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International Wetland Conservation and the Ramsar Convention: Do Broad Measures and Wise Use Equal Meaningful, Transboundary Solutions

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INTERNATIONAL WETLAND CONSERVATION AND THE RAMSAR CONVENTION: DO BROAD MEASURES AND “WISE USE” EQUAL MEANINGFUL, TRANSBOUNDARY SOLUTIONS?

SANDRA VRIESINGA *

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I. INTRODUCTION AND OVERVIEW

Wetlands function as critical, life-supporting ecosystems¹ that play a fundamental role in the interdependent landscape we call Earth. With

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¹ Michael J. Podolsky, *U.S. Wetlands Policy, Legislation, and Case Law as Applied to the Wise Use Concept of the Ramsar Convention*, 52 CASE W. RES. L. REV. 627 (2001). Ecosystems, as defined, are “a complex of living organisms, their physical environment, and all their interrelationships in a particular unit of space.” Ecosystem, Encyclopedia Britannica Online, <http://www.britannica.com/EBchecked/topic/178597/ecosystem> (last visited Feb. 4, 2009).

wetlands disappearing at an unparalleled rate in the last century,² governmental agencies and non-governmental organizations have banded together to raise awareness of and help preserve one of the world's most productive resources.³ In addition to various federal, state and local regulations, many wetlands continue to remain with the help of international efforts designed to facilitate their conservation.⁴

Movements to protect wetlands range from local grassroots efforts⁵ to large international endeavors, such as the Convention on Wetlands of International Importance especially as Waterfowl Habitat, also known as the Ramsar Convention.⁶ The original focus of the Ramsar Convention⁷ was to conserve wetlands primarily as waterfowl habitats, but has since taken on additional, wide-reaching initiatives.⁸ In fact, some complain that the Convention generally and in particular its "wise use" requirement, needs to narrow its goals.⁹

² Convention on Wetlands of International Importance especially as Waterfowl Habitat, Feb. 2, 1971, T.I.A.S. No. 1084, 996 U.N.T.S. 245 [hereinafter Ramsar Convention].

³ Ramsar Convention Bureau, Wetlands, Diversity and the Ramsar Convention: The Role of the Convention on Wetlands in the Conservation and Wise Use of Biodiversity (A.J. Hails ed., 1997), available at http://www.ramsar.org/lib/lib_bio_1.htm; Wetlands provide valuable functions, such as water purification, flood control, and service as storm buffers. They also provide a habitat for many plants and animals, as well as locales for human recreation. See Josef Křeček & Martin J. Haigh, *Environmental Role of Wetlands in Headwaters* 216 (Springer 2003).

⁴ Ramsar Convention, *supra* note 2; Conservation Treaty Support Fund, Wetlands Treaty, <http://www.conservationtreaty.org/ramsar.html> (last visited Feb. 4, 2009).

⁵ Efforts to protect wetlands, such as "adopt-a-wetlands" or "wetlands watch" are valuable to the conservation movement. WORLD WILDLIFE FUND, *STATEWIDE WETLANDS STRATEGIES: A GUIDE TO PROTECTING AND MANAGING THE RESOURCE* 36 (Island Press 1992).

⁶ Ramsar Convention, *supra* note 2.

⁷ *Id.*

⁸ Beth L. Kruchek, *Extending Wetlands Protection under the Ramsar Treaty's Wise Use Obligation*, 20 ARIZ. J. INT'L & COMP. L. 409, 413 (2003); Ramsar Convention, Frameworks for Action, <http://www.undp.org/biodiversity/biodiversitycd/frameRAMSAR.htm> (last visited Feb. 4, 2009).

⁹ See Kruchek, *supra* note 8, at 415. The extent of what "wise use" actually encompasses has been debated since the beginning of its existence. The treaty began with the goal of protecting wetlands for waterfowl and has significantly grown in scope. COONGIE LAKES RAMSAR WETLANDS: A PLAN FOR WISE USE, GOVERNMENT OF SOUTH AUSTRALIA: DEPARTMENT FOR ENVIRONMENT, HERITAGE & ABORIGINAL AFFAIRS (1999), available at <http://www.environment.sa.gov.au/biodiversity/pdfs/wetlands/coongie.pdf>. Accordingly, not only has the treaty grown in scope, but so has the "wise use" component. *Id.* Still, signatories

This paper looks at the world's need to protect wetlands and the Ramsar Convention's conservation activities from a transboundary perspective.¹⁰ It explores the values and benefits of wetlands, why we need to protect them, and how "integrated management" helps parties collaborate on how to treat transboundary wetlands. The discussion then turns to the Ramsar Treaty's "wise use" component and how it relates to climate change, an emerging threat facing wetlands. While wetland protection is not easily secured, especially in light of contemporary environmental threats,¹¹ the Ramsar Convention's participating parties are making significant efforts to garner support by strengthening communication between nations, gathering knowledge, and creating a framework for change.

II. WETLANDS

Wetlands are of "immense socio-economic and ecological importance to [hu]mankind."¹² Wetlands are considered some of the most complex ecosystems in the world¹³ and have been defined in various ways due to their diverse elements.¹⁴ Utilized as a collective term for various similar ecosystems, including marshes, swamps, and bogs, wetlands can usually be classified as flat, transitional areas of the landscape between water and dry land along the edges of streams, rivers, lakes, and coastlines.¹⁵ They can be found in nearly every climatic zone

are free to adopt the treaty and "wise use" component to whatever extent they wish. Edward Maltby & Richard Thorne, *Evaluwet*, www1.rhbnc.ac.uk/rhier/evaluweb/downloads/meeting_120701_final.doc (last visited Feb. 4, 2009).

¹⁰ Transboundary is defined as "crossing or existing across national boundaries." Transboundary, MSN Encarta, http://encarta.msn.com/dictionary_1861721403/transboundary.html (last visited Feb. 4, 2009). Water crossing boundaries and judicial overlap is at issue. See Kruchek, *supra* note 8.

¹¹ Threats include global warming, floods, and disease. U.S. Environmental Protection Agency, *What are Wetlands?*, <http://www.epa.gov/owow/wetlands/vital/what.html> (last visited Feb. 4, 2009) [hereinafter EPA].

¹² RAMSAR CONVENTION BUREAU, *supra* note 3. See *infra* notes 30-51 and accompanying text.

¹³ RAMSAR CONVENTION BUREAU, *supra* note 3.

¹⁴ EPA, *supra* note 11. Because wetland habitats are so diverse as to form a "continuum connecting terrestrial to aquatic ecotypes, and because they can vary so significantly within a given type, no universally recognized wetland definition exists." *Id.*

¹⁵ EPA, *Wetlands Definitions*, <http://www.epa.gov/owow/wetlands/what/definitions.html> (last visited Feb. 4, 2009). "Depth and duration of inundation" can differ greatly between wetland

in the world, “from the tundra to the tropics, and on every continent except Antarctica.”¹⁶ The first portion of this section will address the different types of wetlands, their value to the biosphere, and their particular affects on society. Discussion will then turn to the urgency of wetland losses and the current mechanisms used to help protect and enhance them.

Although environmental groups, governmental agencies, individual states and scholars differ in their definitions, wetlands are generally areas “on which water covers the soil or is present either at or near the surface of the soil . . . all year or for varying periods of time during the year.”¹⁷ The type and extent of land being protected varies with each classification; as a result, some definitions are applied more frequently than others.¹⁸ For instance, the U.S. Army Corps of Engineers’ (The Corps) definition considers wetlands “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support . . . a prevalence of vegetation typically adapted for life in saturated soil conditions.”¹⁹ Ultimately, our definition of wetlands

types and can vary from year to year within a single wetland type; as a result of wetlands’ unpredictable and capricious boundaries, areas close to the water, known as “buffer zones,” are often left unprotected. See Kruchek, *supra* note 8.

¹⁶ EPA, *supra* note 11. But see Renbin Zhu et al., *Methane Emissions from Two Tundra Wetlands in Eastern Antarctica*, 41 ATMOSPHERIC ENV’T 4559, 4711 (2007), available at <http://www.sciencedirect.com/science/journal/13522310> (asserting that some scientists believe Antarctica has wetlands).

