

ON THIN ICE: THE FAILURE OF THE UNITED STATES AND
THE WORLD HERITAGE COMMITTEE TO TAKE CLIMATE
CHANGE MITIGATION PURSUANT TO THE WORLD
HERITAGE CONVENTION SERIOUSLY

BY

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Glacier National Park's iconic glaciers are disappearing at a rate that suggests the loss of all the glaciers will occur entirely by 2030. This is undoubtedly one of the many devastating consequences of climate change awaiting the United States. However, despite the dire need to take action to slow and reverse climate change, the United States has abdicated any international binding targets to reduce greenhouse gas emissions. This Article examines this failure in the context of the melting glaciers in Glacier National Park and the World Heritage Convention, under which Glacier National Park is an international protected area. The World Heritage Convention obliges State Parties to ensure the protection of World Heritage sites like Glacier National Park, meaning, in this case, ensuring that the glaciers do not melt entirely by eliminating dangerous anthropogenic interference with the climate system via greenhouse gas emissions. Yet the World Heritage Committee, with the United States a key member, has failed to endorse the type of aggressive climate change mitigation policy that is necessary to fully implement this obligation. Moreover, the United States has demonstrated again that it is willing to rely on specious arguments rather than engage fruitfully with the international community to address climate change.

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I. INTRODUCTION

Arguably, the worst failure of U.S. environmental policy is the United States refusal to ratify the Kyoto Protocol¹ to the United Nations Framework Convention on Climate Change (UNFCCC),² which would have committed the United States to reducing its greenhouse gas emissions seven percent below 1990 emission levels by 2012.³ Partially because of this failure, the Kyoto Protocol has been largely unsuccessful in meaningfully beginning to stem the tide of global climate change.⁴ However, even if the United States

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¹ Kyoto Protocol to the United Nations Framework Convention on Climate Change, U.N. Doc FCCC/CP/1997/7/Add.1, 37 I.L.M. 22, available at <http://UNFCCC.int/resource/docs/convkp/kpeng.pdf> [hereinafter Kyoto Protocol].

² United Nations Framework Convention on Climate Change art. 2, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC] ("The ultimate objective of [the UNFCCC] . . . is to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.").

³ Kyoto Protocol, *supra* note 1, Annex B, 37 I.L.M. at 43; see PHILIPPE SANDS, *LAWLESS WORLD: AMERICA AND THE MAKING AND BREAKING OF GLOBAL RULES FROM FDR'S ATLANTIC CHARTER TO GEORGE W. BUSH'S ILLEGAL WAR 69-70, 86-94* (2005) (arguing that the failure of the United States to lead on global warming has had grave consequences for the global environment and international politics and world order).

⁴ The withdrawal of the United States from the Kyoto Protocol gave rise to predictions of the regime's pending failures. See Inho Choi, *Global Climate Change and the Use of Economic Approaches: The Ideal Design Features of Domestic Greenhouse Gas Emissions Trading with*

had ratified the Kyoto Protocol and all other Parties fully upheld their commitments, the U.S. National Center for Atmospheric Research suggests that this effort would result in a reduction of projected warming by 2060 of only one-twentieth of one degree Celsius.⁵ Without U.S. participation, however, the Kyoto Protocol's regime of greenhouse gas reduction targets will fail to achieve even this modest reduction of projected warming.⁶

Without the United States on board with the Kyoto Protocol and future protocol negotiations, as well as the regime's overall failure to achieve the level of commitment necessary to avoid dangerous anthropogenic interference with the Earth's atmosphere, lawyers, policy-makers, and advocates are beginning to examine means of pushing a climate change agenda from beyond the framework of the UNFCCC and Kyoto Protocol.⁷ Much of this effort focuses on climate change effects already occurring and legal responses available to address these effects. In fact, climate change, in particular global warming, is wreaking havoc on the Earth's ecosystems, and nothing short of an immediate and aggressive climate-change mitigation policy, plus intensive short-term and long-term adaptation strategies, will even begin to preserve our world as we know it.

The ecosystem changes wrought by global warming are most evident in an increasingly common phenomenon: glacial retreat. Around the world, glaciers are melting at alarming rates. While the loss of glaciers is a loss of majestic, natural beauty, the loss of glaciers also has devastating effects on surrounding ecosystems. When a glacier disappears, it portends devastation for a watershed dependent on seasonal glacial ablation to supply its rivers with freshwater.⁸ In fact, Himalayan glaciers supply critical freshwater to

an Analysis of the European Union's CO2 Emissions Trading Directive and the Climate Stewardship Act, 45 NAT. RESOURCES J. 865, 950 (2005) (proposing the lack of U.S. leadership will cause the Kyoto Protocol to fail to achieve its goals and frustrate developing countries).

⁵ Patrick J. Michaels, *California Retro*, THE AM. SPECTATOR, Sept. 13, 2006, http://www.spectator.org/dsp_article.asp?art_id=10350 (last visited Jan. 27, 2008) (citing scientists from the U.S. National Center for Atmospheric Research); see also Mustafa H. Babiker et al., *The Evolution of a Climate Regime: Kyoto to Marrakech and Beyond*, 5 ENV'TL SCI. & POL'Y 195, 202 (2002), available at http://web.mit.edu/globalchange/www/MITJPSPGC_Reprint02-5.pdf (noting that with full implementation by the United States, the Kyoto Protocol would have resulted in a temperature reduction of 0.5°C by 2100, while both global emissions and atmospheric concentrations of greenhouse gases would have increased). For a short summary of the various compromises of the Kyoto Protocol, see JOSEPH F.C. DiMENTO, THE GLOBAL ENVIRONMENT AND INTERNATIONAL LAW 134 (2003).

⁶ The Kyoto Protocol exempts both China and India from binding reduction targets, but these countries' emissions have significantly increased in recent years. See Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 27 ("The point is most obviously true for developing nations. India's greenhouse gas emissions exceed Germany's; those of South Korea exceed France; and next to the United States, China is the largest emitter of greenhouse gases in the world.").

⁷ See generally William C. Burns & Hari Osofsky, eds., ADJUDICATING CLIMATE CHANGE: NATIONAL, SUB-NATIONAL, AND SUPRA-NATIONAL APPROACHES (forthcoming 2007).

⁸ During snow and rain seasons, glaciers store water; during warmer, dry seasons, glacial melt supplies river systems with freshwater. See U.N. ENV'T PROGRAMME (UNEP), GLOBAL OUTLOOK FOR ICE AND SNOW 24 (2007), available at http://www.unep.org/geo/geo_ice/PDF/full_report_LowRes.pdf. Once in a steady state of retreat, a melting glacier will inundate a

arid regions of Asia.⁹ When the glaciers disappear, the supply of freshwater will also disappear. The newly unfrozen waters of retreating glaciers have formed glacial lakes held back by only earthen moraines, some of which have burst, causing Glacial Lake Outburst Floods (GLOFs), drowning villages, pastureland, and crops.¹⁰ Many species depend on glaciers to supply river systems with the cold water necessary to support their life cycles.¹¹

Moreover, sea levels continue to rise as ice in the form of both glaciers and ice caps continues to melt.¹² Ten percent of earth's land (15,000,000 square kilometers) is covered with ice,¹³ and seventy-five percent of the

river system with water, but river systems dependent on seasonal glacial melt will run dry once the glacier disappears. *Id.* According to the UNEP, "an estimated 1.5 to 2 billion people in Asia (Himalayan region) and in Europe (The Alps) and the Americas (Andes and Rocky Mountains) depend on river systems with glaciers inside their catchment areas." *Id.*

⁹ See WORLD WILDLIFE FUND, AN OVERVIEW OF GLACIERS, GLACIER RETREAT, AND SUBSEQUENT IMPACTS IN NEPAL, INDIA AND CHINA 2 (2005), available at <http://assets.panda.org/downloads/himalayaglaciersonreport2005.pdf> [hereinafter OVERVIEW OF GLACIERS] (indicating that Himalayan glaciers feed seven major rivers in Asia: the Ganga, Indus, Brahmaputra, Salween, Mekong, Yangtze, and Huang He). The World Wildlife Fund (WWF) states that "[i]n the Ganga river only, the loss of glacier melt water would reduce July–September flows by two thirds, causing water shortage for 500 million people and 37% of India's irrigated land." WWF, *Himalayan Glaciers and Rivers*, http://www.panda.org/about_wwf/where_we_work/asia_pacific/where/nepal/our_solutions/projects/index.cfm?uProjectID=NP0898 (last visited Jan. 27, 2008) [hereinafter WWF website].

¹⁰ GLOFs are an increasingly common occurrence. See generally SCOT H. DAHMS, MORaine DAM FAILURE AND GLACIAL LAKE OUTBURST FLOODS (Dec. 1, 2006), <http://www.emporia.edu/earthsci/student/dahms4/web1.htm> (last visited Jan. 27, 2008) (describing moraine dam characteristics and failure mechanism, and the increasing frequency of GLOFs in the Himalayan region). GLOFs occur when discharges resulting from glacial retreat increase the volume of water in glacial lakes, which occupy the depression otherwise occupied by glacial ice. In this scenario, the earthen dams containing the glacial lakes are often structurally weak. Waters easily rise over these natural dams as a result of any number of occurrences, causing catastrophic flooding. See OVERVIEW OF GLACIERS, *supra* note 9, at 3 (providing an overview of GLOFs). In 1985 in Nepal a glacial lake, Dig Tsho, burst over its natural dam, causing over \$1.5 million in damage to 14 bridges and a small hydropower plant. WWF website, *supra* note 9. In 1970, a glacial lake burst its dam in the Peruvian Andes during an earthquake, killing 60,000 people. Fred Pearce, *Flood Disaster Threatens Himalayas*, NEWS SCIENTIST.COM, Apr. 16, 2002, <http://www.newscientist.com/article/dn2170-flood-threatens-himalayas.html> (last visited Jan. 27, 2008).

¹¹ Experts expect a number of consequences for biodiversity, including species migrations; local, regional, and global extinctions; changes in the timing of biological events; and changes in the intensity and frequency of ecological disturbances, such as flooding, wildfires, and droughts. See generally L. Hannah et al., *Conservation Biodiversity in a Changing Climate*, 16 CONSERVATION BIOLOGY 264, 265 (2002) (explaining several consequences of climate change including North American butterflies shifting northward in range, Eastern European trees blooming earlier, and tropical birds shifting upslope in range); L. Hannah, G.F. Midgley & D. Miller, *Climate Change-Integrated Conservation Strategies*, 11 GLOBAL ECOLOGY & BIOGEOGRAPHY 485, 488 (2002) (stating climate change causes species range shifts, changes in abundance, and geographical variation).

¹² According to the 2007 IPCC Report, sea levels are expected to rise approximately 28 to 43 centimeters. See WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS: SUMMARY FOR POLICYMAKERS 5 (2007), available at http://ipcc-wg1.ucar.edu/wg1/docs/WG1AR4_SPM_PlenaryApproved.pdf [hereinafter IPCC SCIENCE REPORT].

¹³ UNEP, GLACIERS AND THE ENVIRONMENT 3 (1992).

earth's freshwater is stored in that ice.¹⁴ Glacial retreat has contributed, along with ice cap melt, between 0.2 and 0.4 millimeters per year to overall sea-levels during the last century.¹⁵ Although this figure includes melting ice caps, scientists indicate that “[d]uring the 20th century, the areas and volumes for mountain glaciers declined much more than for the icecaps and contribute nearly all the [sea level rise].”¹⁶ To put the amount of worldwide glacial melt in perspective: since the early 1960s, mountain glaciers have lost 4000 cubic kilometers of water, which is more than one year’s worth of discharge from the Orinoco, Congo, Yangtze, and Mississippi Rivers combined.¹⁷ Furthermore, in the 1990s, the rate at which glaciers melted more than doubled compared to the rates of previous decades.¹⁸

While many of these concerns seem a world away from the United States, mountain ranges in mid-latitude regions, including the Cascade Range and Rocky Mountains, are suffering severe glacial loss.¹⁹ In fact, Al Gore has been often cited as decrying the state of Glacier National Park’s Rocky Mountain glaciers with the exclamation, “Within 20 years, this is the park that will be formerly known as Glacier.”²⁰ In fact, Glacier National Park’s ecosystem already suffers the consequence of the loss of the glaciers.²¹ Glacial retreat has altered water flows and water temperatures have risen.²² Additionally, temperature-sensitive organisms have begun migrations to find more adequate habitat.²³ These changes will forever alter Glacier National Park.

Despite the immediacy of glacial retreat and the concomitant ecosystem devastation, the Bush Administration blithely insists that its policy of voluntary cuts in greenhouse gas emissions is a solid, workable climate change strategy.²⁴ The rejection of the Kyoto Protocol put the Bush

¹⁴ *Id.* at 4.

¹⁵ WORKING GROUP I TO THE THIRD ASSESSMENT REPORT, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS 665 (2001), *available at* http://www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-11.pdf; *see also* UNEP, *supra* note 13, at 5 (indicating glacial melt is responsible for one third of sea level rise).

¹⁶ Sarah C. Raper & Roger J. Braithwaite, *Low Sea Level Rise Projections from Mountain Glaciers and Icecaps Under Global Warming*, 439 NATURE 311, 312 (2006).

¹⁷ STACEY COMBES ET AL., WORLD WILDLIFE FUND, GOING, GOING, GONE! CLIMATE CHANGE & GLOBAL GLACIER DECLINE 2 (2006), *available at* www.panda.org/downloads/climate_change/glacierspaper.pdf.

¹⁸ *Id.*

¹⁹ *Id.* at 3.

²⁰ Cecilia M. Vega, *Warning from Gore on Future Global Warming Called an Emergency*, S.F. CHRON., June 5, 2005, at A17, *available at* <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/05/GORE.TMP>.

²¹ *See infra* Part II.B.1.

²² *See infra* Part II.B.2.

²³ *See infra* Part II.B.3.

²⁴ On February 14, 2002, President Bush announced his plan for curbing greenhouse gas emissions, calling it the Clear Skies and Global Climate Change Initiatives. *See* George W. Bush, U.S. President, President Announces Clear Skies & Global Climate Change Initiatives (Feb. 14 2002), *in* 38 WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS 232–36 (Feb. 18, 2002), *available at* <http://www.whitehouse.gov/news/releases/2002/02/20020214-5.html> (asserting that voluntary emissions reductions are viable and that “economic growth is the solution, not the problem”).

