Migration Scenarios (EACH-FOR): Specific Targeted Project Scientific Support to Policies—SSP: Tuvalu and New Zealand Case Study Report (Ref. No. D 2.3.2.3.)*. (<http://www.each-for.eu>) (2007) accessed 25 November 2008.

Henry, Rosita, and William Jeffrey. "Waterworld: The Heritage Dimensions of 'Climate Change' in the Pacific." *Historic Environment* 21 (2008): 13–14.

Hodgkinson, David, Tess Burton, Heather Anderson, and Lucy Young. *The Hour When The Ship Comes In: A Convention for Persons Displaced by Climate Change*. (http://www.hodgkinsongroup.com/documents/Hour_When_Ship_Comes_In.pdf) (23 December 2009) accessed 8 December 2010.

Ielemia, H. E. Apisai. *General Debate at the 63rd United Nations General Assembly* (26 September 2008). (http://www.un.org/ga/63/generaldebate/pdf/tuvalu_en.pdf) accessed 31 August 2010.

Informal Group on Migration/Displacement and Climate Change of the IASC. "Climate Change, Migration and Displacement: Who Will Be Affected?" (Working Paper, October 2008). (<http://www.unfccc.int/resource/docs/2008/smsn/igo/022.pdf>) (28 November 2008) accessed 27 November 2010.

Intergovernmental Panel on Climate Change. *Climate Change 2007: Synthesis Report (2007)*. IPCC, Core Writing Team, R.K. Pachauri, and A. Reisinger (eds.), *Climate Change 2007: Synthesis Report*. Geneva: IPCC, 2008. http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm (accessed 8 November 2010).

———. IPCC First Assessment Report 1990 (FAR). Geneva: IPCC, 1990. http://www.ipcc.ch/ipccreports/1992%20IPCC%20Supplement/IPCC_1990_and_1992_Assessments/English/ipcc_90_92_assessments_far_overview.pdf (accessed 8 November 2010).

———. *First Assessment Report (1999)*.

International Council on Monuments and Sites (ICOMOS). *Resolution at the International Workshop on Impact of Climate Change on Cultural Heritage*, New Delhi (22 May 2007).

International Organization for Migration (IOM). *Migration and Climate Change*. IOM Migration Research Series No. 31 (2008): 25–26.

IOM, Office of the United Nations High Commissioner for Refugees (UNHCR), the United Nations University (UNU) in cooperation with the Norwegian Refugee Council (NRC) and the Representative of the Secretary General on the Human Rights of Internally Displaced Persons (RSG on the HR of IDP), *Climate Change, Migration, and Displacement: Impacts, Vulnerability, and Adaptation Options*, submitted to the 5th Session of the Ad-Hoc Working Group on Long-Term Cooperative Action under the UNFCCC, 29 March–8 April 2009, 1 (6 February 2009).

Kalinoe, Lawrence. “Ascertaining the Nature of Indigenous Intellectual and Cultural Property and Traditional Knowledge and the Search for Legal Options in Regulating Access in Papua New Guinea.” *Melanesian Law Journal* 27 (January 2000). (<http://www.paclii.org/journals/MLJ/2000/1.html>) accessed 9 December 2010.

———. “Promulgating Traditional Knowledge Sensitive IPR Legislation in Papua New Guinea and Related Developments in Pacific Island Countries: A Reflection on the Past Three Years.” *Melanesian Law Journal* 27 (January 2000). (<http://www.paclii.org/journals/MLJ/2000/6.html>) accessed 9 December 2010.

Kang, Kyung-wha. *Climate Change, Migration and Human Rights, at the Conference on Climate Change and Migration: Addressing Vulnerabilities and Harnessing Opportunities* (19 February 2008). (<http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=9162&LangID=E>) (accessed 16 October 2011).

Kim, Hee-Eun. *The Role of the Patent System in Stimulating Innovation and Technology Transfer for Climate Change (Including Aspects of Licensing and Competition Law)*. Baden-Baden: Nomos, 2011.