¹⁷ Marjut H. Turner & Richard Gannon, North Carolina State University Water Quality Group, *Wetlands: Several Definitions*, <http://www.water.ncsu.edu/watershedss/info/wetlands/definit.html> (last visited Feb. 4, 2009).

¹⁸ JON KUSLER, ASS’N OF STATE WETLAND MANAGERS, INC., COMMON QUESTIONS: WETLAND DEFINITION, DELINEATION, AND MAPPING (2006), available at http://www.aswm.org/propub/14_mapping_6_26_06.pdf. See also *infra* notes 82-86 and accompanying text.

¹⁹ 33 C.F.R. § 1344; U.S. ARMY CORPS OF ENG’RS, WETLANDS DELINEATION MANUAL (1995), available at <http://www.wetlands.com/coe/87manpla.htm>. Before 1969, the definition (and the Corps’ regulatory power) was limited to “navigable waters,” which did not include much of what we consider wetlands today. Today, the Corps’ definition is given significant weight due to its regulatory power. Joshua P. Welsh, *Firm Ground for Wetland Protection: Using the Treaty Power to Strengthen Conservation Easements*, 36 STETSON L. REV. 207 (2006). The Corps definition is also shared by the EPA. Kim Diana Connolly, *Regulation of Coastal Wetlands and Other Waters of the United States*, in OCEAN & COASTAL L. & POL’Y 88, 91 (2007).

is crucial to our legal relationship with wetlands;²⁰ the scope of the definition and the health and well-being of aquatic ecosystems are tightly interrelated.²¹

A. Types of Wetlands

Currently, the U.S. E.P.A. recognizes two broad categories of wetlands: “coastal or tidal wetlands and inland or non-tidal wetlands.”²² Coastal wetlands are characterized by their proximity to the ocean,²³ and are “closely linked” to “estuaries, where sea water mixes with fresh water to form an environment of varying salinities.”²⁴ The fluctuating water levels and changing tides characterize a dynamic habitat that is difficult to define due to its variable nature. Although it poses a challenging environment for many species, coastal wetlands provide an important function as buffer zones for other areas.²⁵

Inland wetlands are commonly found “on floodplains along rivers and streams, in isolated depressions surrounded by dry land, along the margins of lakes and ponds, and in other low-lying areas”²⁶ Many inland wetlands are seasonal, and characteristically dry for at least one season each year.²⁷ The quantity of water present, and the timing of its presence, in part determine the functions of a wetland and its role in the environment.²⁸ Even wetlands that appear dry for significant parts of the year may “provide critical habitat for wildlife exclusively adapted to these areas.”²⁹

²⁰ Kruchek, *supra* note 8. *Contra* Kusler, *supra* note 18 (arguing that one court does not favor one definition over another).

²¹ Kruchek, *supra* note 8.

²² EPA, *supra* note 11. Scientists and policy experts recognize more than two categories. However, this is an area of contention that will not be addressed in this paper.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* There is a history of wetlands being cleared to prevent disease (malaria) and converted into farmland in nutrient rich areas. EPA, *supra* note 11. In addition, wetlands have increasingly been drained and filled for development purposes. *Id.*

²⁶ EPA, *supra* note 11.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.* See also *Solid Waste Agency of N. Cook County v. U.S. Army Corps of Eng'rs (SWANNC)*, 531 U.S. 159, 174 (2001) (land providing habitat to migratory birds but without

B. *Why Protect Wetlands?*

Wetlands serve many essential purposes and affect our lives in more ways than we realize.³⁰ Wetlands store and filter water, provide homes for an abundant array of species, and are some of the “most biologically productive natural ecosystems in the world.”³¹ In addition, they provide recreational opportunities, such as fishing, hunting and kayaking.³²

Marshes, a type of wetland, exemplify how wetlands can be particularly helpful to surrounding areas.³³ “Due to their high levels of nutrients, freshwater marshes can sustain vast plant communities that in turn support a wide variety of wildlife within the ecosystem.”³⁴ As a result, marshes sustain a remarkable diversity of species.³⁵

In addition to the significant value they serve as plant and animal habitats, fresh water marshes provide important ecological services. “[N]on-tidal marshes serve to mitigate flood damage [by acting as a buffer] and filter excess nutrients from surface runoff,”³⁶ as well as recharging groundwater aquifers. Marshes “recharge groundwater supplies and moderate stream flow by providing water to streams.”³⁷

Marshes can also serve as a necessary component in preserving water quality.³⁸ In fact, “marshes are so good at cleaning polluted waters

any ‘surface connection’ to other waters was not subject to the Clean Water Act, curtailing the EPA’s ability to regulate isolated waters).

³⁰ Unfortunately, many of the services wetlands provide do not translate into market value. Todd H. Votteler & Thomas A. Muir, *Wetland Protection Legislation*, in U.S. GEOLOGICAL SURVEY, NATIONAL WATER SUMMARY ON WETLAND RESOURCES: UNITED STATES GEOLOGICAL SURVEY WATER SUPPLY PAPER 2425 (2002), available at <http://water.usgs.gov/nwsum/WSP2425/legislation.html>.

³¹ EPA, OFFICE OF WETLANDS, OCEANS AND WATERSHEDS, EPA 843-F-01-002C, FUNCTIONS AND VALUES OF WETLANDS (2001), available at http://www.epa.gov/owow/wetlands/pdf/fun_val.pdf.

³² EPA, *supra* note 11.

³³ *Id.*

³⁴ *Id.*

³⁵ EPA, Marshes, <http://www.epa.gov/owow/wetlands/types/marsh.html> (last visited Feb. 4, 2009).

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

that people are now building replica marshes to treat wastewater. . . .³⁹ Every year, wetlands save societies millions of dollars that otherwise would be spent on drinking water treatment plants.⁴⁰ For example, if the Congaree wetlands near Columbia, South Carolina were destroyed, some estimate “the cost to the community to install a water treatment plant would be \$5 million.”⁴¹

Cleaning polluted waters is crucial during a drought as well as in times of a flood.⁴² A wetland’s ability to protect land during a flood provides significant economic value; notably, the wetlands along the Charles River in Boston, Massachusetts once were estimated to have saved the area \$17 million in potential flood damage.⁴³ Unfortunately, despite this value, many of the services wetlands provide do not currently possess a marketable value.⁴⁴

Wetlands, particularly marshes, can serve as a necessary component in preserving water quality. Regrettably, increasing land developments has caused serious loss of these ecosystems.⁴⁵ Wetlands have been “drained and converted to farmland, filled for housing developments and industrial facilities, and used as receptacles for waste.”⁴⁶ In addition to property development, pollution threatens wetlands’ health and vitality.⁴⁷ Human activities continue to adversely affect wetland ecosystems.⁴⁸

³⁹ EPA, *supra* note 11.

⁴⁰ Citizens for a Green North Tonawanda, *What is a Wetland?*, <http://www.geocities.com/ntgreencitizen/wetlandgraphic.html> (last visited Feb. 4, 2009).

⁴¹ *Id.*

⁴² *See id.*

⁴³ *Id.* After Hurricane Katrina, it was speculated that “the loss of wetlands [was] . . . a factor in making Katrina more destructive.” Tim Hirsch, *Katrina Damage Based on Wetland Loss*, BBC NEWS, Nov. 1, 2005, available at <http://news.bbc.co.uk/2/hi/americas/4393852.stm>.

⁴⁴ Votteler & Muir, *supra* note 30.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *See id.*

⁴⁸ In the last two centuries, more than half of the original wetlands in the lower forty-eight United States have been destroyed. Podolsky, *supra* note 1, at 62 (citing WHITE HOUSE OFF. ON ENVTL. POL’Y, PROTECTING AMERICA’S WETLANDS: A FAIR, FLEXIBLE, AND EFFECTIVE APPROACH (1993)). *But see* U.S. Gen Accounting Office, *Wetlands Overview: Problems With Acreage Data Persist* (1998) (“The consistency and reliability of wetlands acreage data reported by the federal agencies are questionable.”).