Administration in a position to insist that the United States had not incurred any binding greenhouse gas reduction obligations, placating both industry and climate-change skeptics.²⁵ The UNFCCC sets goals, including “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system,” but the UNFCCC is simply a framework convention; it does not itself set binding measures for fulfilling this goal.²⁶ The Bush Administration’s recent climate change rhetoric in light of the latest

The plan requires an 18% reduction of greenhouse gas “intensity” by 2012, which President Bush declared “comparable to the average progress that nations participating in the Kyoto Protocol must achieve.” *Id.* at 234. “Intensity” is defined as emissions per unit of Gross Domestic Product (G.D.P.). See *id.* at 234 (“My administration is committed to cutting our Nation’s greenhouse intensity, how much we emit per unit of economic activity . . .”). Using this measurement, the United States can easily claim a level of success, though it’s an entirely specious version of success. As the U.S. economy grows and becomes less dependent on the manufacturing sector, greenhouse gas intensity naturally decreases, even though total greenhouse gas emissions are steadily increasing. See Paul Krugman, *Ersatz Climate Policy*, N.Y. TIMES, Feb. 15, 2002, at A21 (“Because pushing bits around doesn’t take as much energy as pushing around large pieces of sheet metal, a dollar of new-economy G.D.P. generally doesn’t require burning as much carbon as a dollar of old-economy G.D.P.”). Countering assertions that the United States’ failure to lead on climate change policy has disproportionately pushed the burden on developing countries, U.S. government officials cite “groundbreaking initiatives,” including financial incentives for businesses to take steps to reduce greenhouse gas emissions. Jeffrey Gettleman, *Annan Faults “Frightening Lack of Leadership” for Global Warming*, N.Y. TIMES, Nov. 16, 2006, at A18 (quoting Paula J. Dobriansky, Under Secretary of State for Democracy and Global Affairs).

²⁵ See Patrick Parenteau, *Anything Industry Wants: Environmental Policy Under Bush II*, 14 DUKE ENVTL. L. & POL’Y F. 363, 368–71 (2004) (thoroughly describing President Bush’s accommodations to industry in U.S. climate change policy). Some see the U.S. withdrawal from the Kyoto Protocol as an indirect subsidy to American fossil fuels producers, including Pascal Lamy, director of the World Trade Organization. See Andrew Simms, *Bush Faces Trade Sanctions*, NEW STATESMAN, Nov. 15, 2004, at 18.

²⁶ UNFCCC, *supra* note 2, art. 2. See also Anita M. Halvorsen, *The Kyoto Protocol and Developing Countries*, 16 COLO. J. INT’L ENVTL. L. & POL’Y 353, 359 (2005) (describing implications of the lack of a binding commitment). Article 4 of the UNFCCC sets out Parties’ commitments for implementation of the Convention, but all are phrased broadly and the only one that clearly spells out a concrete commitment obliges Parties to regularly make available a “national inventor[y] of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol.” UNFCCC, *supra* note 2, art. 4(1)(a). The remainder of the commitments consist of either general principles or such broadly phrased obligations that Parties have nearly unfettered discretion as to implementation, except that Parties must create greenhouse gas inventories and submit national reports. *Id.* arts. 4, 12(1). For a brief description of these requirements, see UNFCCC, *Annex I Greenhouse Gas Inventories*, http://unfccc.int/national_reports/annex_i_ghg_inventories/items/2715.php (last visited Jan. 26, 2008) and Halvorsen, *supra* note 2, at 360 (describing obligation to produce “national communications”). For example, although the heart of the agreement is reduction of greenhouse gases to prevent anthropogenic climate change, Article 4 merely requires Parties to “adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs . . . with the aim of returning [emissions] to their 1990 levels.” UNFCCC, *supra* note 2, arts. 4(2)(a)–(b). See also SANDS, *supra* note 3, at 85 (describing the process of disassociating the phrases “by the end of the present decade” and “to the 1990 levels” in the UNFCCC in order to allow President Bush to “sign the treaty in the knowledge that he was not entering into a binding legal obligation to stabilize greenhouse gases at 1990 levels by 2000”).

Intergovernmental Panel on Climate Change (IPCC) Report charges that the United States is living up to its climate-change responsibilities under the UNFCCC and even considers itself a leader in climate change field.²⁷ This despite the fact that the United States' total greenhouse gas emissions now constitute approximately a quarter of the world's total greenhouse gas emissions.²⁸

Enter the World Heritage Convention (WHC).²⁹ The WHC protects numerous natural areas covered, or once covered by glaciers, including Waterton-Glacier International Peace Park (Glacier National Park represents the U.S. portion of the transboundary park).³⁰ At its inception it was heralded as a milestone for international cooperation.³¹ Negotiations of the treaty stemmed largely from an international campaign arising out of plans to build the Aswan High Dam in Egypt, which would have flooded the Abu Simbel Temple.³² Egypt and Sudan collectively appealed to the United Nations Educational, Scientific and Cultural Organization (UNESCO) to

²⁷ The latest IPCC Report concludes that “[m]ost of the observed increase in globally averaged temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic greenhouse gas concentrations” (emphasis in original). IPCC SCIENCE REPORT, *supra* note 12, at 8. The Bush Administration responded with a press release devoted to the efforts of U.S. climate research programs and a nod to President Bush’s leadership: “Through President Bush’s leadership, the U.S. government is taking action to curb the growth of greenhouse gas emissions and encouraging the development and deployment of clean energy technologies here in the United States and across the globe.” Press Release, United States Department of Energy Office of Public Affairs, Bush Administration Plays Leading Role in Studying and Addressing Global Climate Change (Feb. 2, 2007), *available at* <http://www.energy.gov/news/4704.htm>.

²⁸ See Env’t News Serv., *Record Increase in U.S. Greenhouse Gas Emissions Reported* <http://www.ens-newswire.com/ens/apr2006/2006-04-18-02.asp> (last visited Jan. 27, 2008) (indicating that even though the United States is home to only 5% of the world’s population, it produces approximately 25% of the world’s greenhouse gas emissions). Greenhouse gas emissions in 2005 totaled 7,260.4 TgCO₂Eq, a rise of 16.3% from 1990 to 2005 and an increase of 0.8% from 2004 to 2005. EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990–2005, at ES-3 (2007), *available at* <http://www.epa.gov/climatechange/emissions/downloads06/07CR.pdf>.

²⁹ Convention Concerning the Protection of the World Cultural and Natural Heritage art. 1, Nov. 16, 1972, 27 U.S.T. 37, 1037 U.N.T.S. 151 (defining cultural and natural heritage in terms of “outstanding universal value”) [hereinafter World Heritage Convention].

³⁰ The World Heritage Committee inscribed Glacier National Park in the United States and Waterton Lakes National Park in Alberta, Canada as one World Heritage Site in 1995. UNESCO, World Heritage Comm., *Report: Convention Concerning the Protection of the World Cultural and Natural Heritage*, at VIII(A.1), U.N. Doc. WHC-95/CONF.203/16 (Jan. 31, 1996), *available at* <http://whc.unesco.org/archive/repcom95.htm#354> [hereinafter UNESCO, World Heritage Comm.]. For purposes of this Article, “Waterton-Glacier” is used to refer to the World Heritage site in its entirety, particularly in describing the threats to the World Heritage site; otherwise, the Article refers simply to Glacier National Park, which is where the glaciers are located.

³¹ See, e.g., Neal A. Kemkar, Note, Environmental Peacemaking: Ending Conflict Between India and Pakistan on the Siachen Glacier Through the Creation of a Transboundary Peace Park, 25 STAN. ENVTL. L.J. 67, 99 (2006) (discussing the symbolic value of international peace parks).

³² See World Heritage Ctr., *Brief History*, <http://whc.unesco.org/en/169> (last visited Jan. 27, 2008).

protect the temples, resulting in their dismantling and relocation.³³ The campaign to save the temples comprised the efforts of at least fifty countries, which, along with efforts to protect a number of other significant areas, propelled UNESCO to begin negotiations on an international agreement to protect cultural and natural areas of special significance to humankind.³⁴ The General Assembly of UNESCO adopted the WHC on November 16, 1972.³⁵

As part of the internationally cooperative spirit underlying the negotiations, the State Parties agreed to do all they can to protect and preserve World Heritage sites, including agreeing not to take deliberate measures that directly or indirectly damage world heritage.³⁶ From these commitments arise obligations to reduce—or at least halt the increase of—greenhouse gas emissions in light of the toll global warming is taking on protected World Heritage areas.³⁷ Given these obligations, the WHC provides an international forum beyond the UNFCCC and the Kyoto Protocol that could meaningfully address both climate change mitigation and adaptation—especially given the role that the United States has in fomenting global warming, its failure to commit to binding GHG reduction targets, and the effects that such warming is having on iconic, nationally protected natural areas like Glacier National Park. This is particularly true because the WHC is one of the few multilateral environmental agreements allowing direct citizen participation through a petition process.³⁸

Part II of this Article provides an overview of the WHC, examines, in basic terms, the current climate change threats to Waterton-Glacier International Peace Park, and describes the history of petitions to list various World Heritage sites as “in danger” due to climate change. Part III

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.* The United States was the first country to ratify the treaty. *See* SANDS, *supra* note 3, at 74–75 (noting President Nixon’s proposal in 1972 that “[i]t would be fitting . . . for the nations of the world to agree to the principle that there are certain areas of such unique worldwide value that they should be treated as part of the heritage of all mankind and accorded special recognition as part of a World Heritage Trust”).

³⁶ *See generally* World Heritage Convention, *supra* note 29, arts. 4–6 (detailing member duties, rights and obligations).

³⁷ *Id.*

³⁸ Other notable exceptions include: the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, arts. 1–3, June 25, 1998, 38 I.L.M. 517 [hereinafter Aarhus Convention]; the North American Agreement on Environmental Cooperation, art. 1, Sept. 8–14, 1993, 32 I.L.M. 1480 [hereinafter NAAEC]; and the Dominican Republic-Central American-United States Free Trade Agreement, ch. 18, Jan. 28, 2004, 43 I.L.M. 514 [hereinafter CAFTA-DR]. On citizen submissions under the Aarhus Convention, see Svitlana Kravchenko, *The Aarhus Convention and Innovations in Compliance with Multilateral Environmental Agreements*, 18 COLO. J. OF INTL. L. & POL’Y 1, 6–9 (2007). For a review of the citizen submission process created by the NAAEC, see Chris Wold et al., *The Inadequacy of the Citizen Submission Process of Articles 14 & 15 of the North American Agreement on Environmental Cooperation*, 26 LOY. L.A. INT’L & COMP. L. REV. 415, 418–21 (2004). For a critique of the CAFTA-DR citizen submission process, see Bradley N. Lewis, *Biting without Teeth: The Citizen Submission Process and Environmental Protection*, 155 U. PA. L. REV. 1229, 1260–63 (2007).

considers the nature of the core obligations of the WHC, concluding that they require an aggressive climate-change mitigation strategy that includes commitments to make deep-cuts in greenhouse gas emissions. Part IV describes the World Heritage Committee's³⁹ current efforts to adopt a climate change policy, and counters U.S. arguments that State Party consent is necessary for "in danger" listing and that the WHC in its implementing rules does not allow citizen submissions. Part V concludes that because climate change is threatening world heritage, State Parties are obligated to take mitigation action pursuant to the substantive provisions and the spirit of the WHC but that to date, with the United States as a key member, the World Heritage Committee has failed to adequately initiate such action.

II. THE "INCONVENIENT TRUTH": THE WORLD HERITAGE CONVENTION, GLACIER NATIONAL PARK, AND CLIMATE CHANGE

On the one hand, as Al Gore indicated in his landmark film "An Inconvenient Truth," the United States, however emphatically its policies attempt to deny it, is faced with the reality of global warming.⁴⁰ On the other hand, concerned citizens are faced with the reality that the United States has thus far steadfastly refused to engage in the international community's effort to implement a legally binding regime of greenhouse gas emission reductions. The conflation of these two realities forces another: if the United States, with the Bush Administration at the helm, is ever going to limit its greenhouse gas emissions through a binding, aggressive national policy, it will be by force only and it will not occur under the auspices of the UNFCCC or Kyoto Protocol. These realities led environmentalists and conservationists to consider alternative mechanisms to force international dialogue on climate change—a dialogue that would necessarily involve the United States. The WHC provides the opportunity to discuss both the effects and solutions related to climate change. The following section provides an overview of the WHC, details the devastation climate change is wreaking in Glacier National Park, and describes the process citizens engaged in to force a climate change dialogue under the auspices of the WHC.

A. Overview of the World Heritage Convention

The General Assembly of UNESCO adopted the WHC at its seventeenth session on November 16, 1972.⁴¹ As of April 28, 2006, 184 countries have ratified the WHC, making it one of the most widely adopted international

³⁹ The World Heritage Committee implements the World Heritage Convention. It consists of representatives from 21 State Parties, which are elected for terms of up to six years by the General Assembly of the WHC. For further discussion of the World Heritage Committee, see World Heritage Ctr., The World Heritage Comm., <http://whc.unesco.org/en/committee/> (last visited Jan. 27, 2008).

⁴⁰ AN INCONVENIENT TRUTH (Paramount Pictures 2006).

⁴¹ See World Heritage Ctr.-Brief History, <http://whc.unesco.org/en/169/> (last visited Jan. 27, 2008) (detailing history of the World Heritage Convention).

agreements.⁴² The WHC's history reflects the global community's growing understanding that conservation of culture and nature requires international cooperation and commitments.⁴³ As René Maheu, Director General of UNESCO during the WHC negotiations, stated in an address to the drafters of the Convention, "[Member States] should be responsible not only for combating deterioration and damage to the cultural and natural heritage, but also for investigating their causes in order that the evil may be attacked at its root."⁴⁴ As of October 2007, the State Parties have inscribed 851 sites to the list, including 660 cultural sites, 166 natural areas, and 25 mixed cultural and natural properties in 141 countries.⁴⁵

The "World Heritage List" is the primary focus of the WHC. Article 11 of the Convention provides that the World Heritage Committee must compose a list of World Heritage sites based on inventories of world heritage submitted by State Parties.⁴⁶ The List serves as a locus for the World Heritage Committee's energies, fund distribution, and international protection.⁴⁷ "Outstanding universal value" is the foundational criterion for listing a site as World Heritage under the Convention, and a property may be of "outstanding universal value" based on either its cultural or natural values.⁴⁸

The WHC recognizes that the "deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all nations of the world . . . [they] therefore need to be preserved as part of the world heritage of mankind as a whole."⁴⁹ The provisions of the treaty implement the principle that international cooperation is essential to protect world heritage, but they also explicitly respect national sovereignty.

Article 4 of the Convention defines the obligations of State Parties respecting World Heritage sites within their territories. It states that

[E]ach State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future

⁴² See World Heritage Ctr., States Parties: Ratification Status, <http://whc.unesco.org/en/statesparties/> (last visited Jan. 27, 2008).