Lewis, M. Paul, ed. *Ethnologue: Languages of the World*, 16th ed. Dallas: SIL International, 2009.

Loughry, Maryanne. “Climate Change: The Tipping Point.” *Link (A Newsletter for Friends of the Jesuit Refugee Service Australia)* 10 no. 4 (Summer 2010): 2.

Loughry, Maryanne, and Jane McAdam. “Kiribati—Relocation and Adaptation.” *Forced Migration Review* 31 (October 2008): 51–52.

Marahare, Don. “Towards an Equitable Future in Vanuatu: The Legal Protection of Cultural Property.” *Journal of South Pacific Law* 8 (2004): 2. (<http://www.paclii.org/journals/fjSPL/vol08no2/6.shtml>) accessed 12 September 2010.

Marra, Kaitlin. "IP & Traditional Cultural Expressions: An Unnatural Alliance?" *Intellectual Property Watch*. (<http://www.ip-watch.org/weblog/2011/01/05/ip-traditional-cultural-expressions-an-unnatural-alliance/>) (5 January 2011) accessed 16 October 2011.

Max Planck Institute for Psycholinguistics. *Dokumentation Bedrohter Sprachen (DoBeS)* [Documentation of Endangered Languages]. (<http://www.mpi.nl/DOBEs>) (2006) accessed 12 October 2010.

McIntyre-Tamwoy, Susan. "The Impact of Global Climate Change and Cultural Heritage: Grasping the Issues and Defining the Problem." *Historic Environment* 21 (2008): 8.

Merryman, John H. "Two Ways of Thinking About Cultural Property." *American Journal of International Law* 80 (1986): 832–37.

———. *Thinking About The Elgin Marbles: Critical Essays on Cultural Property, Art and Law*. Alphen aan den Rijn: Kluwer Law International, 2009.

Moseley, Christopher, ed. *Atlas of the World's Languages in Danger*. Paris: UNESCO Publishing, 2010. (<http://www.unesco.org/culture/languages-atlas/en/atlasmap.html>) accessed 16 October 2011.

Myers, Norman. "Environmental Refugees: A Growing Phenomenon of the 21st Century." *Philosophical Transactions of the Royal Society Biological Sciences* 357 (2001): 609–11.

Myers, Norman and Jennifer Kent. *Environmental Exodus: An Emergent Crisis in the Global Arena*. (<http://www.climate.org/PDF/Environmental%20Exodus.pdf>) (1995) accessed 23 September 2011.

Norwegian Refugee Council (NRC). *Climate Changed: People Displaced* (2009): 5–15. (<http://www.nrc.no/?did=9448676>) (8 December 2009) accessed 25 November 2010.

O'Neil, Dennis. *Culture Change: An Introduction to the Processes and Consequences of Culture Change*. (<http://anthro.palomar.edu/change/>) (2008) accessed 30 November 2010.

Pacific Islands Forum Secretariat (PIFS). *Traditional Knowledge Implementation Action Plan*. ([http://www.forumsec.org.fj/resources/uploads/attachments/documents/Traditional Knowledge Action Plan 2009.pdf](http://www.forumsec.org.fj/resources/uploads/attachments/documents/Traditional%20Knowledge%20Action%20Plan%202009.pdf)) (21 December 2010) accessed 24 November 2010.

Panos Pictures. "Tuvalu—Island on the Frontline of Climate Change." *VIMEO* (4 June 2009). (<http://www.vimeo.com/4997847>) accessed 16 October 2010.

Pearson, Michael. "Climate Change and Its Impacts on Australia's Cultural Heritage." *Historic Environment* 21 (2008): 40.

Pfirman, Stephanie, interview by Yale Environment 360. "As the Arctic Ocean Melts, A Refugee Plan for the Polar Bear," 22 December 2010. (http://e360.yale.edu/feature/as_the_arctic_ocean_melts_can_refuge_save_polar_bears/2355/) (22 December 2010) accessed 16 October 2011.