Recently, society has begun to arrive at a greater understanding and respect for the functions of wetlands, as well as the services they provide.⁴⁹ While a number of the states in the U.S. have enacted legislation to combat such threats,⁵⁰ “diligence is needed to assure that these protective measures are actively enforced.”⁵¹

The use of Federal regulations protecting wetlands began in 1972 under the Clean Water Act, originally known as the 1972 Federal Water Pollution Control Act.⁵² The Clean Water Act serves as the basis of the majority of Federal regulation of wetlands,⁵³ it discourages construction that endangers wetlands and reinforces treaties like the Ramsar Convention, that on their own hold little enforcement power.⁵⁴ Section 404 of the Clean Water Act establishes the federal authority to regulate

⁴⁹ Wetlands also “help regulate water levels within watersheds; improve water quality; reduce flood and storm damages; provide important fish and wildlife habitat; and support hunting, fishing, and other recreational activities.” Additionally, “the construction of dams changes the course and ecology of rivers[;] . . . development and tourism activities threaten the biodiversity of lakes; fens, mires and bogs are being exploited industrially or converted into agricultural land; and climate change has large implications for many wetland areas.” Birdlife International, Wetlands and the Ramsar Convention, <http://www.birdlife.org/action/change/ramsar/index.html> (last visited Feb. 4, 2009).

⁵⁰ See, e.g., Ass’n of State Wetland Managers, State Wetland Programs, available at <http://www.aswm.org/swp/statewetlandprogram9.pdf> (last visited Feb. 4, 2009) (Amongst other states, Florida has a program independent of any federal system for regulating the dredging and filling wetlands).

⁵¹ EPA, Marshes, *supra* note 35.

⁵² 33 U.S.C. § 1344 (2000). Under the Act, “more than 200 million acres of private property came under the control of the EPA simply by the EPA’s designation of private property as a wetland.” See Land Use Control Tutorial, <http://www.sovereignty.net/p/land/landusetutorial.htm> (last visited Feb. 4, 2009).

⁵³ The Federal Water Pollution Control Act (CWA) § 404 program and the Rivers and Harbors Act of 1899 § 10 Program “form the foundation of the Federal government’s coastal wetlands regulatory efforts.” Connolly, *supra* note 19, at 88. “Through these statutes, the Corps (and EPA in some contexts) has permitting authority for many activities, including construction and dredging, in the nation’s ‘navigable waters.’” *Id.* While the definition of “navigable waters” is used to mean “waters of the United States” in the CWA, older laws like the Rivers and Harbors Act tied regulation closely to navigability. *Id.* (citing 33 U.S.C. § 1362 (7) (2000)). Thus, the Rivers and Harbors Act definition is narrower in scope; it prohibits the construction of any obstruction “to the navigable capacity of any of the waters of the United States . . .” Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 403 (2000).

⁵⁴ Connolly, *supra* note 19, at 88; Kruckek, *supra* note 8.

the filling of wetlands.⁵⁵ While state and national wetland regulations function as a foundation for wetland protection,⁵⁶ international treaties such as the Ramsar Convention can serve as a framework for change.⁵⁷

III. RAMSAR CONVENTION

The Ramsar Convention provides an international framework that actively advances wetland conservation.⁵⁸ The Ramsar Convention (“the Convention”) promotes three broad objectives: (1) to designate sites as wetlands of international importance;⁵⁹ (2) to apply the “wise use” concept to all wetlands;⁶⁰ and (3) to engage in international cooperation.⁶¹ As of the 10th Conference of the Contracting Parties in October-November 2008, there were 158 Contracting Parties to the Convention,⁶² with 1,801 wetland sites⁶³ designated for inclusion in the

⁵⁵ 33 U.S.C. § 1344. Under § 404, jointly administered by U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA), the discharge of material into waters of the United States, including wetlands, requires a permit from the Corps based on regulations developed in conjunction with the EPA. *Id.* The Federal regulations implementing § 404 of the Clean Water Act define wetlands as “swamps, marshes, bogs, and similar areas.” 33 C.F.R. part 230.3(t) (2000). However, there is still considerable controversy over the meaning of “wetlands,” which itself is a derivative of the contested definition of “navigable waters.” In the summer of 2006, the U.S. Supreme Court made a controversial and heavily debated decision in *Rapanos v. United States* that “indicate[d] the Court’s continuing willingness to curtail the jurisdiction of the Corps of Engineers, and its continued suspicion of Congress’ power to regulate wetlands pursuant to the Commerce Clause.” Welsh, *supra* note 19 (citing *Rapanos v. United States*, 547 U.S. 715 (2006)).

⁵⁶ Connolly, *supra* note 19.

⁵⁷ Ramsar Convention, *supra* note 2.

⁵⁸ The Ramsar Archives, Wetlands in Europe: An Overview, http://www.ramsar.org/wn/w.n.europe_abstract.htm (last visited Feb. 4, 2009).

⁵⁹ Ramsar Convention, *supra* note 2, at art. 3.1.

⁶⁰ *Id.* at art. 3.2.

⁶¹ *Id.* at art. 5; RAMSAR CONVENTION SECRETARIAT, THE RAMSAR CONVENTION MANUAL: A GUIDE TO THE CONVENTION ON WETLANDS 6 (4th ed. 2006), available at http://www.ramsar.org/lib/lib_manual2006e.htm [hereinafter RAMSAR MANUAL].

⁶² Contracting Parties to the Ramsar Convention on Wetlands, http://www.ramsar.org/key_cps.htm (last visited Feb. 4, 2009). The U.S. signed onto the Ramsar Convention in 1987. See Ramsar: The Convention on Wetlands of International Importance, available at <http://www.ramsarcommittee.us/documents/RamsarFactSheet.pdf>.

⁶³ Ramsar Sites in Order of Addition to the Ramsar List of Wetlands of International Importance, available at http://www.ramsar.org/sitelist_order.pdf. Despite the listed site number, there are presently only 1,785 wetland sites (sixteen less than reported) because of delisting, relisting, incorporation and the rationalization of sites. *Id.*

Ramsar List of Wetlands of International Importance,⁶⁴ protecting a total surface area of 163,142,801 hectares.⁶⁵

A. Goals and Objectives

As an intergovernmental treaty providing the basis for national and international cooperation for the conservation and wise use of wetlands,⁶⁶ the Convention has been used to help slow recent and future infringement on wetland habitats. The Convention has addressed wetland diminution by having areas voluntarily designated as “Wetlands of International Importance.”⁶⁷ Ramsar emphasizes wetlands’ importance as vital ecosystems that supply goods and services for human beings, as well as their role in biodiversity conservation.⁶⁸

One of the most important articles of the Ramsar Convention is Article 3.1, which outlines the principles of the “wise use” component.⁶⁹ Once a site has been designated, the contracting party must make sure “to promote the conservation of the site,”⁷⁰ as well as all other wetlands in the party’s land mass.⁷¹ The benefits of joining the Convention include the support of the Ramsar Secretariat, which facilitates wetland protection by “preparing wise use guidelines, creating training opportunities and providing access to financial resources.”⁷²

Sites receiving the distinction of “Wetlands of International Importance” tend to see increased tourism and recreation, creating

⁶⁴ Convention on Wetlands of International Importance, *The List of Wetlands of International Importance*, Ramsar, Iran, 1971, available at <http://www.ramsar.org/sitelist.pdf>.

⁶⁵ *Id.* As of today, there are twenty-five U.S. sites designated as wetlands of international importance. *Id.*

⁶⁶ See Ramsar Convention, *supra* note 2.

⁶⁷ *Id.* See Connolly, *supra* note 19 (detailing the listing process of “wetlands of international importance).”

⁶⁸ Rachele Adam, *Waterbirds, The 2010 Biodiversity Target, and Beyond: AEWA’s Contribution To Global Biodiversity Governance*, 38 ENVTL. L.J. 87 (2008).