⁴³ The decision to build the Aswan Dam first sparked international interest in safeguarding cultural monuments. World Heritage Ctr., *supra* note 41, <http://whc.unesco.org/en/169/> (last visited Jan. 27, 2008). The dam was to flood the valley containing the Abu Simbel temples. *Id.* Subsequent to an appeal from Egypt and Sudan, UNESCO campaigned to safeguard the temples. *Id.* Its success led to other campaigns, and soon the idea for a Convention to protect cultural heritage arose. *Id.* A few years later, the United States began work to include natural heritage. See World Heritage Ctr., *supra* note 42.

⁴⁴ René Maheu, Director-General, UNESCO, Address to the Special Committee of Governmental Experts to Prepare a Draft Convention (Apr. 4, 1972), *available at* <http://whc.unesco.org/archive/1972/dg-72-4e.pdf>.

⁴⁵ See World Heritage Ctr., World Heritage List, <http://whc.unesco.org/en/list/> (last visited Jan. 27, 2008).

⁴⁶ World Heritage Convention, *supra* note 29, art. 11.

⁴⁷ See World Heritage Ctr., Global Strategy, <http://whc.unesco.org/en/globalstrategy> (last visited Jan. 27, 2008).

⁴⁸ World Heritage Convention, *supra* note 29, arts. 1, 2, 11.

⁴⁹ *Id.* pmbl.

generations of the cultural and natural heritage . . . situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources⁵⁰

Thus, State Parties accept the responsibility to expend resources and take all necessary actions possible to preserve World Heritage sites for future generations. To fulfill this obligation, Article 5, among other things, requires that State Parties endeavor to implement operating methods that “will make the State capable of counteracting the dangers that threaten its cultural or natural heritage”⁵¹ and to “take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage.”⁵²

While each State Party is first and foremost the protector of World Heritage sites situated in its territory, the Convention, as stated in its Preamble, recognizes that national effort alone is often insufficient to address the threats facing world heritage.⁵³ Article 6 provides that State Parties recognize “that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate.”⁵⁴ State Parties agree “to give their help in the identification, protection, conservation and presentation of the cultural and natural heritage . . . if the States on whose territory it is situated so request.”⁵⁵ Finally, “[e]ach State Party . . . undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage . . . situated on the territory of other States Parties to this Convention.”⁵⁶ Together, these provisions represent the responsibility to cooperate in global efforts to protect world heritage and to ensure that actions taken within a national territory do not cause damage or deterioration of the world heritage situated in any other national territory.

As a framework for implementing these obligations, the treaty employs a three-tiered protection strategy. The first level is the listing of sites approved as “world heritage.”⁵⁷ This listing implicates the aforementioned provisions, which provide for the protection of World Heritage sites. The second level is possible inclusion on the “List of World Heritage in Danger” if “major operations are necessary and for which assistance has been requested.”⁵⁸ The third level consists of the funding provisions of the WHC. The fund receives money based on a percentage of each State Party’s annual

⁵⁰ *Id.* art. 4.

⁵¹ *Id.* art. 5(c). Article 5 also suggests that State Parties endeavor to develop comprehensive planning and protection programs, train and educate protected-area staff, scientists, and community members, and undertake scientific and technical studies and research. *Id.* art. 5.

⁵² *Id.* art. 5(d).

⁵³ *Id.* pmb1.

⁵⁴ *Id.* art. 6(1).

⁵⁵ *Id.* art. 6(2).

⁵⁶ *Id.* art. 6(3).

⁵⁷ Article 3 states that “[i]t is for each State Party to this Convention to identify and delineate the different properties situated on its territory.” *Id.* art. 3.

⁵⁸ *Id.* art. 11(4).

UNESCO dues as well as voluntary contributions from both public and private sources.⁵⁹ Money from the fund may be used for emergency assistance, training of staff and specialists, and technical cooperation, including the provision of experts, equipment, and studies.⁶⁰

The “List of World Heritage in Danger” (the “in danger” list) is a crucial operational element of the WHC because it highlights those World Heritage sites that warrant heightened international and national protective efforts. The “in danger” list includes only those sites that are “threatened by serious and specific dangers.”⁶¹ The *Operational Guidelines* identify two broad categories of danger that warrant listing a site as “in danger”: ascertained and potential dangers.⁶² The ascertained dangers for sites of natural heritage include declines in populations of endangered or threatened species, severe deterioration of the natural beauty or scientific value of the site, and human encroachment.⁶³ The potential dangers are those that could have deleterious effects on the sites’ inherent characteristics, including modifications in legal status of the property, settlement or development projects, armed conflict, and inadequate or not fully implemented management plans.⁶⁴ In addition, the *Operational Guidelines* state that the World Heritage Committee must also consider as a prerequisite to an in-danger listing whether the threats facing the site are amenable to correction by human action.⁶⁵

When a site is considered for listing as “in danger,” the World Heritage Committee, in consultation with the State Party concerned, if possible, develops a program of corrective measures to address the potential and ascertained dangers facing the property.⁶⁶ The Secretariat is charged with ascertaining the current state of the property as well as the dangers threatening deterioration of the site and the feasibility of undertaking corrective measures.⁶⁷ To the extent possible the Secretariat undertakes this work in consultation with the State Party concerned.⁶⁸ Finally, if further investigation is necessary, the Committee may engage a mission of qualified observers to visit the site and evaluate the nature and extent of the dangers

⁵⁹ See *id.* art. 15–16; DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1040 (2d ed. 2002).

⁶⁰ World Heritage Convention, *supra* note 29, art. 22.

⁶¹ *Id.* art. 11(4).

⁶² UNESCO, Intergovernmental Comm. for the Prot. of the World Cultural and Natural Heritage, *Operational Guidelines for the Implementation of the World Heritage Convention*, ¶¶ 177–82, U.N. Doc. WHC. Doc. 05/2 (Feb. 2, 2005), available at <http://whc.unesco.org/archive/opguide05-en.pdf> [hereinafter UNESCO, *Operational Guidelines*].

⁶³ *Id.* ¶ 179.

⁶⁴ *Id.* at 48–49.

⁶⁵ *Id.* at 49.

⁶⁶ *Id.* at 50.

⁶⁷ *Id.* The Director-General of UNESCO appoints the Secretariat and, among other things, the Secretariat organizes the meetings of the General Assembly and may be engaged as the State Parties and World Heritage Committee see fit. UNESCO, General Assembly of States Parties to the Convention Concerning the Protection of the World Cultural and Natural Heritage, *Rules of Procedure*, R. 15, <http://whc.unesco.org/en/garules/> (last visited Jan. 27, 2008).

⁶⁸ UNESCO, *Operational Guidelines*, *supra* note 62, at 50.

threatening the property.⁶⁹ These experts may then propose possible protective measures to the Committee.⁷⁰ If the Committee then decides to list a site as “in danger,” it will define a program of corrective measures and suggest that the State Party in which the site is found undertake immediate implementation.⁷¹

B. Climate Change: A Serious and Specific Danger to Glacier National Park

Climate change poses a number of serious dangers to the characteristics that generated the World Heritage listing of Glacier National Park.⁷² Indeed, the Canadian and U.S. management authorities note in their

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² Article 2 of the Convention describes the inscription criteria for natural heritage sites:

[N]atural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;

geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

World Heritage Convention, *supra* note 29, at 2. The World Heritage Committee designated Waterton-Glacier International Peace Park as a World Heritage Site based on two of the more detailed criteria of the Operational Guidelines that interpret the Convention’s criteria. First, the Committee found Waterton-Glacier to “contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.” UNESCO, *Operational Guidelines*, *supra* note 62, at 20 (These criteria were formerly presented as two separate sets of criteria: criteria (i)-(vi) for cultural heritage and (i)-(iv) for natural heritage. The 6th extraordinary session of the World Heritage Committee decided to merge the ten criteria. UNESCO, World Heritage Comm., Convention Concerning the Protection of the World Cultural and Natural Heritage, *Decisions Adopted by the World Heritage Committee at its 6th Extraordinary Session*, at 7, U.N. Doc. WHC-03/6 EXT.COM/8 (May 27, 2003). The criteria on which Waterton-Glacier World Heritage Site was listed are now vii (formerly natural heritage iii) and ix (formerly natural heritage ii)). Second, the Committee found the two parks to “be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.” UNESCO, *Operational Guidelines*, *supra* note 62, at 20.

The World Heritage Committee identified six specific characteristics of Waterton-Glacier in deciding to include the park in the World Heritage List:

1. Waterton-Glacier exists at a climatological crossroads where Pacific weather systems mingle with warm air masses from the south and east and cold weather from the north.
2. Waterton-Glacier contains adjacent mountain and prairie ecosystems.
3. Waterton-Glacier has tremendous scenic and aesthetic value.
4. The waters of Waterton-Glacier flow into watersheds linked to the Pacific, Atlantic, and Arctic ocean systems.

2004 *Report on the State of Conservation of Waterton-Glacier International Peace Park* for the World Heritage Committee that climate change is damaging aspects of the Park that make it worthy of its World Heritage designation. The report states:

Climate change has and will continue to have important impacts to the International Peace Park [sic] natural resources. Scientific data collected in Glacier indicates that park glaciers have shrunk dramatically over the past century; that the park's tree line is creeping higher in elevation; that the alpine tundra zone is shrinking, and that subalpine meadows are filling in with tree species. The ecological significance of losing the park's glaciers is likely affecting stream baseflow in late summer and increasing water temperatures thus influencing the distribution and behavior of aquatic organisms and food webs.⁷³

As the report indicates, climate change threatens the unique climate system of Waterton-Glacier. Data from Glacier National Park indicate that the local summer mean temperature increased 1.66 degrees Celsius between 1910 and 1980.⁷⁴ In addition, since 1900, precipitation levels in the region around Glacier National Park have decreased by as much as twenty percent.⁷⁵ These changes in Waterton-Glacier's climate drive other changes occurring in the Park, such as glacial melt, changes in hydrological systems, and species migration.

1. *Glacial Retreat*

Waterton-Glacier's receding glaciers provide tangible evidence that current climate-change patterns harm its natural features. Glacial retreat in Glacier National Park, where all of Waterton-Glacier's glaciers exist, is

5. Waterton-Glacier is physiographically significant because it contains examples of Precambrian rock formations.

6. The status of Waterton-Glacier as the first International Peace Park is culturally significant because the designation not only "promote[s] peace and goodwill between nations, but also underscore[s] the international nature of wilderness and the co-operation required in its protection."

Parks Canada: Canada World Heritage Sites, http://www.pc.gc.ca/progs/spm-whs/itm2-/site11_E.asp (last visited Jan. 27, 2008). "It was the Rotary Clubs of Alberta and Montana that proposed, in 1931, uniting Waterton Lakes National Park in Alberta and Glacier National Park in Montana as the Waterton-Glacier International Peace Park, the first such park in the world." *Id.* See also UNESCO, World Heritage Comm., *supra* note 30, at 37 (generally describing six characteristics).

⁷³ U.S. DEPT OF THE INTERIOR AND PARKS CANADA, PERIODIC REPORT ON THE APPLICATION OF THE WORLD HERITAGE CONVENTION, REPORT ON THE STATE OF CONSERVATION OF WATERTON-GLACIER INTERNATIONAL PEACE PARK 17 (1995), available at http://www.nps.gov/oia/topics/Waterton_Glacier.pdf.

⁷⁴ Myrna H.P. Hall & Daniel B. Fagre, *Modeled Climate-Induced Glacier Change in Glacier National Park, 1850-2100*, 53 BIOSCIENCE 131, 131 (2003).

⁷⁵ EPA, CLIMATE CHANGE AND MONTANA 2 (1997), available at [http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BUTHT/\\$File/mt_impct.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BUTHT/$File/mt_impct.pdf).

occurring particularly rapidly and is scientifically linked to climate change.⁷⁶ Compared to many of the world's glaciers, Glacier National Park's glaciers are small and therefore have responded relatively quickly to climate change.⁷⁷ As of 2005, there were only twenty-seven glaciers remaining in Glacier National Park,⁷⁸ less than one-fifth of the approximately 150 glaciers that existed within the current Park's boundaries in 1850.⁷⁹ Since 1850, the area covered by glaciers in the Park decreased by seventy-three percent.⁸⁰ As U.S. Secretary of the Interior Bruce Babbitt observed in 1998, "[i]t's increasingly hard to understand why it's called Glacier National Park, because the glaciers are getting hard to find."⁸¹ Indeed, projections indicate that if present warming rates continue, all of the Park's glaciers will disappear by 2030.⁸²

Climate change is responsible for the disappearance of the Park's glaciers. Climate change has led to global temperature increases, which have hastened glacial retreat at a pace unparalleled during past warming trends.⁸³ Glaciers are "excellent barometers of climate change, because they respond directly to trends in temperature, precipitation, and cloud cover."⁸⁴ Scientists are able to trace the drastic glacial retreat in Glacier National Park to climate change both because few other anthropogenic forces exist locally that could influence climate patterns and because ample past data is available for comparison with current data.⁸⁵ As Dr. Daniel Fagre, the Global Change Research Coordinator at the U.S. Geological Survey Research Center in Glacier National Park made clear, "Losing the glaciers in Glacier National Park is a supreme irony, one that should tell us that global warming is real."⁸⁶

2. Potential Effects on the Hydrological System

Glacial retreat is not only in and of itself an adverse impact of climate change, but it is also a signal of other less obvious climate change effects,

⁷⁶ U.S. NAT'L PARK SERV., GLACIER NATIONAL PARK, ENVIRONMENTAL MANAGEMENT PLAN 6 (2006), available at <http://www.nps.gov/climatefriendlyparks/downloads/Action%20Plans%20and%20Inventories/Glacier%20Action%20Plan.pdf>.

⁷⁷ U.S. Geological Survey, Northern Rocky Mountain Science Ctr., *Crown of the Continent Ecosystem*, <http://www.nrmssc.usgs.gov/research/ecosystem.htm> (last visited Jan. 27, 2008).

⁷⁸ U.S. Nat'l Parks Serv., *Geology*, <http://www.nps.gov/glac/resources/geology.htm> (last visited Jan. 27, 2008).

⁷⁹ U.S. NAT'L PARK SERV., *supra* note 76, at 6.

⁸⁰ *Id.*

⁸¹ EPA, CLIMATE CHANGE, WILDLIFE, AND WILDLANDS: CASE STUDY 2 (2001) (quoting Bruce Babbitt, U.S. Secretary of the Interior, Keynote Address at the Wildlife Conference), available at [http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BPQ3X/\\$File/CS_wmtn.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BPQ3X/$File/CS_wmtn.pdf).