Rowland, Mike. "Saving the Past from the Future." *Historic Environment* 21 (2008): 21.

Sandler, Felicia. "Music of the Village in the Global Market Place: Self-Expression, Inspiration, Appropriation, or Exploitation?" PhD diss., Ann Arbor: University of Michigan, 2001.

Secretariat of the Pacific Community (SPC). *Explanatory Memorandum for the South Pacific Model Law*, in Regional Framework for the Protection of Traditional Knowledge and Expressions of Culture (2002): 1–3, http://www.wipo.int/wipolex/en/text.jsp?file_id=184651 (last modified 14 October 2011) accessed 16 October 2011.

Talakai, Malia. *Intellectual Property and Safeguarding Cultural Heritage: A Survey of Practices and Protocols in the South Pacific*. (<http://www.wipo.int/tk/en/culturalheritage/surveys.html>) (September 2007) accessed 24 November 2010.

Taubman, Antony. "Saving the Village: Conserving Jurisprudential Diversity in the International Protection of Traditional Knowledge." In *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime*, edited by Keith E. Maskus and Jerome H. Reichman, 521–64. Cambridge: Cambridge University Press, 2005.

Taubman, Antony, and Matthias Leistner. "Traditional Knowledge." In *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore*, 2nd ed., edited by Silke von Lewinski, 59–173. Alphen aan den Rijn: Kluwer Law International, 2008.

Torsen, Molly. "Intellectual Property and Traditional Cultural Expressions: A Synopsis Of Current Issues." *Intercultural Human Rights Law Review* 3 (2008): 201.

Torsen, Molly and Jane Anderson, WIPO. *Intellectual Property and the Safeguarding of Traditional Cultures: Legal Issues and Practical Options for Museums, Libraries and Archives*. (<http://www.wipo.int/tk/en/publications/1023.pdf>) (December 2010) accessed 17 October 2011

UNESCO. *Intergovernmental Committee for the Protection and Promotion of the Diversity of Cultural Expressions*, Fourth Ordinary Session Paris, UNESCO Headquarters 29 November 29–3 December 3 2010 Item 10A of the Provisional Agenda: Implementation of the International Fund for Cultural Diversity (IFCD). (http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/pdf/Conv2005_4IGC_decisions_en_10_12_10.pdf) (last modified 10 June 2010) accessed 12 October 2010.

———. UNESCO World Report: Investing in Cultural Diversity and Intercultural Dialogue (2009): 11–22.

———. *Vanuatu Sand Drawings*. (<http://www.unesco.org/culture/ich/en/RL/00073>) (2010) accessed 16 September 2011.

———. "Vanuatu Sand Drawings." *YouTube* video (28 September 2009). (<http://www.youtube.com/watch?v=nJociHoB-t8>) accessed 10 December 2010.

UNESCO Institute for Statistics. *Measuring the Diversity of Cultural Expressions*. (http://www.uis.unesco.org/ev.php?ID=7061_201&2=DO_TOPIC) (2009) accessed 8 December 2010.

UNESCO and WIPO, *Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions with a Commentary*, 4 (1985). <http://www.wipo.int/export/sites/www/tk/en/documents/pdf/1982-folklore-model-provisions.pdf> (last modified 1 February 2010) accessed 30 November 2010.

———. *The 2009 UNESCO Framework for Cultural Statistics*. (<http://www.uis.unesco.org/Culture/Pages/cultural-diversity.aspx>) (2009) accessed 16 September 2011.

United Nations Framework Convention on Climate Change (UNFCCC). *CDM in Numbers*. (<http://cdm.unfccc.int/Statistics/index.html>) (2011) accessed 14 December 2010.

———. *NAPA Priorities Database*. (http://unfccc.int/files/adaptation/application/pdf/napa_tourism.pdf) (September 2008) accessed 12 December 2010.