⁶⁹ Ramsar Convention, *supra* note 2, at art. 3.1.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² See Ramsar: The Convention on Wetlands of International Importance, *supra* note 62; see also Votteler & Muir, *supra* note 44 (The U.S does not receive funds or access to funds upon designation, but eighteen of the twenty-two sites recently surveyed were assisted with grant applications and other funding requests.).

economic growth.⁷³ Designation may lead to zoning protections as well.⁷⁴ However, Ramsar is not a regulatory body;⁷⁵ it does not place restrictions on nations or landowners and its resolutions do not create binding international law.⁷⁶ Ramsar's recommendations are nevertheless taken very seriously by its Signatories.⁷⁷

One of the Ramsar Convention's long-term goals is a general heightening of societal awareness regarding wetlands. In order to help meet this objective, government representatives meet every three years for a Conference of the Contracting Parties (COP), "the policy-making organ of the Ramsar Convention that reviews the general trends in the implementation of the Convention and adopts decisions to improve the way the Convention works."⁷⁸ As "the first of the modern global conservation treaties,"⁷⁹ Ramsar is leading the way in wetland recognition and is "the only one dedicated to a particular ecosystem type."⁸⁰ Despite differing laws between nations regarding wetlands, the Ramsar treaty has nonetheless been successful at spreading awareness, integrating its aspirations with others and adopting strong objectives.⁸¹

B. Wetlands Broadly Defined

Under the Ramsar Convention, wetlands are very broadly defined by Articles 1.1 and 2.1 as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth

⁷³ Royal C. Gardner & Kim Diana Connolly, *The Ramsar Convention on Wetlands: Assessment of International Designations within the United States*, 37 ENV'T L. REP. 10089 (2007) (citing RAMSAR MANUAL, *supra* note 61).

⁷⁴ *Id.*

⁷⁵ *See* Ramsar Convention, *supra* note 2.

⁷⁶ Ramsar: The Convention on Wetlands of International Importance, *supra* note 62.

⁷⁷ Gardner & Connolly, *supra* note 73.

⁷⁸ World Wide Fund for Nature, Conferences and Events: The Ramsar Convention, http://www.panda.org/about_wwf/what_we_do/freshwater/our_solutions/policy_practice/conferences_events/ramsar/index.cfm (last visited Feb. 4, 2009).

⁷⁹ The Ramsar Convention on Wetlands, Under-Represented Wetland Types in the Ramsar "List of Wetlands of International Importance": Peatlands and the Ramsar Convention, http://www.ramsar.org/types_peatlands.htm (last visited Feb. 4, 2009).

⁸⁰ *See id.*

⁸¹ Gardner & Connolly, *supra* note 73.

of which at low tide does not exceed six meters.”⁸² Article 2.1 provides that wetlands “may incorporate riparian⁸³ and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetland.”⁸⁴ Because the Convention defines wetlands so broadly, countries have discretion in what they declare a wetland, and subsequent land use decisions.⁸⁵ Member states can adapt or modify the definition to fit their geographic conditions and have the freedom to create more detailed systems as a basis for future legislation.⁸⁶

In the U.S., the process of listing a wetland as one of “international importance” can be accomplished by almost anyone; even a single individual can nominate a wetland.⁸⁷ Certain features, such as the presence of an endangered species or the site’s ability to support a particular amount of wildlife, must be present in order to designate a Ramsar wetland.⁸⁸ As part of the nomination procedure, a Ramsar Information Sheet (RIS) must be completed, along with a map of the wetland’s location, and letters of support from local environmental and government figures.⁸⁹ Once a site is designated, the Secretariat expects an update every 6 years as to the wetlands condition.⁹⁰ In addition, if a

⁸² Ramsar Convention, *supra* note 2, at art. 1.1.

⁸³ “Riparian” is defined as “situated or taking place along or near the bank of a river.” MSN Encarta, http://encarta.msn.com/dictionary/_riparian.html (last visited Feb. 4, 2009).

⁸⁴ Ramsar Convention, *supra* note 2, at art. 2.1.

⁸⁵ Ultimately, countries have exclusive sovereignty over their natural resources; the listing of a wetland does not deprive a country of its original authority over the land. Ramsar Convention, Frameworks for Action, *supra* note 8.

⁸⁶ See Kruchek, *supra* note 8. In fact, at one of the more recent Ramsar Conventions, Resolution VIII.23 “asked the Standing Committee to develop and propose to the 8th Meeting of the Conference of the Contracting Parties a procedure for the review of Ramsar site boundaries.” Ramsar, *Resolution VIII.21: Defining Ramsar Site Boundaries More Accurately in Ramsar Information Sheets*, ¶ 4, http://www.ramsar.org/res/key_res_viii_21_e.pdf (last visited Feb. 4, 2009).

⁸⁷ See Ramsar: The Convention on Wetlands of International Importance, *supra* note 62.

⁸⁸ *Id.* There are nine official criteria that make a site designation worthy. *Id.* They will be discussed *infra* notes 101-102.

⁸⁹ Ramsar: The Convention on Wetlands of International Importance, *supra* note 62.

⁹⁰ Ramsar, *Resolution VI.13: Submission of Information on Sites Designated for the Ramsar List of Wetlands of International Importance*, http://ramsar.org/res/key_res_vi.13.htm (last visited Jan. 27, 2009). Ramsar sites where the ecological character is going through changes, has changed, or is likely to change, are recorded in the Montreux Record. See RAMSAR

Ramsar site's ecological character "has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference,"⁹¹ the Ramsar Secretariat is also informed.⁹²

C. Obligations

There are several specific obligations placed on member countries to encourage conservation.⁹³ First, "each member must dedicate at least one wetland for the List of Wetlands of International Importance."⁹⁴ Second, "all member countries must include wetland conservation considerations in their natural resources planning processes and promote the wise use of wetlands within their territory."⁹⁵ Third, member states are required to "establish nature reserves on wetlands within their borders."⁹⁶ Parties are encouraged to promote field research, exchange information among the Parties, and manage wetlands in a way that benefits native waterfowl.⁹⁷ Finally, members are expected to work internationally, particularly in regard to transboundary wetlands. Cooperating internationally on wetland conservation is essential, because of shared water systems, development projects and species that occupy transboundary areas.⁹⁸ The following section will discuss these obligations in further detail.

Compliance with Article 2 of the Ramsar Treaty focuses on the designation of at least one "suitable wetland[] within [each signatory's] territory for inclusion in a List of Wetlands of International

MANUAL, *supra* note 61, at 3.4.5. Additionally, if a party decides to take a site off the Ramsar List or "restricts" its boundaries, the Party is supposed to compensate for that action by creating other "nature reserves." Ramsar Convention, *supra* note 2, at art. 4.2.

⁹¹ Ramsar Convention, *supra* note 2, at art. 3.2.

⁹² See Ramsar, *Resolution IX.15: The Status of Sites in the Ramsar List of Wetlands of International Importance*, ¶ 7, http://ramsar.org/res/key_res_ix_15_e.htm (last visited Feb. 4, 2009).

⁹³ Gardner & Connolly, *supra* note 73. It should also be clarified that the treaty serves the goal of conservation, not preservation. *Id.*

⁹⁴ Ramsar Convention, *supra* note 2, at art. 2.1.

⁹⁵ *Id.* at art. 3.1.

⁹⁶ *Id.* at art. 4.1.

⁹⁷ *Id.* at art. 4.3-4.5.

⁹⁸ *Id.* at art. 5; *see also* Kruchek, *supra* note 8.

Importance.”⁹⁹ In order to make them “suitable”¹⁰⁰ wetlands for listing, they must have “international significance in terms of ecology, botany, zoology, limnology or hydrology.”¹⁰¹ There are nine different criteria for identifying wetlands of international importance, which are divided into two different categories.¹⁰² Category A sites contain “representative, rare or unique wetland types.”¹⁰³ Group B sites consist of wetlands that are “of international importance for conserving biological diversity.”¹⁰⁴

The Convention and the criteria of the “Wetlands of International Importance” have been under constant review during its evolution as a treaty.¹⁰⁵ At the Conference of the Contracting Parties in 1999 (7th Conference), the Convention on Wetlands adopted the “[s]trategic framework and guidelines for the future development of the List of Wetlands of International Importance” to help provide some focus for its long-term goals.¹⁰⁶ The Convention’s original vision was “to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits/services.”¹⁰⁷ The most challenging aspect of Ramsar’s vision may be its international impact.¹⁰⁸ With more than one

⁹⁹ See Ramsar Convention, *supra* note 2, at art. 2.1.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at art. 2.2.