⁸² Hall & Fagre, *supra* note 74, at 137; U.S. NAT'L PARK SERV., *supra* note 76, at 6.

⁸³ See Andrew C. Revkin, *No Escape: Thaw Gains Momentum*, N.Y. TIMES, Oct. 25, 2005, at F1 (reporting that extracted cores of Arctic glaciers demonstrate that the warming of the last decade is different than past warm periods).

⁸⁴ Hall & Fagre, *supra* note 74, at 131.

⁸⁵ *Id.* at 132.

⁸⁶ Tom Yulsman, *Meltdown*, AUDUBON MAG., Dec. 2003, at 40.

such as alterations in the hydrological systems of Waterton-Glacier.⁸⁷ For example, glacial melt induced by climate change alters streamflows. The IPCC explains that a glacier in equilibrium releases the same amount of water through summer melt as it accumulates through winter precipitation; in contrast, a glacier in retreat releases more summer melt than it accumulates through winter precipitation.⁸⁸ Thus, flows initially increase in rivers and streams fed by spring and summer glacier melt due to global warming and increased melt. As a glacier shrinks, however, summer flows decline because of decreases in glacial melt.⁸⁹ The period of increased flows varies with glacier size and the rate of melt.⁹⁰ Smaller glaciers like those in Waterton-Glacier have a shorter period of increased flows.⁹¹ Thus, summer flows in Waterton-Glacier will decrease more quickly because of its small glaciers.

Snow and snowmelt, including glacial melt, influence many hydrological and ecosystem processes in Waterton-Glacier. Seventy percent of annual precipitation in the park falls as snow at high elevations,⁹² feeding the snowpack and glaciers that, in turn, melt into Waterton-Glacier's many streams and rivers that flow into three separate drainage systems, each of which empties into a different ocean.⁹³ The World Heritage Committee designated Waterton-Glacier International Peace Park as a World Heritage Site, in part, because of this tri-ocean hydrological divide.⁹⁴ However, the stability and unique drainage features of Waterton-Glacier World Heritage Site are at risk because of a "trend toward later maximum snowpack accumulation . . . [and] earlier snowmelt, potentially creating more intense spring run-off and flooding."⁹⁵ U.S. Geological Survey scientists have recently reestablished a stream flow monitoring station specifically to help measure the effects of glacial recession at the creek flowing out of one of Glacier National Park's better known glaciers, Grinnell Glacier.⁹⁶

⁸⁷ See Hall & Fagre, *supra* note 74, at 131 ("[T]he most significant aspect of glacial retreat may be that it is tangible and intuitive evidence of broader environmental changes that are more difficult to measure.").

⁸⁸ WORKING GROUP II TO THE THIRD ASSESSMENT REPORT, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION AND VULNERABILITY 209 (2001), available at http://www.grida.no/climate/ipcc_tar/wg2/pdf/wg2TARchap4.pdf.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² Daniel J. Selkowitz et al., *Interannual Variations in Snowpack in the Crown of the Continent Ecosystem*, 16 HYDROLOGICAL PROCESSES 3651, 3653 (2002).

⁹³ UNEP-World Conservation Monitoring Ctr., *Protected Areas and World Heritage: Waterton Lakes National Park*, <http://www.unep-wcmc.org/sites/wh/waterton.html> (last visited Jan. 27, 2008). The waters in the park flow ultimately to either the Pacific Ocean, the Arctic Ocean, or the Atlantic Ocean.

⁹⁴ DANIEL B. FAGRE, GLACIER NATIONAL PARK BIOSPHERE RESERVE: ITS SUITABILITY FOR THE MOUNTAIN RESEARCH INITIATIVE 5-6 (2003), available at http://www.nrmssc.usgs.gov/products/GCC/GLOCHAMOREProceedings_Fagre_03.pdf (prepared for Global Change Research in Mountain Biosphere Reserves Launching workshop, held in Entibuch Biosphere Reserve Nov. 10-13, 2003).

⁹⁵ *Id.* at 1.

⁹⁶ See U.S. Geological Survey, *Real-Time Data for Montana: Streamflow*,

Increased snow and glacial melt also cause fluctuations in water temperatures that destabilize aquatic ecosystems. Studies conducted in McDonald Basin in Glacier National Park indicate that several species of the temperature-sensitive caddis fly family, *Hydropsychidae*, have increasingly shifted out of their previously well-defined distribution areas, thus demonstrating that stream temperatures have begun to increase.⁹⁷ Furthermore, the U.S. Geological Survey designed a computer-modeling program that has predicted, based on the slight temperature increase that has occurred thus far, even more significant changes in Glacier National Park's natural water cycles.⁹⁸ As the National Park Conservation Association's *Waterton Glacier International Peace Park Resource Assessment* warns: "The greatest future threat to the park's aquatic resources may arise from alterations associated with global climate change."⁹⁹ Although the climate-change effects on the hydrological systems of Waterton-Glacier are not as obvious as the impacts on the glaciers themselves, changes are occurring and will only accelerate with continued global climate change.

3. Vulnerable Biodiversity

Climate change presently harms—and will continue to harm—the remarkably rich species diversity of Waterton-Glacier by driving species out of their historical geographical ranges and even eliminating some species from the Park entirely. Species diversity in Waterton-Glacier is especially vulnerable to climate change because many of the Park's species depend on the particular climatic balance in the park and cannot adapt to even minor changes in climate.¹⁰⁰ Consequently, populations of these species will not successfully make range adjustments and will, instead, fragment and perish.¹⁰¹

Waterton-Glacier currently boasts vast biological diversity. The World Conservation Union (IUCN), in its evaluation advocating the listing of Waterton-Glacier International Peace Park as a World Heritage site, emphasized that even though Waterton-Glacier is only one-fifth the size of the Canadian Rockies World Heritage site, it has an equivalent number of

http://waterdata.usgs.gov/mt/nwis/uv/?site_no=05013900&PARAMeter_cd=00060,00065,00010 (last visited Jan. 27, 2008) (showing real-time data for streamflow near Grinnell Glacier).

⁹⁷ Daniel B. Fagre et al., *Watershed Responses to Climate Change at Glacier National Park*, 33 J. AM. WATER RESOURCES ASS'N 755, 764 (1997).

⁹⁸ See *id.*

⁹⁹ NAT'L PARKS CONSERVATION ASS'N, STATE OF THE PARKS: A RESOURCE ASSESSMENT, WATERTON-GLACIER INTERNATIONAL PEACE PARK 15 (2002), available at <http://www.npca.org/stateoftheparks/glacier/glacier.pdf>.

¹⁰⁰ See U.S. Geological Survey, *supra* note 77 (explaining that in Glacier National Park, "many species exist at the limits of their biogeographic ranges. Some of these sensitive species will directly respond to minor climatological changes; others will respond to climate-induced habitat changes. The effects will be evident . . . in range shifts detected first as local extinctions, and ultimately as invasions by new species").

¹⁰¹ *Id.*

vascular plant species.¹⁰² Two major continental biomes and five major floristic provinces converge within Glacier National Park's boundaries.¹⁰³ Of the more than 1400 plant species in Glacier National Park, twenty-eight do not grow anywhere else in the state of Montana.¹⁰⁴

The IUCN indicates that "any global warming will have major impact on mountain flora and fauna" and explains that increasing temperatures force species already confined to narrow vegetation zones at high altitudes to migrate to more compact and higher elevation areas.¹⁰⁵ The loss of mountain-dwelling plant species poses a serious concern since mountain ecosystems are both home to extensive biodiversity and highly vulnerable to adverse impacts of human activities.¹⁰⁶ In fact, mountain ecosystems contain half of the world's twenty-four designated biodiversity "hot spots," areas that are particularly rich in endemic plant species diversity but are also seriously threatened with plant habitat loss.¹⁰⁷ As a pristine mountain protected area, Waterton-Glacier is highly sensitive to species loss caused by climate change.

Climate change jeopardizes Waterton-Glacier's species diversity because it forces species to adjust their geographical range, which may force many species outside the protective boundaries of the park.¹⁰⁸ An increase in

¹⁰² See IUCN, WORLD HERITAGE NOMINATION—IUCN TECHNICAL EVALUATION: GLACIER AND WATERTON LAKES NATIONAL PARKS (USA–CANADA), § 2, ¶ 13 (1995) (based on the 1993 and 1994 nominations submitted by the U.S. government and Canada). See also IUCN & WORLD CONSERVATION MONITORING CTR., WORLD HERITAGE NOMINATION—IUCN SUMMARY: GLACIER AND WATERTON LAKES NATIONAL PARKS (USA – CANADA), § 3, ¶ 2 (1995) ("Five large ecoregions are found within the Waterton Glacier complex: Alpine Tundra, Subalpine Forest, Montane Forest, Aspen Parkland, and Fescue Grassland. A number of vegetation types have been identified for this area which are undescribed elsewhere: these include extensive Fir Whitebark forests, large areas of Limber Pine scrub, and 'intermediate' alpine meadow associations. In all, some 1258 vascular plant species and 275 lichens have been identified from Glacier, including 18 which are found only in the park and its immediate environs. Six vascular plant species found in Waterton Lakes are classified as rare in Canada. Sixty mammal species have been recorded for the two parks, including a population of over 200 grizzly bear and more than twice as many black bear.").

¹⁰³ See U.S. Geological Survey, *supra* note 77 ("Given the physical diversity of Glacier National Park, it is not surprising that tremendous biological diversity exists there as well. Glacier encompasses an interface of 2 major continental biomes and 5 major floristic provinces, ranging from the mesic boreal forest and alpine tundra to semi-arid grassland. Numerous plant communities and over 1,000 plant species, reflect the unique convergence of these provinces. The faunal diversity reflects that of the floral diversity.").

¹⁰⁴ EPA, *supra* note 75.

¹⁰⁵ See IUCN, *Mountains—Key Issues*, <http://www.iucn.org/themes/wcpa/biome/mountain/issue.htm> (last visited Jan. 27, 2008).

¹⁰⁶ ERICA THORSON ET AL., INT'L ENVTL. LAW PROJECT, PETITION TO THE WORLD HERITAGE COMMITTEE REQUESTING INCLUSION OF WATERTON-GLACIER INTERNATIONAL PEACE PARK ON THE LIST OF WORLD HERITAGE IN DANGER AS A RESULT OF CLIMATE CHANGE AND FOR PROTECTIVE MEASURES AND ACTIONS, at 13 (2006), available at <http://law.lclark.edu/org/ielp/objects/Waterton-GlacierPetition2.15.06.pdf> [hereinafter PETITION].

¹⁰⁷ IUCN, *supra* note 105. Hotspots by definition contain at least 1500 species of vascular endemic plants that have lost a minimum of 70% of their original habitat. Conservation Int'l, *Hotspots Defined*, http://www.biodiversityhotspots.org/xp/Hotspots/hotspotsScience/pages/hotspots_defined.aspx (last visited Jan. 27, 2008).

¹⁰⁸ See, e.g., EPA, *supra* note 75, at 4. ("Six rare alpine plants that are at the southern border

global temperatures of one degree Celsius causes a shift in temperature zones of approximately 160 kilometers (100 miles).¹⁰⁹ A temperature increase of three degrees Celsius will thus drive Waterton-Glacier's plant and animal species as many as 500 kilometers (300 miles) north or 500 meters (1600 feet) upwards in elevation.¹¹⁰

Plant species are already on the move in Glacier National Park. Repeat photography in the Park visually documents changes in the alpine areas, and digital aerial photography has documented the expansion in area, and increase in biomass, of the alpine treeline area.¹¹¹ As one researcher reports, "[a]lpine treelines have advanced upward in elevation . . . [and] have increased in biomass."¹¹² With increasing temperatures, species may quickly move outside the protective limits of the relatively small Waterton-Glacier World Heritage Site protected area. The IUCN evaluation of Waterton-Glacier submitted to UNESCO to advocate for the listing of the park as a World Heritage Site acknowledged this issue, stating: "One expert reviewer has compared the data on fauna and concluded that the main concern was the ecological integrity and population viability of [Waterton-Glacier World Heritage Site] the size of which is a limiting factor."¹¹³ Waterton-Glacier's small size makes the Park proportionately rich in plant species but also especially vulnerable to species loss.

Additionally, because many of the species in Waterton-Glacier lack the ability to adapt, climate change will likely cause regional extinctions.¹¹⁴ Factors such as small population size, small range, and whether a species already lives at the limit of its range weigh heavily against a species' capacity to successfully redistribute itself.¹¹⁵ These limiting factors are common among the species of Waterton-Glacier because so many of its species rely on the particular ecosystem balance in the park for their survival.¹¹⁶ As the 1994 nomination of Waterton-Glacier International Peace Park summarized, "[t]he presence of disjunct and endemic species in a site of environmental complexity and geographic discontinuity renders Waterton Glacier International Peace Park highly significant as a centre of genetic diversity and ecological community development, especially in the context of global climate change."¹¹⁷ Climate change thus results in cascading negative effects on the park's many prized features, beginning with increasing temperatures and melting glaciers that make stream flows and temperatures volatile, driving species out of their ranges.

of their geographic range would be especially vulnerable to climate change.").

¹⁰⁹ Karen J. Schmidt, Glacier National Park Biodiversity: Global Climate Change, <http://www.nps.gov/glac/resources/bio7.htm> (last visited Jan. 27, 2008).

¹¹⁰ *Id.*

¹¹¹ FAGRE, *supra* note 94, at 7.

¹¹² Selkowitz et al., *supra* note 92, at 3651.

¹¹³ IUCN, *supra* note 102, at §2, ¶ 7.

¹¹⁴ U.S. Geological Survey, *supra* note 77.

¹¹⁵ Schmidt, *supra* note 109.

¹¹⁶ *Id.*

¹¹⁷ IUCN, UNITED STATES AND CANADA, WORLD HERITAGE LIST NOMINATION: WATERTON GLACIER INTERNATIONAL PEACE PARK, 50 (1994).

C. Petitioning for "In Danger" Listings due to Climate Change

Due to the dramatic climate change effects occurring in Glacier National Park, a group of non-governmental organizations (NGOs) from the United States and Canada petitioned to add the Waterton-Glacier International Peace Park to the "List of World Heritage in Danger" (the "in danger" list) on February 16, 2007.¹¹⁸ This Petition followed on the heels of four other Petitions to list certain World Heritage sites on the "in danger" list because of the deterioration these sites have endured as a result of climate change.¹¹⁹ The Petitions argue that pursuant to their obligations under the WHC, State Parties must develop a mitigation strategy that prevents anthropogenic interference with the climate system sufficient to halt further deterioration of World Heritage sites threatened by climate change.¹²⁰ At the heart of the Petitions, then, is a call for all State Parties to the WHC to make drastic cuts in their greenhouse gas emissions.