———. *Technologies for Adaptation to Climate Change* (2006). (http://www.unfccc.int/ttclear/pdf/tech_for_adaptation.pdf) (2006) accessed 12 December 2010.

———. *Vulnerability and Adaptation to Climate Change in Small Island Developing States: Background Paper for the Expert Meeting on Adaptation for Small Island Developing States* (2007).

UNHCR, in cooperation with NRC, RSG on the HR of IDP and UNU. *Forced Displacement in the Context of Climate Change: Challenges for States under International Law*, <http://unfccc.int/resource/docs/2009/smsn/igo/049.pdf> (19 May 2009) accessed 27 November 2010. Submitted to the 6th Session of the Ad Hoc Working Group on Long-Term Cooperative Action under the UNFCCC, 1–12 June 2009 (<http://unfccc.int/meetings/sb30/items/4842.php>) (June 2009) accessed 27 November 2010.

United Nations Convention to Combat Desertification (UNCCD). *Promotion of Traditional Knowledge: A Compilation of UNCCD Documents and Reports from 1997–2003* (2005). (http://www.unccd.int/publicinfo/publications/docs/traditional_knowledge.pdf) (last modified 19 September 2011) accessed 16 October 2011.

UN Secretary-General. *Five-year Review of the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*, 34, U.N. Doc. A/65/115 (6 July 2010).

Vanuatu Cultural Centre. *Moratorium on Commercial Filming of Nagol*. (http://www.vanuatuculture.org/site-bm2/research/20051122_pentecost_land_dive.shtml) (22 November 2005) accessed 6 December 2010.

Vanuatu National Cultural Council. *The National Action Plan for the Safeguarding of Sand Drawing, a UNESCO Masterpiece of the Oral and Intangible Heritage of Humanity*. (http://www.vanuatuculture.org/site-bm2/sand/050627_sanddrawing.shtml) (last modified 10 August 2011) accessed 17 October 2011.

———. *Vanuatu Cultural Research Policy*. (http://www.vanuatuculture.org/site-bm2/research/050520_culturalresearchpolicy.shtml) (2004) accessed 17 December 2010.

von Lewinski, Silke, ed. *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore*, 2nd ed. Alphen aan den Rijn: Kluwer Law International, 2008.

Wendland, Wend B. “Seeking Tangible Benefits from Linking Culture, Development and Intellectual Property.” *International Journal of Intangible Heritage* 29 (2009): 129.

WIPO. *Revised Draft Provisions for the Protection of Traditional Cultural Expressions/Expressions of Folklore: Policy Objectives and Core Principles*. (http://www.wipo.int/export/sites/www/tk/en/consultations/draft_provisions/pdf/tce-provisions.pdf) (2006) accessed 30 November 2010.

———. *Climate Change and the Intellectual Property System: What Challenges, What Options, What Solutions?* (http://www.wipo.int/export/sites/www/patentscope/en/lifesciences/pdf/ip_climate.pdf) (14 November 2008) accessed 30 November 2010.

———. *Creative Heritage Project: Strategic Management of IP Rights and Interests*. (<http://www.wipo.int/tk/en/culturalheritage>) (2010) accessed 17 October 2011.

———. “Director General Welcomes Moves to Enhance Protection of Traditional Knowledge & Folklore in Africa,” press release, 31 August 2010, WIPO Press Release PR/2010/654.

———. “IGC Makes Significant Progress, Sets the Stage for Working Groups on GRs and TK,” press release, 10 December 2010. WIPO Press Release PR/2010/675/ (http://www.wipo.int/pressroom/en/articles/2010/article_0051.html) accessed 14 December 2010.

———. *Lisbon System for the International Registration of Appellations of Origin*. (<http://www.wipo.int/lisbon/en/>) (13 January 2011) accessed 17 October 2011.

———. *Legislative Texts on the Protection of Traditional Cultural Expressions (Expressions of Folklore) (TCEs)*. (<http://www.wipo.int/tk/en/laws/folklore.html>) (4 April 2011) accessed 17 October 2011.