¹⁰² Ramsar Convention Secretariat, The Ramsar Convention on Wetlands: The Criteria for Identifying Wetlands of International Importance, http://www.ramsar.org/key_criteria.htm (last visited Feb. 4, 2009).

¹⁰³ *Id.*

¹⁰⁴ *Id.* (For instance, a site may contain “vulnerable” or “endangered species” that will allow it to be placed on the List of Wetlands of International Importance.).

¹⁰⁵ RAMSAR CONVENTION SECRETARIAT, STRATEGIC FRAMEWORK AND GUIDELINES FOR THE FUTURE DEVELOPMENT OF THE LIST OF WETLANDS OF INTERNATIONAL IMPORTANCE OF THE CONVENTION ON WETLANDS (3d ed. 2006), available at http://www.ramsar.org/key_guide_list2006_e.htm [hereinafter STRATEGIC FRAMEWORK]. At each meeting, the Parties consider recommendations and resolutions. See Gardener & Connolly, *supra* note 73, at 10091.

¹⁰⁶ STRATEGIC FRAMEWORK, *supra* note 105.

¹⁰⁷ *Id.* (“In this context, ‘ecosystem benefits’ are defined in accordance with the Millennium Ecosystem Assessment definition of ecosystem services as ‘the benefits that people receive from ecosystems.’”).

¹⁰⁸ Jonathan Verschuuren, *The Case of Transboundary Wetlands under The Ramsar Convention: Keep the Lawyers Out!*, 19 COLO. J. INT’L ENVTL. L. & POL’Y 49, 52 (2008).

country involved, transboundary issues will arise,¹⁰⁹ which is the basis of the next discussion.

IV. TRANSBOUNDARY IMPLICATIONS

The Ramsar Convention has been influential in international environmental law,¹¹⁰ in part because of its broad-reaching effects on our increasingly interdependent world.¹¹¹ As one scholar has opined, Ramsar's international approach deserves attention because "[p]rotection of international waters is probably the single most regulated issue in international law."¹¹² There is a significant possibility that a wetland may be subject to multiple jurisdictions,¹¹³ and that wetland activities in one country will ultimately affect wetlands in another country.¹¹⁴

In fact, "[a]lmost one third of the world's protected wetlands are transboundary river basins."¹¹⁵ In order "[t]o achieve[] integration the Ramsar Convention Bureau and the Secretariat of the Convention on Biodiversity have joined hands in a River Basin Initiative."¹¹⁶ In

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 49.

¹¹¹ *Id.*

¹¹² *Id.* at 76.

¹¹³ *Id.* at 51.

¹¹⁴ Verschuuren, *supra* note 108, at 49.

¹¹⁵ *Id.* at 51 (citing RAMSAR CONVENTION SECRETARIAT, RAMSAR HANDBOOK FOR THE WISE USE OF WETLANDS, HANDBOOK 17: INTERNATIONAL COOPERATION 13 (3d ed. 2007), available at http://www.ramsar.org/lib/lib_handbooks2006_e17.pdf. A recent report prepared by the World Conservation Monitoring Centre revealed that, "of around 1,000 Ramsar sites surveyed, some 28 percent fell within international river basins." TEMATEA, Resolution VII.19: Guidelines for International Cooperation under the Ramsar Convention, <http://www.tematea.org/?q=node/77> (click on Resolution VII and then VII.19) (last visited Feb. 4, 2009).

¹¹⁶ See Verschuuren, *supra* note 108, at 60 (citing River Basin Initiative Portal, <http://www.riverbasin.org> (last visited Feb. 4, 2009)). "Rivers and their associated ecosystems and biological diversity provide life support for a high proportion of the world's population." The Ramsar Convention on Wetlands, Brief Description of the River Basin Initiative, http://www.ramsar.org/key_rbi_brochure_e.htm (last visited Feb. 4, 2009). At Ramsar's 6th Conference of the Contracting Parties (COP6), the Parties recognized "the inextricable link between water resources and wetlands [and] . . . the need for planning at the river basin scale which involves integration of water resources management and wetland conservation." Ramsar, Resolution VI.23: Ramsar and Water, 1-3, http://ramsar.org/res/key_res_vi.23.htm (last visited Feb. 4, 2009). "Operational Objective 2.2 of the Strategic Plan 1997-2002 approved at the 6th Ramsar Conference urges Parties 'to integrate conservation and wise use

addition to the Convention, the EU Water Framework Directive has promoted the River Basin Approach.¹¹⁷ After all, wetlands are often part of a larger catchment area and interdependent with the rest of the catchment for their well-being.¹¹⁸

Management of transboundary Ramsar sites was the premise of an international conference held in Illmitz, Austria in 2004, at one of Europe's transboundary Ramsar sites: Lake Neusiedl/Fertö.¹¹⁹ The conference commemorated 10 years of successful cooperation between Austria and Hungary, in creating a transboundary national park at the site on April 24, 1994.¹²⁰ Because some of the world's wetlands do not fit neatly into one jurisdiction or another,¹²¹ the Ramsar Convention

of wetlands . . . into national, provincial and local planning and decision making on land use, groundwater management, catchment/river basin and coastal zone planning and all other environmental management.” GER BERGKAMP & BRETT ORLANDO, *WETLANDS AND CLIMATE CHANGE: EXPLORING COLLABORATION BETWEEN THE CONVENTION ON WETLANDS (Ramsar, Iran, 1971) AND THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (1999)*, available at http://www.ramsar.org/key_unfccc_bkgd.htm. In November 2005, at the 9th Conference of Contracting Parties, the Ramsar Scientific and Technical Review Panel put forth that “[m]anagement of wetlands and water resources is most successfully addressed through integrated management at the river (or lake or aquifer) basin scale that is linked to coastal zone management for coastal and near-shore wetlands and that takes into account water allocations for the ecosystems.” Millennium Ecosystem Assessment, MA Synthesis Report on Wetlands and Water, http://www.ramsar.org/wm/w.n.ma_synthesis_available.htm (last visited Feb. 4, 2009).

¹¹⁷ WATER INFORMATION SYSTEM FOR EUROPE, WATER NOTES ON THE IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE, WATER NOTE 1, JOINING FORCES FOR EUROPE'S SHARED WATERS: COORDINATION IN INTERNATIONAL RIVER BASINS (2008), available at http://ec.europa.eu/environment/water/water-framework/pdf/water_note1_joining_forces.pdf; see also Tobias Salathé, International Cooperation for Shared Water Basins and Wetlands, available at http://mab.kav.cas.cz/en/pdf/International_cooperation_SALATHE.pdf (Salathé is a member of the staff of the Ramsar Convention Secretariat; specifically, he holds the position of Senior Adviser for Europe).

¹¹⁸ See Verschuuren, *supra* note 108, at 60 (citing RAMSAR CONVENTION SECRETARIAT, *RAMSAR HANDBOOK FOR THE WISE USE OF WETLANDS, HANDBOOK 7: RIVER BASIN MANAGEMENT* (3d ed. 2007)).

¹¹⁹ Conference on Transboundary Ramsar Sites, Management of Transboundary Ramsar Sites—Chances and Challenges, http://www.ramsar.org/mtg/mtg_austria_transboundary.htm (last visited Feb 4, 2009).