The Waterton-Glacier Petition, along with the election of the United States to the World Heritage Committee, raised the stakes of the review of all of the Petitions because of the claim that the WHC requires all State Parties to reduce greenhouse gas emissions to protect World Heritage sites occurring anywhere in the world.¹²¹ The United States, of course, withdrew from the Kyoto Protocol,¹²² which would have imposed binding emission reduction obligations. Additionally, Australia has also refused to ratify the Kyoto Protocol, despite the fact that the Great Barrier Reef has suffered a series of devastating coral bleaching episodes linked to climate change.¹²³ By

¹¹⁸ PETITION, *supra* note 106, at vii.

¹¹⁹ See Climate Justice, Media/Press Releases, <http://www.climatelaw.org/media> (last visited Jan. 26, 2008) (offering links to press releases regarding the Petitions). These sites include Sagarmatha National Park in Nepal, Huascaran National Park in Peru, the Great Barrier Reef in Australia, Waterton-Glacier International Peace Park in the United States and Canada, and Belize's Barrier Reef Reserve System, which suffer from two of the most dramatic effects of climate change on natural areas—coral bleaching and glacial ice loss. *Id.* For a concise summary of the relationship between climate change and coral bleaching, see WORKING GROUP II TO THE THIRD ASSESSMENT REPORT, *supra* note 88, at 361. For a summary of the effects of climate change on glaciers and small ice caps, see *id.* at 208–09.

¹²⁰ See, e.g., PETITION, *supra* note 106, at viii.

¹²¹ See Wil Burns et al., *International Environmental Law*, 40 INT'L LAW 197, 199 (2006) (reporting that the Bush Administration continues to refuse to ratify the Kyoto Protocol, emphasizing instead voluntary approaches and funding of technology development and transfer).

¹²² Shortly before this Article went to press, Australia ratified the Kyoto Protocol, on Dec. 3, 2007.

¹²³ SYDNEY CTR. FOR INT'L & GLOBAL LAW, GLOBAL CLIMATE CHANGE & THE GREAT BARRIER REEF: AUSTRALIA'S OBLIGATIONS UNDER THE WORLD HERITAGE CONVENTION 2 (2004), *available at* http://www.law.usyd.edu.au/scigl/SCIGLFinalReport21_09_04.pdf. The United States, Australia, and other Asian countries are collaborating on climate change issues within the context of the "Asia-Pacific Partnership for Clean Development and the Climate." Burns et al., *supra* note 121. The Partnership focuses on non-binding, voluntary mechanisms, including technology development and transfer, information exchange and increasing national energy security, as means of combating long-term climate change. *Id.*; see also Press Release, The White House, Fact Sheet: The Asia-Pacific Partnership on Clean Development and Climate (Jan. 11, 2006), *available at* <http://www.whitehouse.gov/news/releases/2006/01/20060111-8.html>.

suggesting that the WHC requires a climate change mitigation strategy independent of the Kyoto Protocol, the Petitions argue that all State Parties, including the United States and Australia, may have an obligation to cut greenhouse gas emissions that exceeds their obligations under the Kyoto Protocol or, in the case of the United States and Australia, what would have been their Kyoto Protocol obligations.¹²⁴

The United States issued a policy and position paper in March 2006, one month after NGOs filed the Waterton-Glacier Petition, contending that the Petitions are “invalid” for a number of substantive and procedural reasons.¹²⁵ The primary premise of the U.S. policy paper holds that the root cause of climate change is not necessarily anthropogenic. The United States asserts that “[c]limate change is as old as the earth itself” and that “there is not enough data available to distinguish whether climatic changes at the named world heritage sites are the result of human-induced climate change or natural variability.”¹²⁶ United States policy on climate change undoubtedly muscled the decision of the World Heritage Committee because its most recent stance on climate change is commensurate with the U.S. policy to oppose binding greenhouse gas emission reductions.¹²⁷ In fact, the World Heritage Committee has failed to endorse a mitigation strategy that adequately implements the State Parties’ WHC obligations.¹²⁸

¹²⁴ See PETITION, *supra* note 106, at 17–18.

¹²⁵ UNITED STATES, POSITION OF THE UNITED STATE [SIC] OF AMERICA ON CLIMATE CHANGE WITH RESPECT TO THE WORLD HERITAGE CONVENTION AND WORLD HERITAGE SITES, *available at* <http://www.elaw.org/assets/word/u.s.climate.US%20position%20paper.doc> [hereinafter U.S. Position Paper].

¹²⁶ *Id.* at 4–5. This sentiment echoes that of President Bush. See Remarks on Global Climate Change, 37 WKLY. COMP. PRESIDENTIAL DOC. 876, 877 (2001) (“[W]e do not know how much effect natural fluctuations in climate may have had on warming. We do not know how much our climate could or will change in the future. We do not know how fast change will occur or even how some of our actions could impact it. . . . And finally, no one can say with any certainty what constitutes a dangerous level of warming and, therefore, what level must be avoided.”).

¹²⁷ See *infra* Part IV.A.

¹²⁸ *Id.* That said, however, the World Heritage Centre has produced a small but growing body of work on the effects of climate change on World Heritage sites. See AUGUSTIN COLETTE, UNESCO WORLD HERITAGE CTR., CASE STUDIES ON CLIMATE CHANGE AND WORLD HERITAGE 15 (2007), *available at* http://whc.unesco.org/documents/publi_climatechange.pdf. In addition, the World Heritage Centre has drafted a policy document on climate change that will be presented to the World Heritage Convention General Assembly meeting in the fall of 2007. In 2006, the World Heritage Committee adopted a short decision on climate change, which endorsed a report that had been commissioned that called for adaptation and site-level mitigation where possible and practicable. See UNESCO, World Heritage Comm., *Decisions adopted at the 30th Session of the World Heritage Committee*, at 7–8, WHC-06/30.COM/19 (Aug. 23, 2006), *available at* <http://whc.unesco.org/archive/2006/whc06-30com-19e.pdf#decision.7.1> [hereinafter UNESCO, *30th Session Decisions*]. In June 2007, the Committee adopted another decision calling for State Parties to “participate in the UN Climate Change conferences with a view to achieving a comprehensive post-Kyoto agreement.” UNESCO, World Heritage Comm., *Decisions Adopted at the 31st Session of the World Heritage Committee*, at 4, WHC-07/31.COM/24 (July 31, 2007), *available at* <http://whc.unesco.org/archive/2007/whc07-31com-24e.pdf>. It also recalls the need for site-level mitigation activities. See UNESCO, World Heritage Comm., *Issues Related to the State of Conservation of World Heritage Properties: The Impacts of Climate Change on World Heritage Properties*, at 4, WHC-07/31.COM/7.1 (May 23, 2007), *available at*

III. DEEP CUTS: CLIMATE CHANGE MITIGATION UNDER THE WORLD HERITAGE CONVENTION

Although the Petitioners employed the “in danger” listing process to highlight the devastating consequences of climate change and to urge immediate attention for particular areas, the language of the Convention text, which is implicated when a site is listed simply as “world heritage,” demands that State Parties engage in effective climate change mitigation even before a site is listed as “in danger.” Climate change mitigation is defined as “an anthropogenic intervention to reduce the sources of greenhouse gases or enhance their sinks.”¹²⁹ Certainly, if climate change is causing deterioration of World Heritage sites, then climate change mitigation is at least one of the “appropriate” legal, scientific, and technical undertakings that the WHC references because mitigation is necessary to prevent total deterioration of many vulnerable World Heritage sites.¹³⁰ Moreover, Article 6 requires that State Parties avoid undertakings that will damage World Heritage sites; in the context of climate change, this means that State Parties must limit their emissions of greenhouse gases.

A. The Nature and Extent of State Parties’ Obligations Under Articles 4, 5, and 6

The nature and extent of how the obligations set forth in Articles 4, 5, and 6 bind State Parties—namely, whether the operative provisions impose mere recommendations entirely left to State Party discretion to implement or whether, in a given context, like climate change, they impose substantive obligations—is a key interpretive question. Articles 4 and 5 are broad, potentially leaving much room for State Party discretion as to the exact nature of the respective responsibilities. They contain qualifying language such as “as far as possible,” employ precatory verbs such as “endeavor,” and merely require that State Parties “recognize” certain responsibilities. In fact, some would argue that the language of Articles 4 and 5 is so broad and imparts so much discretion that it eviscerates any

<http://whc.unesco.org/archive/2007/whc07-31com-71e.pdf> [hereinafter UNESCO, 2007 *State of Conservation*] (stating that “States Parties and managers of individual World Heritage properties will consider undertaking site-level monitoring [and] mitigation . . . where appropriate.”).

¹²⁹ WORKING GROUP III TO THE THIRD ASSESSMENT REPORT, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: MITIGATION 3 n.1 (2001), available at http://www.grida.no/climate/ipcc_tar/wg3/pdf/WG3_SPM.pdf; see also UNESCO, World Heritage Ctr., its Advisory Bodies, and a Broad Group of Experts to the 30th Session of the World Heritage Comm., Joint Report, Predicting and Managing the Effects of Climate Change on World Heritage, ¶ 10 (2006) (prepared by May Cassar et al.), in UNESCO, World Heritage Comm., *Issues Relating to the State of Conservation of the World Heritage Properties: The Impact of Climate Change on World Heritage Properties*, app. 4, WHC-06/30.COM/7.1 (June 26, 2006), available at <http://whc.unesco.org/archive/2006/whc06-30com-07.1e.pdf> [hereinafter UNESCO, Joint Report] (restating the definition of mitigation as “reducing the emission and enhancing the sinks of greenhouse gases”).

¹³⁰ See *supra* Part II.A.

binding obligation.¹³¹ However, the High Court of Australia and established principles of international law have defined the limits of this discretion.

1. *The Limits of Discretion Under Articles 4 and 5*

The only case to examine the nature of the obligations imposed by Articles 4 and 5 is *Commonwealth v. Tasmania*, a case of the High Court of Australia.¹³² Despite the qualifying language of Articles 4 and 5, a majority of the High Court of Australia determined that both Articles impose legally binding obligations, essentially because the qualifying language would be superfluous if, in fact, no obligation existed.¹³³ Although having found that Articles 4 and 5 of the WHC impose binding legal obligations, the Court nonetheless recognized the duties as so broadly articulated that State Parties have much latitude as to how they implement the Convention. As one judge stated in his opinion, “there may be an element of discretion and value judgment on the part of the State to decide what measures are necessary and appropriate.”¹³⁴ This discretion, however, is not without bounds. This judge further noted, “[t]here is a distinction between a discretion as to the manner of performance and discretion as to performance or non-performance.”¹³⁵

The Australian case clarifies that Articles 4 and 5 impose discretionary obligations but international law defines the nature of State Parties’

¹³¹ See *Commonwealth of Australia v. Tasmania (Tasmanian Dam Case)* (1983) 158 C.L.R. 1, para. 69 (“It is however impossible to conclude that Arts. 4 and 5 were intended to impose a legal duty . . . on the State Parties to the Convention. If the conduct which those articles purport to prescribe was intended to be legally enforceable, the obligations thereby created would be of the most onerous and far reaching kind. . . . The very nature of these obligations is such as to indicate that the States Parties to the Convention did not intend to assume a legal obligation to perform them.”); see also Michael I. Jeffery, QC, *An International Legal Regime for Protected Areas*, IUCN ENVTL. LAW & POL’Y PAPER NO. 49, 23 (John Scanlon & Françoise Burhenne-Guilmin eds., 2004) (suggesting that the phraseology is so subjective that some argue no legal obligations may exist).

¹³² *Tasmanian Dam Case*, 158 C.L.R. Although the case primarily concerned the relationship of Commonwealth and State power, the decision turned, in part, on whether the WHC imposed binding obligations and the nature of these obligations. *Id.* at 471. In the case, Tasmania challenged the Australia Commonwealth’s legislation providing for the protection of World Heritage areas. *Id.* The argument revolved around the division of powers between the Australian federal government and individual state governments, like Tasmania. See *id.* paras. 2, 25.

¹³³ *Id.* para. 31. Judge Mason’s opinion states:

Article 5 cannot be read as a mere statement of intention. It is expressed in the form of a command requiring each party to endeavour to bring about the matters dealt with in the lettered paragraphs. Indeed, there would be little point in adding the qualifications ‘in so far as possible’ and ‘as appropriate for each country’ unless the article imposed an obligation.

See also Jeffery, *supra* note 131, at 15 (“Although terminology such as ‘to the utmost of its own resources’ and ‘in so far as possible’ might be seen as adding a subjective mechanism from which States can easily escape responsibility, it still places a legal obligation on each contracting party.”).

¹³⁴ *Tasmanian Dam Case*, 158 C.L.R. at 489.

¹³⁵ *Id.* at 490.

discretion. With respect to treaty implementation, the principle of *pacta sunt servanda* guides State Party discretion.¹³⁶ This principle provides that States are bound by their international agreements and they must implement such agreements in good faith.¹³⁷ Thus, Articles 4 and 5 of the WHC impose discretionary obligations, but “good faith” is the touchstone for implementation, and the aims of the Convention—namely, the protection and conservation of world heritage—guide operationalization of State Parties’ good faith.

2. Article 6: No Deliberate Damage

Unlike Articles 4 and 5, Article 6 is not qualified with language of limitation.¹³⁸ The provisions of Article 6 are less discretionary, stating that State Parties are not to undertake deliberate measures that might damage world heritage.¹³⁹ A simple textual analysis of the plain meaning of the provision supports this interpretation. Under fundamental rules of treaty interpretation, as provided by the Vienna Convention, a treaty must “be interpreted in good faith in accordance with the ordinary meaning of the terms of the treaty in their context and in light of its object and purpose.”¹⁴⁰

¹³⁶ See I. M. SINCLAIR, *THE VIENNA CONVENTION ON THE LAW OF TREATIES* 3 (1973) (describing *pacta sunt servanda* as “the most fundamental principle of treaty law”). See generally LORD MCNAIR, *THE LAW OF TREATIES* 493–505 (1961) (explaining extensively the principle of *pacta sunt servanda*); Josef L. Kunz, *The Meaning and the Range of the Norm Pacta Sunt Servanda*, 39 AM. J. INT’L L. 180 (1945) (discussing how treaties’ force of law derives from the principle of *pacta sunt servanda*).

¹³⁷ IAN BROWNIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 620 (5th ed. 1998). The Vienna Convention on the Law of Treaties states the principle in the following manner: “Every treaty in force is binding upon the parties to it and must be performed by them in good faith.” Vienna Convention on the Law of Treaties art. 26, 1155 U.N.T.S. 331, 339, May 23, 1969 [hereinafter Vienna Convention]. The Vienna Convention entered into force in 1980, after the WHC, and therefore might not be applicable retroactively. However, much of the Vienna Convention embodies customary international law and, as such, would be applicable. See Gabčíkovo-Nagymaros Project (Hung./Slovk.), 1997 I.C.J. 4, 37 (Judgment of Sept. 25) (stating that although the Vienna Convention may not be directly applicable to an earlier international agreement, those provisions of the Vienna Convention that state customary international law are relevant). The United States has not ratified the Vienna Convention, but the State Department has stated that the Vienna Convention is evidence of the customary law on treaties. It describes the Vienna Convention as “constituting a codification of the customary international law governing international agreements, and therefore as foreign relations law of the United States even though the United States has not adhered to the convention.” SEN. EXEC. DOC. L., 92nd Cong., 1st Sess. (1971). Further, in the letter of submittal of the Vienna Convention, the Secretary of State described it to be “generally recognized as the authoritative guide to current treaty law and practice.” Maria Frankowska, *The Vienna Convention on the Law of Treaties Before United States Courts*, 28 VA. J. INT’L L. 281, 298 (1988) (quoting SECRETARY OF STATE ROGERS’ REPORT TO THE PRESIDENT, 65 DEP’T OF STATE BULLETIN 684, 685 (1971)).

¹³⁸ The Australian Court suggested that these provisions more clearly impose binding obligations on Parties to the Convention; however, the Court did not directly rule on the issue. *Tasmanian Dam Case*, 158 C.L.R. at 489–90.

¹³⁹ *Id.* at 517.

¹⁴⁰ The Vienna Convention is widely understood to codify customary international law regarding interpretation of treaties. SINCLAIR, *supra* note 136, at 153 (“There is no doubt that articles 31 to 33 of the Convention constitute a general expression of the principles of

The plain language of Article 6(3) sets forth a non-discretionary duty to forgo deliberate undertakings that may damage world heritage.

The *travaux préparatoires* (the negotiating history of the treaty) supports this plain language interpretation.¹⁴¹ Early drafts of the Convention did contain qualifying language, but the drafters pointedly excluded it from the final version of Article 6. In early drafts, Article 6(3) read: “The States Parties to this Convention undertake to respect the cultural and natural heritage enjoying international protection under this Convention by refraining so far as possible from acts which might damage them.”¹⁴² The adopted language is far less discretionary and imposes a binding, articulable legal obligation on State Parties. In fact, the drafters specifically eliminated “in so far as possible,” indicating that this provision was meant to be implemented in a less discretionary manner than Articles 4 and 5.¹⁴³ Article

customary international law relating to treaty interpretation.”); *see also* BROWNIE, *supra* note 137, at 608 (stating that “a good number” although not all, of the provisions of the Vienna Convention express general international law, and those that do not “constitute presumptive evidence of emergent rules of general international law”). Indeed, the textual approach to interpretation of treaty provisions codified in Article 31 has attained the status of customary international law. *See* Sir Gerald Fitzmaurice, *The Law and Procedure of the International Court of Justice 1951–4: Treaty Interpretations and Other Treaty Points*, 33 BRITAIN Y.B. INT’L L. 203, 204 (1957) (suggesting that the International Court of Justice favors the textual approach); *and see, e.g.*, Territorial Dispute (Libyan Arab Jamahiriya v. Chad), 1994 I.C.J. 6, 21–22 (Feb. 3) (stating that “[i]nterpretation must be based above all upon the text of the treaty.”); OPPENHEIM’S INTERNATIONAL LAW, 1271–75 (Robert Jennings & Arthur Watts eds., 9th ed. 1992) (discussing the Vienna Convention’s adoption of the textual approach as its general rule of interpretation).

¹⁴¹ The textual approach to treaty interpretation excludes resort to the negotiating history of a treaty to discern the meaning of a term. Typically, recourse to negotiating documents only occurs when, after an analysis of the plain meaning, treaty terms remain ambiguous. BROWNIE, *supra* note 137, at 635. However, the negotiating work, or the *travaux préparatoires*, may verify or confirm an interpretation emerging from a textual analysis. *Id.* Article 32 of the Vienna Convention states that:

[r]ecourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from . . . [a textual interpretation], or to determine the meaning when . . . [a textual interpretation] leaves the meaning ambiguous or obscure; or leads to a result which is manifestly absurd or unreasonable.

Vienna Convention, *supra* note 137, art. 32.

¹⁴² UNESCO, Draft Convention Concerning the Protection of Cultural and Natural World Heritage, U.N. Doc. SHC-72/Conf.37/5 (Apr. 7, 1972), *available at* <http://whc.unesco.org/archive/1972/shc-72-conf37-5e.pdf>. Another earlier draft read: “Each Party shall respect all areas and sites inscribed in the Register by refraining so far as possible from acts which might damage them.” UNESCO, Draft Convention Concerning the Protection of Cultural and Natural World Heritage, U.N. Doc. SHC-72/Conf.37/4 (Apr. 7, 1972), *available at* <http://whc.unesco.org/archive/1972/shc-72-conf37-4e.pdf>.

¹⁴³ In fact, “[t]he words ‘so far as possible’ . . . were considered an overly broad loophole, so the word ‘deliberate’ was substituted.” Robert L. Meyer, *Travaux Préparatoires for the UNESCO World Heritage Convention*, 2 EARTH L.J. 45, 52 (1972). Meyer’s article also suggests that the drafters did not intend this provision to subject State Parties to strict liability for unintentional damage caused by pollution. *Id.* The desire not to impose strict liability, however, does not eviscerate the plain meaning of the provision. The word “deliberate” can be construed according to its plain meaning to impart an intent requirement. In other words, State Parties are

6, as adopted, codifies the object and purpose of the Convention—international cooperation for the protection of world heritage.

As the Preamble evinces, the WHC's object and purpose is two-fold. First, protection of "[world] heritage at the national level often remains incomplete because of the scale of the resources which it requires and of the insufficient economic, scientific, and technological resources of the country where the property" is located.¹⁴⁴ In other words, the State Parties recognized that in many circumstances national-level efforts are insufficient to provide adequate protection. Second, to work toward resolving the inadequacies inherent in national-level protection, the State Parties understand that:

[I]t is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value, by the granting of collective assistance which, although not taking the place of action by the State concerned, will serve as an efficient complement thereto.¹⁴⁵

Essentially, the Preamble, while recognizing the primary nature of national effort, makes clear that the State Parties recognize that to ensure protection they must engage in an internationally cooperative effort.¹⁴⁶

Rules of treaty interpretation, including the Vienna Convention, indicate that the object and purpose of a treaty evinces the ordinary meaning of treaty language.¹⁴⁷ The preamble to a treaty provides context for the meaning of treaty terms, and often the preamble elucidates the object and purpose of the treaty.¹⁴⁸ The WHC Preamble supports the interpretation that Articles 4, 5, and 6 impose binding legal obligations. It makes clear that the WHC's object and purpose is to foster international cooperation, coupled with national efforts, to protect world heritage.

B. The Mitigation Strategy Required by the World Heritage Convention

The obligations imposed by Articles 4, 5, and 6 of the WHC require that State Parties engage in an aggressive climate change mitigation strategy because they mandate the protection of World Heritage sites and the

only obligated not to take deliberate measures that might damage World Heritage sites; they are not obliged to protect sites from their unintended actions.

¹⁴⁴ World Heritage Convention, *supra* note 29, pmbl., recital 3.

¹⁴⁵ *Id.* pmbl., recital 7.

¹⁴⁶ The Preamble states that the treaty seeks to establish "an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organized on a permanent basis and in accordance with modern scientific methods." *Id.* pmbl., recital 8.

¹⁴⁷ See Vienna Convention, *supra* note 137, art. 31(1).

¹⁴⁸ See *id.* art. 31(2); see also BROWNLIE, *supra* note 137, at 634 (stating that for purposes of interpretation, the "context" of the treaty includes its preamble); G. G. Fitzmaurice, *The Law and Procedure of the International Court of Justice: Treaty Interpretation and Other Treaty Points*, 28 BRITAIN Y.B. INT'L L. 1, 25 (1951) (indicating that "a preamble does have legal force and effect from the *interpretative* standpoint") (emphasis in original).

“outstanding universal values” therein. Articles 4 and 5 call for State Parties to act aggressively to protect world heritage within their territories, and Article 6 obliges all State Parties to forgo actions that might damage World Heritage sites. Together, these provisions require that all State Parties engage in an aggressive climate change mitigation strategy entailing sharp reductions in greenhouse gas emissions.

1. To the “Utmost” of Their Resources: The Case for Deep Cuts

The Petitions suggest that the Kyoto Protocol targets could provide useful guidelines for State Party implementation of WHC obligations respecting climate change; however, “appropriate” mitigation measures for many State Parties would necessarily include reductions beyond those called for by the Kyoto Protocol because the WHC states that State Parties recognize that they must do all they can to the utmost of their resources.¹⁴⁹ In the case of many State Parties to the WHC, this would entail greater reductions than those provided by the Kyoto Protocol. In fact, although the Kyoto Protocol sets greenhouse gas reduction targets with the aim of preventing dangerous anthropogenic interference with the climate system, it calls for developed countries to reduce greenhouse gas emissions by an average of only 5.2% against a 1990 baseline during the period of 2008–2012.¹⁵⁰ Many State Parties to the WHC can, within their resources, reduce greenhouse gas emissions further. National and localized efforts to take action above and beyond Kyoto Protocol requirements make this clear.¹⁵¹

Indeed, if State Parties are to protect World Heritage sites from climate change, then all Parties to the WHC may be obligated to implement a regime of so-called “deep cuts” in greenhouse gas emissions. As is commonly understood, the reductions proposed by the Kyoto Protocol will not stabilize concentrations of greenhouse gas emissions in the atmosphere, and they certainly will not reverse current global climate change trends.¹⁵² The Chairman of the Intergovernmental Panel on Climate Change, Dr. Rajendra Pachauri, has warned that the world has “already reached the level of dangerous concentrations of carbon dioxide in the atmosphere” and called

¹⁴⁹ World Heritage Convention, *supra* note 29, art. 6(3). *See also* Scott Barrett, *The Problem of Averting Global Catastrophe*, 6 CHI. J. INT’L L. 527, 549–50 (2006) (describing failure of the Kyoto Protocol to achieve reductions commensurate with Parties’ capacity).

¹⁵⁰ Kyoto Protocol, *supra* note 1, art. 3(1). *See also* David W. Childs, *The Unresolved Debates that Scorched Kyoto: An Analytical Framework*, 13 U. MIAMI INT’L & COMP. L. REV. 233, 251 (2005) (noting that climatologists estimate that reductions would need to increase 40% to 50% to stabilize greenhouse gas concentrations in the atmosphere).

¹⁵¹ *See* MATTHEW BRAMLEY, DAVID SUZUKI FOUND. & PEMBINA INST., THE CASE FOR DEEP REDUCTIONS: CANADA’S ROLE IN PREVENTING DANGEROUS CLIMATE CHANGE 3–4 (2005), *available at* http://www.davidsuzuki.org/files/climate/Ontario/Case_Deep_Reductions.pdf (summarizing government commitments to reduce greenhouse gas emissions). *See generally* Randall S. Abate, *Kyoto or Not, Here We Come: The Promise and Perils of Piecemeal Approach to Climate Change Regulation in the United States*, 15 CORNELL J.L. & PUB. POL’Y 369 (2006) (discussing aggressive initiatives and measures taken by such states as Maine, Massachusetts, Connecticut, California and New Jersey toward regulating climate change).

¹⁵² BRAMLEY, *supra* note 151, at 3–4.

for immediate and “very deep” cuts in the pollution if humanity is to “survive.”¹⁵³

The goal of the UNFCCC provides helpful guidance regarding WHC obligations. The UNFCCC’s “ultimate objective” is “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”¹⁵⁴ The consensus of the scientific community, as well as many governments, suggests that to avoid “dangerous climate change” the global average surface temperature must not increase beyond 2° Celsius above pre-industrial temperatures.¹⁵⁵ To avoid temperature increases beyond 2° Celsius, the global community must limit cumulative greenhouse gas emissions to no more than fifteen percent above 1990 levels by 2020 and reduce emissions to at least thirty to fifty percent below 1990 levels by 2050.¹⁵⁶ This daunting task requires substantially more reductions in greenhouse gas emissions than the global community can achieve either through implementation of the Kyoto Protocol or through other non-binding, multilateral measures.

The UNFCCC’s goal of preventing dangerous human-induced climate change could provide a basis for implementation of the WHC obligations regarding climate change because it expresses nearly the entire international community’s sentiment and would achieve the protection necessary for World Heritage sites as is contemplated by the WHC—namely, that such sites should be preserved for future generations by preventing damaging anthropogenic interference with the climate system.¹⁵⁷ However, the UNFCCC’s Kyoto Protocol does not adequately implement the WHC’s obligations to prevent climate change effects. State Parties to the WHC have

¹⁵³ Geoffrey Lean, *Global Warming Approaching Point of No Return, Warns Leading Climate Expert*, INDEPENDENT, Jan. 23, 2005, available at <http://www.commondreams.org/headlines/05/0123-01.htm> (quoting Dr. Pachauri).

¹⁵⁴ UNFCCC, *supra* note 2, art. 2.

¹⁵⁵ See 3 MILLENNIUM ECOSYSTEM ASSESSMENT, ECOSYSTEMS AND HUMAN WELL-BEING: POLICY RESPONSES 375 (Kanchan Chopra et al. eds., 2005) (“[T]he best guidance that can currently be given suggests that efforts be made to limit the increase in global mean surface temperature to less than 2° Celsius above pre-industrial levels.”); see also BRAMLEY, *supra* note 151, at 2 (stating that the European Council first endorsed a two degree Celsius limit and that the Climate Action Network International “has concluded that ‘climate action must be driven by the aim of keeping global warming as far below 2°C as possible.’”).

¹⁵⁶ BRAMLEY, *supra* note 151, at 28, tbl.1 (presenting a comparative look at data from three climate change studies). For the climate change studies cited, see BILL HARE & MALTE MEINSHAUSEN, POTSDAM INST. FOR CLIMATE IMPACT RESEARCH, HOW MUCH WARMING ARE WE COMMITTED TO AND HOW MUCH CAN BE AVOIDED? (2004), available at <http://www.pik-potsdam.de/research/publications/pikreports/files/pr93.pdf>; M.G.J. DEN ELZEN & MALTE MEINSHAUSEN, NETH. ENVTL. ASSESSMENT AGENCY, MEETING THE EU 2°C CLIMATE TARGET: GLOBAL AND REGIONAL EMISSION IMPLICATIONS (2005), available at <http://www.gci.org.uk/briefings/rivm.pdf>; NIKLAS HÖHNE ET AL., FED. ENVTL. AGENCY, OPTIONS FOR THE SECOND COMMITMENT PERIOD OF THE KYOTO PROTOCOL (2005), available at <http://www.umweltdaten.de/publikationen/fpdf-l/2847.pdf>.