¹²⁰ *Id.*

¹²¹ See *id.* (“Many Wetlands of International Importance are located in border zones of adjoining countries.”).

recognizes that governments must coordinate plans to ensure that shared goals are met regarding conservation efforts.¹²²

Article 5 of the Convention states that “the Contracting Parties shall consult each other about implementing obligations . . . especially in the case of a wetland extending over the territories of more than one Contracting Party or where a water system is shared by Contracting Parties.”¹²³ Article 5 also recommends that Parties “co-ordinate and support present and future policies and regulations concerning the conservation of wetlands.”¹²⁴ Transboundary wetland sites can present a challenge to conservation efforts, especially in terms of “habitat management, regional planning,” sustainable development initiatives and wetland-related “environmental education and public awareness activities.”¹²⁵ As such, changes must be made in how we address the treatment of shared wetlands.¹²⁶

At the 2004 conference in Austria, participants recommended that parties “treat transboundary sites as ecological units and . . . recognize their functional and ecological unity,”¹²⁷ while involving actors “of all levels”¹²⁸ and making sure to “match the appropriate decision-making level to the problem.”¹²⁹ Holding meetings for parties to strengthen

¹²² See *infra* note 158 (mission statement of Ramsar). See also Bradley Karkkainen, *Marine Ecosystem Management & A “Post-Sovereign” Transboundary Governance*, 6 S.D. INT’L L.J. 113 (2004).

¹²³ Ramsar Convention, *supra* note 2; see also Michael Bowman, *The Ramsar Convention on Wetlands: Has it Made a Difference?*, in YEARBOOK OF INTERNATIONAL CO-OPERATION ON ENVIRONMENT AND DEVELOPMENT: CURRENT ISSUES AND KEY THEMES 61 (2003), available at http://www.ramsar.org/key_law_bowman2.htm.

¹²⁴ Ramsar Convention, *supra* note 2.

¹²⁵ INTERNATIONAL CONFERENCE ON TRANSBOUNDARY RAMSAR SITES, MANAGEMENT OF TRANSBOUNDARY RAMSAR SITES—CHANCES AND CHALLENGES (2004), available at http://www.ramsar.org/wm/w.n.announcement_austria_transboundary_mtg.pdf.

¹²⁶ See NICK DAVIDSON, DEPUTY SEC’Y GEN., RAMSAR CONVENTION ON WETLANDS, UNFCCC SYNERGIES WORKSHOPS, THE RAMSAR CONVENTION AND SYNERGIES WITH OTHER CONVENTIONS (2003), available at http://unfccc.int/files/adaptation/adverse_effects_and_response_measures_art_48/application/pdf/200307_ramsar_synergies_meas.pdf.

¹²⁷ Conference on Transboundary Ramsar Sites, Management of Transboundary Ramsar Sites—Chances and Challenges: Summary of a Conference Held in Illmitz, Austria, http://www.ramsar.org/mtg/mtg_austria_transboundary2.htm (last visited Feb. 4, 2009).

¹²⁸ *Id.*

¹²⁹ *Id.*

communication and develop strategies is an essential first step toward transboundary solutions.¹³⁰

The Ramsar Convention also continues to enact broad measures for states to collaborate and attain “integrated management.”¹³¹ Integrated management combines “physical, technical, administrative, and legal practices” to protect wetlands “in a manner designed to increase combined benefits or achieve a more equitable apportionment of benefits.”¹³² Despite Ramsar’s lack of strong enforcement power, the Convention seems to “strengthen domestic commitments to wetlands protection” just by the act of enlisting parties.¹³³

Today, almost all of the main “transboundary rivers and lakes in Europe and North America fall under the scope of the 1992 United Nations Economic Commission for Europe (UNECE) Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes.”¹³⁴ Ramsar’s understanding and incorporation

¹³⁰ See *id.*

¹³¹ Ramsar, *The Ramsar Strategic Plan 2003-2008*, Operational Objective 12.1, http://www.ramsar.org/key_strat_plan_2003_e.htm#001201 (last visited Feb. 4, 2009); see also THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES (IUCN), *THE RAMSAR CONVENTION IN LAO PDR* (2008), available at http://cmsdata.iucn.org/downloads/ramsar_brief_brochure.pdf.

¹³² Groundwater Glossary: The Groundwater Foundation, <http://www.groundwater.org/gi/gwglossary.html> (last visited Feb. 4, 2009).

¹³³ ZMARAK SHALIZI, *WORLD DEVELOPMENT REPORT 2003*, THE WORLD BANK, WORLD BANK PUBLICATIONS 162 (2003).

¹³⁴ See Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, Finland, Mar. 17, 1992, 31 I.L.M. 1312, available at <http://www.unece.org/env/water/pdf/watercon.pdf> [hereinafter 1992 UNECE Helsinki Convention]. See also U.N. ECON. COMM’N FOR EUROPE, *THE 1992 UNECE CONVENTION ON THE PROTECTION AND USE OF TRANSBOUNDARY WATERCOURSES AND INTERNATIONAL LAKES* (2004), available at http://www.unece.org/env/water/documents/brochure_water_convention.pdf. Considered one of the most influential conferences in history, the 1972 United Nations Stockholm Conference on the Environment was “widely credited with ushering in the era of modern international environmental law.” Its goal was “the protection of waters of the Baltic region with the help of transboundary cooperation.” Karkkainen, *supra* note 122, at 134 (citing Robert W. Knecht, *Institutional Implications of Sustainable Development at the Regional Scale*, in *REGIONAL SEAS: TOWARDS SUSTAINABLE DEVELOPMENT* (S. Belfiore et al. eds., 1996)).

of other treaties such as the Helsinki Convention is indispensable to ensure that similar goals are being reached in protecting wetlands.¹³⁵

While there are quite a few regulatory mechanisms for shared wetlands around the world,¹³⁶ the most widely known may be the “tripartite mechanism established by Denmark, Germany, and the Netherlands regarding the Wadden Sea.”¹³⁷ Other examples include Lake Victoria and the Lake Chad Basin,¹³⁸ which involve numerous African nations working together to achieve similar goals.

There are many different factors at play when several countries share a wetland, including the social and economic interests at stake. The Ramsar Convention compels parties to directly or indirectly contact each other and seek advice before attempting to satisfy designation, especially regarding transboundary arrangements and shared water systems.¹³⁹

V. WISE USE COMPONENT

The “wise use” component of the Ramsar treaty¹⁴⁰ is one of the most important aspects of the treaty; it is also one of the most misunderstood aspects, because it has been defined and redefined so many times.¹⁴¹ The

¹³⁵ See, e.g., Ramsar, *Resolution IX.4: The Ramsar Convention and Conservation, Production and Sustainable Use of Fisheries Resources*, http://www.icriforum.org/secretariat/doc/RAMSAR_fisheries_resix04.pdf (last visited Feb. 4, 2009).

¹³⁶ Salathé, *supra* note 117. (There were over ninety designated shared wetlands in Europe as of 2007.)

¹³⁷ Bowman, *supra* note 123 (citing Jens A. Enemark, *Wise Use of the Wadden Sea, in TOWARDS THE WISE USE OF WETLANDS*, GLAND: RAMSAR CONVENTION BUREAU (T. J. Davis ed., 1993)).

¹³⁸ See *id.* “The World Wildlife Fund (WWF) is working to promote management planning at the Lake Chad basin scale with several regional and global partners: the Lake Chad Basin Commission (LCBC) and its five member states, the Ramsar Convention secretariat (Ramsar Bureau), the Global Environment Facility (GEF, through the World Bank and UNDP), and NGOs including the Nigerian Conservation Foundation and IUCN—The World Conservation Union.” Global Water Partnership, “*Transboundary: Reversal of land and water degradation in Lake Chad*,” http://www.gwptoolbox.org/index.php?option=com_case&id=155 (last visited Feb. 4, 2009).

¹³⁹ 6th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands, *supra* note 90, ¶ 15 (Contact between parties may simply involve setting up a meeting to discuss their goals for the wetland.)

¹⁴⁰ Ramsar Convention, *supra* note 2, at art. 3.1.