¹⁵⁷ RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITY 55 (2005) (noting that “stabilization is linked to the prevention of dangerous interference with the climate system, which implies that the actual objective of the [UN]FCCC is the stabilization of the climate itself at safe levels”).

an obligation independent of the obligations they may have under the UNFCCC and the Kyoto Protocol to prevent dangerous human-induced climate change and eliminate the threat of climate change to world heritage. This obligation arises directly from Article 4's call for State Parties to do all they can and the request in Article 5 that State Parties undertake the appropriate legal, technical, administrative, and scientific measures. In light of current climate change trends, these provisions require that State Parties undertake to make "deep cuts" in their greenhouse gas emissions to protect the world heritage within their territories. Thus, although the UNFCCC provides the same goal State Parties have when executing their WHC obligations, the current implementation strategies under the UNFCCC, *i.e.*, the Kyoto Protocol, have failed to achieve the necessary emissions reductions.

2. Burden Sharing: Article 6 and "Common but Differentiated Responsibilities"

In addition to the obligations State Parties have to protect threatened world heritage within their territories, Article 6 states that all State Parties may "not take any deliberate measures which might damage directly or indirectly" World Heritage sites.¹⁵⁸ Thus, while Articles 4 and 5 specifically concern State Party obligations to protect and preserve their own world heritage, Article 6 reiterates the recognition that world heritage is part of the common heritage of humankind and, as such, all State Parties, whether developed or developing countries, must undertake to protect all world heritage. With respect to climate change, this obligation means that all State Parties must act to reduce or limit their greenhouse gas emissions whether or not climate change threatens World Heritage sites within their respective jurisdictions.

In its position paper, the United States mischaracterizes the nature of the obligations in Article 6. The United States reads the Petitions as arguing that State Parties have failed to reduce greenhouse gas emissions and thus have not prevented climate change, leading to a violation of Article 6(3).¹⁵⁹ The United States correctly states the Petitioners' position, but the Petitioners do not argue that the failure to reduce greenhouse gas emissions is a violation of Article 6(3), as the United States suggests. The United States argues that "[n]ot taking an action, such as not reducing greenhouse gas emissions, or not signing on to an agreement like the Kyoto Protocol, does not constitute a 'deliberative [sic] measure which might damage' a site."¹⁶⁰ Thus, the United States concludes that a violation of Article 6(3) has not occurred.¹⁶¹ This is a specious, end-run argument based on semantics. Article 6(3) obliges State Parties "not to take deliberate measures" that directly or indirectly damage world heritage. The relevant action is emission

¹⁵⁸ World Heritage Convention, *supra* note 29, art. 6(3).

¹⁵⁹ U.S. Position Paper, *supra* note 125, at 2.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

of greenhouse gases, not their reduction. This is the central argument of the Petitions. State Parties have an obligation to reduce their greenhouse gas emissions because emitting greenhouse gases is a deliberate measure directly and indirectly damaging World Heritage sites. In other words, the Convention obliges State Parties not to emit greenhouse gases to the extent that they are contributing to anthropogenic interference with the climate system.

Unlike the targets and timetables of the Kyoto Protocol, which only bind certain nations to specific reductions,¹⁶² the climate change responsibilities under the WHC bind all State Parties similarly, whether affected world heritage lies within a State Parties' territory or beyond.¹⁶³ However, these obligations must be read with international principles of equity in mind, primarily the concept of common but differentiated responsibilities.¹⁶⁴ Principle 7 of the United Nations' Rio Declaration¹⁶⁵ is the foremost statement of this concept. It states "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities."¹⁶⁶

Article 3.1 of the UNFCCC specifically recognizes this principle's application to climate change responsibility, stating that "[t]he Parties should protect the climate system...on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."¹⁶⁷ The relevant provisions of the WHC recognize that responsibilities may vary depending on availability of capacity and resources. Article 4 specifies that a State Party must do all it can "to the utmost of its own resources," and Article 5 indicates that State Parties must endeavor to undertake the specified requirements "in so far as possible."¹⁶⁸

¹⁶² The Kyoto Protocol obligates Annex I Parties (developed countries) to collectively reduce their greenhouse gas emissions at least 5% below 1990 levels by 2008–2012, but non-Annex I Parties (developing countries) are not subject to binding reduction targets. *See generally* Paul G. Harris, *Common but Differentiated Responsibility: The Kyoto Protocol and United States Policy*, 7 N.Y.U. ENVTL. L. J. 27, 28 (1999) (discussing the concept of Common but Differentiated Responsibility, that is, that "developing countries are disproportionately responsible for historical GHG emissions and have the greatest capacity to act").

¹⁶³ The United States recognizes this concept in its position paper but argues that because the provisions bind all State Parties equally, it does not confer any climate change obligations. *See* U.S. Position Paper, *supra* note 125, at 2–3 (arguing that developed nations have not violated Article 6(3) because "even if this provision applied to not taking particular actions, it would apply equally to all State Parties, not just the developed country Parties").

¹⁶⁴ For background and the history of "common but differentiated responsibilities," *see* ANITA MARGRETHE HALVORSEN, *EQUALITY AMONG UNEQUALS IN INTERNATIONAL ENVIRONMENTAL LAW: DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES* 74–76 (1999).

¹⁶⁵ U.N. Conference on Env't and Dev., June 3–14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26 (June 13, 1992).

¹⁶⁶ *Id.* princ. 7.

¹⁶⁷ UNFCCC, *supra* note 2, art. 3(1). *See also* Christine Batruch, "Hot Air" as Precedent for Developing Countries? *Equity Considerations*, 17 UCLA J. ENVTL. L. & POL'Y 45, 50–53 (describing the rationale for the principle of "common but differentiated responsibilities").

¹⁶⁸ UNFCCC, *supra* note 2, arts. 4 & 5.

The widely accepted principle of “common but differentiated responsibilities” and the recognition in the text of the WHC of varying degrees of capacity present a conceptual framework for compromise and cooperation in meeting the challenge of reducing global greenhouse gas emissions.

IV. POLITICS OF CONVENIENCE: STATUS QUO FOR THE UNITED STATES

Despite the clear nature of State Parties’ legal obligations to engage in an aggressive climate change mitigation strategy under the WHC, the World Heritage Committee—with the United States as a member—has thoroughly failed to take climate change mitigation seriously as an obligation independent of other international obligations or efforts. In each subsequent policy paper or document and decision, the WHC has avoided directly advising State Parties on their responsibility to reduce greenhouse gas emissions to limit deterioration of World Heritage sites.¹⁶⁹ Given the difference between the United States’ approach to climate change from the approach undertaken by the majority of the rest of the world, and the U.S. policy paper on climate change and the WHC, this weak approach is likely attributable to U.S. leadership in the work of the World Heritage Committee. Further evidence of the United States’ leadership failures is its position on citizen petitions to the World Heritage Committee. In contrast to its otherwise relatively open and robust policies on citizen engagement, the United States’ interpretation of the petition process under the WHC excludes public participation.¹⁷⁰

A. The World Heritage Committee’s Weak Stance on Mitigation

In response to the petitions, the World Heritage Committee commissioned three documents that outline the Committee’s position on climate change: a joint report entitled *Predicting and Managing the Effects of Climate Change on World Heritage* (Joint Report);¹⁷¹ a document prepared by the World Heritage Committee based on an expert working group meeting concerning climate change and the WHC (2006 State of Conservation);¹⁷² and a policy document that purports to explain State Parties’ legal obligations under the WHC.¹⁷³ The Joint Report recognizes that only mitigation absolutely alleviates the threats caused by climate change;¹⁷⁴

¹⁶⁹ See, e.g., World Heritage Committee, Decision 2006, *supra* note 128; World Heritage Committee, Decision 2007, *supra* note 128.

¹⁷⁰ See discussion *infra* Part IV.B.1.

¹⁷¹ UNESCO, Joint Report, *supra* note 129.

¹⁷² UNESCO, World Heritage Comm., *Issues Relating to the State of Conservation of the World Heritage Properties: The Impact of Climate Change on World Heritage Properties*, WHC-06/30.COM/7.1 (June 26, 2006), available at <http://whc.unesco.org/archive/2006/whc06-30com-07.1e.pdf> [hereinafter UNESCO, 2006 State of Conservation].

¹⁷³ UNESCO, 2007 State of Conservation, *supra* note 128, at 6–7.

¹⁷⁴ See UNESCO, Joint Report, *supra* note 129, at 38–39.

however, it stops far short of recommending that State Parties implement a general mitigation strategy to protect World Heritage sites. Each document variously indicates that climate change mitigation initiatives are within the sole province of the UNFCCC and Kyoto Protocol.¹⁷⁵ In fact, all three documents provide that climate change mitigation under the auspices of the WHC ought to occur only as site-specific projects.¹⁷⁶ For example, both the Joint Report and the 2006 State of Conservation document suggest that some World Heritage sites may be involved in sequestering carbon dioxide, though the Joint Report concludes that any quantitative effect is negligible.¹⁷⁷ It also indicates that World Heritage site managers could be encouraged to promote “improved technology to reduce emissions throughout the World Heritage network.”¹⁷⁸

Effectively, neither the Joint Report nor the Strategy prescribes clear-cut action on climate change mitigation. The policy document, which considers the legal obligations of State Parties, only indicates that State Parties “will consider undertaking site-level monitoring, mitigation and adaptation measures, where appropriate.”¹⁷⁹ Many World Heritage sites will never be preserved for transmission to future generations unless the State Parties, led by the World Heritage Committee, act more proactively than merely supporting site-specific mitigation. For example, any climate change mitigation occurring within Glacier National Park’s boundaries, while commendable, is inevitably inadequate to address the devastating consequences of climate change within the park.¹⁸⁰ Even a total ban on greenhouse gas emissions within the park would not slow, and could never reverse, the climate change effects on glacial melt within the Park.¹⁸¹ Yet this type of mitigation is all that the Joint Report and the Strategy suggest should

¹⁷⁵ *Id.* ¶ 7 (providing that “mitigation at the global and States Parties level is the mandate of the UNFCCC and its Kyoto Protocol”); UNESCO, *2006 State of Conservation*, *supra* note 172, ¶ 18 (stating the “UNFCCC is the UN instrument through which mitigation strategies at the global and States Parties level is being addressed”). *See also* UNESCO, *2007 State of Conservation*, *supra* note 128, at 3.

¹⁷⁶ *See* UNESCO, Joint Report, *supra* note 129, ¶ 121 (stating that “some mitigation opportunities could be contemplated in the context of the *World Heritage Convention* at the level of the World Heritage sites,” even though “[t]he UN Framework Convention on Climate Change is the preferred international tool to address mitigation at the global and states Parties levels.”); UNESCO, *2006 State of Conservation*, *supra* note 172, at 6; UNESCO, *2007 State of Conservation*, *supra* note 128, at 10.

¹⁷⁷ UNESCO, Joint Report, *supra* note 129, ¶ 124 (stating “benefit of mitigation at World Heritage sites is therefore likely to be negligible on a quantitative basis”); UNESCO, *2007 State of Conservation*, *supra* note 128, at 10.

¹⁷⁸ UNESCO, Joint Report, *supra* note 129, ¶¶ 124–25.

¹⁷⁹ *See* UNESCO, *2007 State of Conservation*, *supra* note 128, at 4 (describing national-level obligations).

¹⁸⁰ *See generally* NAT’L ENVTL. TRUST, RENAMING GLACIER NATIONAL PARK 4, *available at* <http://www.renameglacier.org/docs/renameglacier-factsheet.pdf> (describing the present and future consequences of global warming in Glacier National Park, the longevity of carbon in the atmosphere, and the magnitude of the Western United States’ carbon emissions, from which it can be inferred that a reduction in or ban on emissions from the park itself would be relatively small and would pale in comparison to the amount of emissions overall).

¹⁸¹ *Id.*

occur—a wholly inadequate response to the threat of climate change because it will not protect the outstanding universal values of the Park. The World Heritage Committee’s weak approach may be politically palatable, especially to State Parties like the United States, but it falls far short of the type of mitigation required to protect World Heritage sites.

B. The U.S. Position on “In Danger” Listings and Citizen Petitioning

Because the United States has been on the World Heritage Committee since the submission of the petition to list Waterton-Glacier International Peace Park as a World Heritage site “in danger” due to climate change, it had the opportunity to play an integral leadership role in shaping WHC policy on climate change. Few thought that the United States would reverse its entrenched positions on climate change, given its abdication of any international legal obligation to achieve targeted reductions, but the United States surprised even the critics. In certain international fora, the United States is an effective advocate for international cooperation and sound implementation of international obligations, as well as an actively engaged citizenry.¹⁸² However, the U.S. position on the World Heritage Committee has been to push back aggressively on citizen involvement and, consequently, to push back on the “in danger” listing process more generally.¹⁸³

1. Citizen Petitions

The United States incorrectly claims that NGOs may not submit information to the Committee that may lead the Committee to inscribe a site on the “in danger” list. The United States claims that, “[t]he origin of any action to include a site in the List of World Heritage in Danger is with the Committee in consultation with the State Party and with advice from the Advisory Bodies.”¹⁸⁴ Again, neither the WHC nor the *Operational Guidelines* suggest that the authority to originate an “in danger” listing rests only with either the Committee or the relevant State Party. In fact, no provision, in either the Convention or the *Operational Guidelines*, prescribes a procedure for how a proposal for “in danger” listing might arise.

¹⁸² See, e.g., Malik Tariq, *Space Experts Say International Cooperation is Key for NASA’s Space Vision*, SPACE.COM, http://www.space.com/news/commission_ny_040504.html (last visited Jan. 27, 2008) (describing the importance of global cooperation to the space industry and stating that NASA has close relationships with the European Space Agency and Russia’s Federal Space Agency); Peace Corps, *About the Peace Corps*, <http://www.peacecorps.gov/index.cfm?shell=learn.whatispc> (last visited Jan. 27, 2008) (describing the Peace Corps, through which the government supports and encourages volunteerism and development throughout the world); Media Note, U.S. Dep’t of State, The United States and New Zealand Pledge to Advance Science Partnership (Oct. 30, 2007), available at <http://www.state.gov/r/pa/prs/ps/2007/oct/94371.htm> (describing a new partnership between the United States and New Zealand to support the development of each country’s competitiveness and economic sustainability).