¹⁴¹ Verschuuren, *supra* note 108, at 57. Although “wise use” was never technically defined in the original text, Recommendation 1.5 was passed, which provided “wise use of wetlands

concept was first defined at the third conference in Regina, Canada in 1987.¹⁴² It was decided that “the wise use concept provides that individuals may utilize the natural productivity and biodiversity of a site as long as the basic ecological functioning of the wetland is not disturbed.”¹⁴³

A. Understanding Wise Use

The latest definition of “wise use” comes from the 2005 Convention of the Parties, which specified that “[w]ise use of wetlands is the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development.”¹⁴⁴ The Convention defines “ecological

involves maintenance of their ecological character, as a basis not only for nature conservation, but for sustainable development.” Ramsar, *Recommendation 1.5: National Wetland Inventories*, http://www.ramsar.org/rec/key_rec_1.05e.pdf (last visited Feb. 4, 2009). In 1987, the Parties to the Convention adopted a definition of ‘wise use’ which emphasized maintaining “the natural properties of the ecosystem.” Ramsar, *Recommendation 3.3: Wise Use of Wetlands*, http://www.ramsar.org/rec/key_rec_3.03e.pdf (last visited Feb. 4, 2009). *But see* David Farrier & L. Tucker, *Wise Use of Wetlands under the Ramsar Convention: A Challenge for Meaningful Implementation of International Law*, 12 J. ENV’T L. 21, 21-42 (2000), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=230093 (The authors state that a conservation-based approach does not sit well with human interventions, which are inherent in the concept of wise management: “It could be argued that the more holistic approaches towards environmental management . . . have rendered the Ramsar Convention outmoded. If this is the case, it is in no small way due to the failure to develop more effectively the wise management concept.”). Today, according to the United Nations Environment Programme, “wise use” is defined as “sustainable utilization for the benefit of humankind in a way compatible with the maintenance of the natural properties of ecosystems.” United Nations Environment Programme, List of Acronyms and Glossary Terms, <http://www.unep.org/dec/online/manual/Resources/Glossary/tabid/69/Default.aspx?letter=W> (last visited Feb. 4, 2009).

¹⁴² Ramsar, *Recommendation 3.3*, *supra* note 141.

¹⁴³ See Kruchek, *supra* note 8 (citing Michael Smart, *The Ramsar Convention: Its Role in Conservation and Wise Use of Wetland Biodiversity*, in WETLANDS, DIVERSITY AND THE RAMSAR CONVENTION: THE ROLE OF THE CONVENTION ON WETLANDS IN THE CONSERVATION AND WISE USE OF BIODIVERSITY (A.J. Hails ed., 1997)).

¹⁴⁴ Ramsar, *Resolution IX.1 Annex A: A Conceptual Framework for the Wise Use of Wetlands and the Maintenance of their Ecological Character*, ¶ 22, http://www.ramsar.org/res/key_res_ix_01_annexa_e.pdf (last visited Feb. 4, 2009) [hereinafter *Annex A*]; see Verschuuren, *supra* note 108, at 57. “The phrase ‘in the context of sustainable development’ is intended to recognize that whilst some wetland development is inevitable and that many developments have important benefits to society, developments can be facilitated in sustainable ways by approaches elaborated under the Convention, and it is not appropriate to imply that ‘development’ is an objective for every wetland.” STRATEGIC FRAMEWORK, *supra* note 105.

character” as “the sum of the biological, physical, and chemical components of the wetland ecosystem, and their interactions, which maintain the wetland and its products, functions, and attributes.”¹⁴⁵ This change in language reflects a change in approach, and aligns the Ramsar Convention closer with other international conventions.¹⁴⁶

However, even after modifying the definition numerous times, the meaning of “wise use” is still not completely clear. According to the Treaty, a Party can “satisfy the current obligation of ‘wise use’ by adopting national wetland legislation or policies, by implementing programs on wetland inventories, monitoring, research and education, and by developing plans to ‘take action’ at individual wetland sites.”¹⁴⁷ Essentially, the wise use obligation involves making beneficial use of the land with respect to human development without producing negative consequences for future generations.¹⁴⁸ In addition, “wise use” is encouraged for *all* wetlands, not just those listed as Wetlands of International Importance.¹⁴⁹ Article 3.1, which outlines the principles of “wise use,” discusses the need for member states to “formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory.”¹⁵⁰

¹⁴⁵ Ramsar, *Resolution VII.10: Wetland Risk Assessment Framework*, ¶ 11, www.ramsar.org/res/key_res_vii.10e.doc (last visited Feb. 4, 2009).

¹⁴⁶ Verschuuren, *supra* note 108, at 58. Ramsar’s language has been clarified and made similar to the language used in other treaties.

¹⁴⁷ Gardner & Connolly, *supra* note 73.

¹⁴⁸ See Ramsar Convention, *supra* note 2. This model is akin to the amorphous concept of sustainability.

¹⁴⁹ Kruchek, *supra* note 8. It is to be noted that “the ‘wise use’ principle inscribed in Article 3.1 of the Convention in 1971, and its definition and application by the Conference of the Contracting Parties, have been established and have evolved completely independently from the so-called ‘wise use movement’ that has emerged in recent years in North America.” RAMSAR CONVENTION SECRETARIAT, RAMSAR INFORMATION PAPER NO. 7: THE RAMSAR CONCEPT OF “WISE USE” (2007), available at <http://www.ramsar.org/about/info2007-07-e.pdf>. “The use of the same term does not necessarily indicate that there is a commonality of understanding and/or purpose.” *Id.*

¹⁵⁰ Ramsar Convention, *supra* note 2, at art. 3.1. This definition was later added to the text; the concept of wise use was never actually debated in the original Convention. The first goal was only to promote wise use, not to guarantee it. *Id.*

The Ramsar Treaty also speaks of “co-management” and “sustainable utilization.”¹⁵¹ “Sustainable utilization” is defined as “human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations”¹⁵² and is considered “wise use” under the Strategic Plan adopted at the Conference of Contracting Parties of 1996.¹⁵³ “Co-management,” or “cooperative management,” is considered “the active participation in the management of a wetland by the community of all individuals and groups having some connection with, or interest in, that wetland.”¹⁵⁴ Ultimately, the objective of co-management is “to achieve a sustainable utilization of the wetland’s resources” through allocating responsibility to those “who work and live in and near the wetland.”¹⁵⁵

It is also important to consider the ramifications of transboundary agreements when implementing methods of “wise use.”¹⁵⁶ Advice concerning the “wise use” concept was given at the fifth Conference of the Parties at Kushiro, Japan.¹⁵⁷ The Convention called for cooperation between neighbors, asserting that sites are heavily affected by decisions taken outside their boundaries.¹⁵⁸ The success of the Ramsar Treaty and its “wise use” requirement depends, to a degree, on how it works with other government regulations.¹⁵⁹ After all, the Convention’s mission statement is: “the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a

¹⁵¹ Verschuuren, *supra* note 108, at 122.

¹⁵² See Recommendations of the Regina Conference, Annex to the Regina Recommendations: Information on Wise Use of Wetlands Specified under Article 3 of the Ramsar Convention, http://www.ramsar.org/rec/key_rec_3_annex.htm (last visited Feb. 4, 2009).

¹⁵³ See STRATEGIC FRAMEWORK, *supra* note 105.

¹⁵⁴ Michael Bowman, *The Ramsar Convention Comes of Age*, NETH. INT’L L. REV., XLII: 1-52 (1995), available at http://www.ramsar.org/key_law_bowman.htm (citing GORDON CLARIDGE & BERNARD O’CALLAGHAN, COMMUNITY INVOLVEMENT IN WETLAND MANAGEMENT: LESSONS FROM THE FIELD (Wetlands Int’l 1997)).

¹⁵⁵ See *id.*

¹⁵⁶ See Ramsar Convention, *supra* note 2, at art. 3.1.

¹⁵⁷ See Kruczek, *supra* note 8.

¹⁵⁸ See *id.* “The United States partially satisfies its obligation of general wise use through its continued adherence to federal environmental regulations, including § 404 of the Clean Water Act.” See Welsh, *supra* note 19, at 210.