¹⁸³ U.S. Position Paper, *supra* note 125, at 4.

¹⁸⁴ *Id.*

However, Article 13(7) provides that “[t]he Committee shall co-operate with international and national governmental and non-governmental organizations having objectives similar to those of this Convention.”¹⁸⁵ Moreover, that same provision provides that “[f]or the implementation of its programmes and projects, the Committee may call on . . . public and private bodies and individuals.”¹⁸⁶ Thus, the plain language of the WHC specifically supports dialogue between the World Heritage Committee and NGOs. The *travaux préparatoires* lends further credence to this interpretation. A report to the drafters’ working group states that the World Heritage Committee “shall have complete freedom to consult public or private organizations or individuals, either in the course of its meetings or apart from them.”¹⁸⁷

Furthermore, in the absence of any language prescribing an “in danger” listing procedure, paragraph 194 of the *Operational Guidelines* is illuminating. It provides the WHC’s procedure when it receives information that a site should be taken off the “in danger” list. Paragraph 194 reads: “When the Secretariat receives such information from a source other than the State Party concerned, it will as far as possible” consult with the relevant State Party.¹⁸⁸ This paragraph suggests that the Committee is indeed receptive to information and petitions from NGOs or any other non-State Party, contrary to the United States’ assertion that the WHC may not receive or take action on such information. The World Heritage Committee undoubtedly benefits from the contributions of non-State actors, including The World Conservation Union (IUCN) and the World Commission on Protected Areas.¹⁸⁹

¹⁸⁵ World Heritage Convention, *supra* note 29, art. 13(7).

¹⁸⁶ *Id.*

¹⁸⁷ UNESCO, Special Comm. of Gov’t Experts to prepare a Draft Convention and a Draft Recommendation to Member States Concerning the Prot. of Monuments, Groups of Bldg. and Sites, *Draft Report*, 9 U.N. Doc. SHC.72/Conf.37/19 (Apr. 21, 1972), *available at* <http://whc.unesco.org/archive/1972/shc-72-conf37-19e.pdf> [hereinafter UNESCO, *Draft Report*]. The *travaux préparatoires* is the negotiating history of a convention. See *supra* note 140 for a further discussion.

¹⁸⁸ UNESCO, *Operational Guidelines*, *supra* note 62, ¶ 194.

¹⁸⁹ On climate change, the World Heritage Centre was asked to convene an expert working group meeting involving a “broad working group of experts.” See UNESCO, World Heritage Comm., *Decisions Adopted at the 29th Session of the World Heritage Committee*, at 36–37, WHC-05/29.COM/22 (Sept. 9, 2005) *available at* <http://whc.unesco.org/archive/2005/whc05-29com-22e.pdf#decision.7B>. And, in fact, a publication by the World Heritage Centre meant to be an “information kit” further supports this. The section on World Heritage in danger reads:

The States Parties to the *Convention* should inform the Committee as soon as possible about threats to their sites. On the other hand, private individuals, nongovernmental organizations, or other groups may also draw the Committee’s attention to existing threats. If the alert is justified and the problem serious enough, the Committee may consider including the site on the List of World Heritage in Danger. To inform the World Heritage Committee about threats to sites, you may contact the Committee’s Secretariat.

Id. The “information kit” then provides the address of the World Heritage Centre. UNESCO, WORLD HERITAGE CTR., WORLD HERITAGE INFORMATION KIT 18 (2005), *available at* http://whc.unesco.org/documents/publi_infokit_en.pdf. In addition, the World Heritage Committee recently considered a citizen petition to list La Amistad International Peace Park in Panama and Costa Rica as “in danger” and adopted a decision calling on the host governments

2. State Party Consent

The United States misreads the World Heritage Convention to require the consent of the State in which the World Heritage Site is located as a condition for inscribing a site in the List of World Heritage in Danger. The U.S. position paper refers to Article 11.3, which states that “the inclusion of a property on the World Heritage List requires the consent of the State concerned.”¹⁹⁰ Then the position paper states that “even though not specifically articulated in Article 11.4 of the Convention [the provision concerning “in danger” listings]” the United States believes that “in danger” listings also require the consent of the State Party concerned.¹⁹¹ The United States offers no further support for its proposition in its position paper, and, in fact, its proposition is unsupportable.

Under fundamental rules of treaty interpretation, as provided by the Vienna Convention, a treaty must be interpreted in good faith in accordance with the ordinary meaning of the terms of the treaty in their context and in light of the treaty’s object and purpose.¹⁹² The context includes the treaty, its preamble and annexes, as well as any agreement or instrument relating to the treaty.¹⁹³ Article 11.2 of the WHC directs the World Heritage Committee to maintain the World Heritage List,¹⁹⁴ and Article 11.3 expressly requires the consent of the State Party in which the World Heritage site is located.¹⁹⁵ That consent makes sense in the broader context of the WHC, which requires Parties to submit sites suitable for inclusion in the World Heritage List and provides for effective and proactive national measures to protect and conserve those sites.¹⁹⁶

In contrast, Article 11.4 of the Convention expressly directs the World Heritage Committee to maintain the “List of World Heritage in Danger.”¹⁹⁷ Article 11.4 pointedly lacks provisions that might require State Party consent. The duty to give terms and provisions their ordinary meaning requires an interpretation of the World Heritage Convention that maintains the distinction between the World Heritage List and the “in danger” list. Certainly, the drafters understood the language necessary to require State consent, but they specifically chose not to require that consent for inclusion of sites in the “List of World Heritage in Danger.”¹⁹⁸

to invite IUCN and observers from the World Heritage Centre to investigate the site in order to further the “in danger” listing process. The author of this Article was the lead author of that Petition. See ERICA THORSON ET AL., INT’L ENVTL. LAW PROJECT, PETITION TO THE WORLD HERITAGE COMMITTEE REQUESTING INCLUSION OF TALAMANCA RANGE-LA AMISTAD RESERVES/LA AMISTAD NATIONAL PARK ON THE LIST OF WORLD HERITAGE IN DANGER (2007), *available at* http://law.lclark.edu/org/ielp/objects/LaAmistadPetition_4-23-07_english.pdf.

¹⁹⁰ World Heritage Convention, *supra* note 29, art. 11(3).

¹⁹¹ U.S. Position Paper, *supra* note 125, at 1.

¹⁹² See *supra* notes 135–39 and accompanying text.

¹⁹³ Vienna Convention, *supra* note 137, art. 31(2).

¹⁹⁴ World Heritage Convention, *supra* note 29, art. 11.2.

¹⁹⁵ *Id.* art. 11.3.

¹⁹⁶ *Id.* art. 3.

¹⁹⁷ *Id.* art. 11.4.

¹⁹⁸ A report from the treaty negotiation sessions on an early draft states that “[t]he inclusion

The *Operational Guidelines* are consistent with this interpretation. Paragraph 178 states that the World Heritage Committee may inscribe a World Heritage Site in the List of World Heritage in Danger when “it”—that is, the Committee—determines that the property meets at least one of the relevant criteria.¹⁹⁹ Further provisions of the *Operational Guidelines* discredit the United States’ position. Paragraph 186 states that “[t]he Committee shall examine the information available and take a decision concerning the inscription of the property on the List of World Heritage in Danger.”²⁰⁰ This language makes absolutely clear that the World Heritage Committee has unfettered authority to take decisions about whether a site warrants an “in danger” listing. Paragraph 187 supports this interpretation, stating that “[t]he State Party concerned shall be informed of the *Committee’s* decision.”²⁰¹ If, as the United States suggests, State Party consent was a prerequisite to “in danger” listing, such notice would necessarily precede the World Heritage Committee’s decision, or, alternatively, paragraph 187 would provide a procedure for obtaining the State Party’s assent to the World Heritage Committee’s decision.

In fact, the *Operational Guidelines* explicitly defines the role that the relevant State Party plays during “in danger” decisions. When the World Heritage Committee considers adding a site to the “in danger” list, paragraph 183 provides that “the Committee shall develop, and adopt, as far as

of a property in these lists requires the consent of the State Party concerned.” UNESCO, *Draft Report*, *supra* note 187, ¶ 27. However, not all drafts preceding the report contain the language adopted in Article 11.3, which states that State Party consent is a prerequisite for listing a site on the World Heritage List. See UNESCO, Special Comm. of Gov’t Experts to prepare a Draft Convention and a Draft Recommendation to Member States Concerning the Prot. of Monuments, Groups of Bldg. and Sites, *Draft Convention Concerning the Protection of Cultural and Natural World Heritage*, 2, U.N. Doc. SHC-72/Conf. 37/6 (Apr. 7, 1972), available at <http://whc.unesco.org/archive/1972/shc-72-conf37-6e.pdf> (lacking “consent” language); UNESCO, Special Comm. of Gov’t Experts to prepare a Draft Convention and a Draft Recommendation to Member States Concerning the Prot. of Monuments, Groups of Bldg. and Sites, *Drafting Committee (Articles 11–14)*, 1, U.N. Doc. SHC-72/Conf.37/13/Red.5 (Apr. 17, 1972), available at <http://whc.unesco.org/archive/1972/shc-72-conf37-13-red-5e.pdf> (also lacking “consent” language); but see UNESCO, Special Comm. of Gov’t Experts to Prepare a Draft Convention and a Draft Recommendation to Member States Concerning the Prot. of Monuments, Groups of Bldg. and Sites, *Draft Convention for the Protection of the Cultural and Natural World Heritage*, ¶ 11, U.N. Doc. SHC-72/Conf.37/20, (Apr. 20, 1972), available at <http://whc.unesco.org/archive/1972/shc-72-conf37-20e.pdf> (containing “consent” language in Article 11(3) but not Article 11(4)). In other words, the drafters at one point intended that State Party consent was necessary for inclusion in either list; however, after stating as much, they only included direct reference to State Party consent in the provision concerning the World Heritage List, not the List of World Heritage in Danger. The drafters could have as easily inserted “consent” language into Article 11(4), the provisions concerning the process for “in danger” listing, if they remained convinced that State Party consent was necessary. This progression further supports what the plain meaning of the adopted text makes clear—State Party consent is only required for inclusion on the World Heritage List. The Vienna Convention established rules on recourse to the *travaux préparatoires* to confirm the plain meaning of treaty text. See BROWNIE, *supra* note 137; see Vienna Convention, *supra* note 137.

¹⁹⁹ UNESCO, *Operational Guidelines*, *supra* note 62, ¶ 178.

²⁰⁰ *Id.* ¶ 186.

²⁰¹ *Id.* ¶ 187 (emphasis added).

possible, in consultation with the State Party concerned, a programme for corrective measures.”²⁰² To develop these corrective measures, the Secretariat and the World Heritage Committee request that the State Party submit the current condition of the property, the danger to the property, and the feasibility of any potential corrective measures.²⁰³ As with the consultations provided for by paragraph 183, these communications shall take place only “as far as possible.”²⁰⁴ The *Operational Guidelines* suggest that on occasion State Parties may have a limited, or even non-existent, role in “in danger”-listing decision making, quite unlike the role the United States suggests.²⁰⁵

Nonetheless, the United States has persisted in espousing its interpretation. At the most recent World Heritage Committee meeting in July of 2006, the United States introduced an amendment to the draft decision regarding the World Heritage Committee’s considerations of the Convention and climate change that could be seen as an attempt to increase host State influence of “in danger” listings.²⁰⁶ The amendment reads:

[T]he decisions to include properties on the List of World Heritage in Danger because of threats resulting from climate change are to be made by the World Heritage Committee, on a case-by-case basis, in consultation and cooperation with States Parties, taking into account the input from Advisory Bodies and NGOs, and consistent with the *Operational Guidelines for the Implementation of the World Heritage Convention*.²⁰⁷

The amendment, however, does not impute host State consent into the provisions governing “in danger” listings, but directly references consistency with the *Operational Guidelines* and reiterates that decisions are to be made merely “in consultation” with State Parties. Inclusion of the word “cooperation” might require more than mere consultation, but ultimately the provision does not alter the procedure clearly specified for “in danger”

²⁰² *Id.* ¶ 183.

²⁰³ *Id.* ¶ 184.

²⁰⁴ *Id.*

²⁰⁵ In fact, the World Heritage Committee has previously listed sites without State Party consent. For example, the World Heritage Committee listed Simien National Park without official consent from Ethiopia in 1996. UNEP, UNEP-World Conservation Monitoring Ctr., Protected Areas and World Heritage, *Simien National Park, Ethiopia*, <http://www.unep-wcmc.org/sites/wh/simen.html> (last visited Jan. 27, 2008). The site remains on the “in danger” list, and UNESCO, in cooperation with wildlife authorities in Ethiopia, has held stakeholder meetings to impart to regional park managers the importance of the listing and of preserving the outstanding universal values of the park. See UNESCO, World Heritage Ctr., *Simien National Park*, <http://whc.unesco.org/en/list/9> (last visited Jan. 27, 2008) (describing listing decision and official UNESCO efforts to work to protect the park’s wildlife). Of course, as a practical matter, effective implementation of any program of corrective measures necessitates State Party consent or, at least, willingness because the onus for carrying out measures lies with the host country.

²⁰⁶ PETER RODERICK, COMMENTARY BY THE CLIMATE JUSTICE PROGRAMME ON WORLD HERITAGE COMMITTEE, DECISION 30 COM 7.1, at 1 n.10, available at <http://www.lclark.edu/org/ielp/objects/WHCDecision30.pdf>.

²⁰⁷ UNESCO, *30th Session Decisions*, *supra* note 128, at 8.

listings, nor could it—a World Heritage Committee decision cannot amend the Convention or the *Operational Guidelines*.

V. CONCLUSION

The World Heritage Convention requires State Parties to develop a comprehensive mitigation strategy to protect and preserve World Heritage sites. Although the broad language of the Convention facilitates flexibility and discretionary approaches to these obligations, it does not mean that State Parties may entirely abdicate any responsibility to address the threat to World Heritage sites arising from climate change. For many State Parties, particularly Australia and the United States, these conclusions may seem like an end-run around the Kyoto Protocol, but the obligations under the WHC are clear. Certainly, the negotiators of the WHC did not foresee the threat of climate change, but they knew that they could not foresee all potential threats to World Heritage sites. As a result, the WHC provides broad protections against all threats, and if the WHC is to remain a meaningful tool to protect natural areas of outstanding universal value, including mountain glaciers, then the World Heritage Committee, despite the efforts of the United States, must effectively engage State Parties in an aggressive climate change mitigation strategy.