¹⁵⁹ *Id.*

contribution towards achieving sustainable development throughout the world”¹⁶⁰

Despite its broad language, particularly considering the “wise use” requirement, “documents published under the Ramsar Convention framework include much greater detail concerning the management of protected sites” than other conventions.¹⁶¹ For instance, the Treaty specifically asks “Parties to the Ramsar Convention [to] formulate and implement their planning law so as to promote the conservation of ‘Ramsar sites.’”¹⁶² In contrast, while the African Convention on the Conservation of Nature and Natural Resources contains certain “specific requirements,” its provisions are not as precise or detail-oriented as those found in the Ramsar Treaty.¹⁶³ Nonetheless, Ramsar’s provisions are not legally binding; while one Party may have a strong commitment to wise use, another may not.¹⁶⁴

In order to assist and encourage member states to implement the Convention’s plans, the Ramsar Secretariat has produced guidelines for management planning of designated Ramsar sites and other wetlands.¹⁶⁵ Article 6’s main task is to “review and promote the implementation” of the Convention.¹⁶⁶ The Secretariat has even created a center to help countries attain their obligation of wise use.¹⁶⁷

¹⁶⁰ RAMSAR MANUAL, *supra* note 62, § 4.2.

¹⁶¹ Verschuuren, *supra* note 108, at 57.

¹⁶² *Id.*

¹⁶³ *See id.* at 56.

¹⁶⁴ Connolly, *supra* note 19, at 88; Kruchek, *supra* note 8.

¹⁶⁵ United Nations Environment Programme, Guidelines, Manual, and Handbooks on Implementation of the Ramsar Convention, <http://www.unep.org/dec/onlinemanual/Compliance/InternationalCooperation/GuidanceMaterials/Resource/tabid/707/Default.aspx> (last visited Feb. 4, 2009). The written guidelines provide advice on incorporating good practice in management planning. These good practices include: “adaptive management; integrated monitoring; environmental, social, and economic impact assessment; cost-benefit analysis; zoning and multiple use; design and maintenance of buffer zones; and application of the precautionary approach.” *See id.*

¹⁶⁶ Ramsar Convention, *supra* note 2, at art. 6.1.

¹⁶⁷ Ramsar, The Wise Use Resource Centre, http://www.ramsar.org/wurc/wurc_index.htm (last visited Feb. 4, 2009).

In addition, Article 3.2 of the Convention makes certain that the status of a listed site is kept up-to-date.¹⁶⁸ “Each Contracting Party shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change”.¹⁶⁹ The Montreux Record¹⁷⁰ identifies Ramsar sites whose biodiversity is under particular pressure in the face of “technological developments, pollution or other human interference.”¹⁷¹ In addition to pollution and construction, climate change is an emerging biological pressure that will heavily affect many wetlands;¹⁷² wetlands are inextricably linked to the effects of changes in climate.¹⁷³ The next section addresses these concerns and examines what is being done by the Ramsar Convention to tackle climate change through wise use.

B. *The Wise Use Concept in Relation to Climate Change*

There is increasing awareness that wetland conservation and “wise use” cannot be realized without taking climate change into consideration.¹⁷⁴ According to Assessment Reports by the Intergovernmental Panel on Climate Change,¹⁷⁵ “climate changes will

¹⁶⁸ Ramsar Convention Secretariat, Keeping Ramsar Site Information Up to Date: What do we know about Wetlands of International Importance? http://www.ramsar.org/wn/w.n.ris_status.htm (last visited Feb. 4, 2009).

¹⁶⁹ STRATEGIC FRAMEWORK, *supra* note 105.

¹⁷⁰ The Montreux Record allows parties to voluntarily list Ramsar sites that are having problems. This approach to non-compliance “helps parties to generate public awareness, mobilize financial resources (if necessary), and build political consensus to undertake the necessary measures.” United Nations Environment Programme, Compliance Mechanisms, <http://www.unep.org/dec/onlinemanual/Compliance/NegotiatingMEAs/ComplianceMechanisms/tabid/429/Default.aspx> (last visited Feb. 4, 2009).

¹⁷¹ RAMSAR CONVENTION BUREAU, *supra* note 3; *see* Connolly, *supra* note 19.

¹⁷² RAMSAR SECRETARIAT AND SCIENTIFIC AND TECHNICAL REVIEW PANEL AND THE SECRETARIAT OF THE CBD, WATER, WETLANDS, BIODIVERSITY AND CLIMATE CHANGE: PROVISIONAL OUTCOMES OF AN EXPERT MEETING, 23-24 MARCH, 2007, GLAND, SWITZERLAND 66 (2007), available at <http://www.cbd.int/doc/case-studies/wtr/cs-wtr-ramsar-en.pdf> [hereinafter BIOLOGICAL DIVERSITY].

¹⁷³ *Id.* at i-ii.

¹⁷⁴ BERGKAMP & ORLANDO, *supra* note 116.

¹⁷⁵ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SECOND ASSESSMENT SYNTHESIS OF SCIENTIFIC-TECHNICAL INFORMATION RELEVANT TO INTERPRETING ARTICLE 2 OF THE

lead to an intensification of the global hydrological cycle and can have major impacts on regional water resources.”¹⁷⁶ Climate change may also lead to shifts in the geographical distribution of wetlands.¹⁷⁷ This is a serious threat because wetlands, particularly peatlands,¹⁷⁸ are “more important as carbon stores than any other biome.”¹⁷⁹

Wetlands are critical to mitigating climate change because “they have an important role in both carbon storage and the regulation of greenhouse gas emissions.”¹⁸⁰ Climate change will affect water quantity and quality,¹⁸¹ disrupt the habitats of essential members of the food chain,¹⁸² and diminish the resources used by humans.¹⁸³ Overall, increases in temperature, sea-level, and changes in precipitation could create a reduction in wetland-generated benefits and services that are crucial to our planet.¹⁸⁴

Resolution VIII.3 was proposed to address the effects of climate change on wetlands at the 8th Meeting of the Parties in Valencia, Spain in 2002.¹⁸⁵ The delegates recognized a need to mitigate the effects of global warming and wetlands’ potential role¹⁸⁶ in helping to slow the

UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (1995), *available at* <http://www.ipcc.ch/pdf/climate-changes-1995/2nd-assessment-synthesis.pdf>.

¹⁷⁶ *Id.* at 3.12.

¹⁷⁷ *Id.* at 3.10.

¹⁷⁸ BIOLOGICAL DIVERSITY, *supra* note 172.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ BERGKAMP & ORLANDO, *supra* note 116, at 2.2.3. Water demand is projected to increase steadily during the coming decades. However, climate change is expected to lead to a decrease in water availability. *Id.* at 2.2.6.

¹⁸² *Id.* at 1. Loss of wetlands will primarily affect waterfowl, fish, and amphibians. *Id.* at 2.2.

¹⁸³ *Id.* at 2.2. (The benefits to humans include water for drinking, fish and fruit to eat, reeds for thatch roofs, timber for construction, and peat and fuelwood for fire.)

¹⁸⁴ *Id.*

¹⁸⁵ Ramsar, *Resolution VIII.3: Climate Change and Wetlands: Impacts, Adaptation, and Mitigation*, ¶ 1, http://www.ramsar.org/res/key_res_viii_03_e.pdf (last visited Jan. 27, 2009).

¹⁸⁶ Wetlands, especially peatlands, are “significant carbon stores.” See BIOLOGICAL DIVERSITY, *supra* note 172, at 22. Thus, “the role of . . . conservation also needs to be considered in the development of climate change mitigation strategies.” See BERGKAMP & ORLANDO, *supra* note 115, at 1. Furthermore, “[t]he Convention’s Parties at the [8th Conference] recognized the issues of synergies between Multilateral Environmental Agreements (MEA’s), and of climate change, as high priorities[,] . . . recognizing that the goals of sustainable use of water and wetlands cannot be achieved without taking into account

process.¹⁸⁷ Further, significant efforts were made at that time by countries wishing to address climate change, “including those reflected in the 2001 Marrakesh Declaration, the Marrakesh Accords, and the 2002 Delhi Ministerial Declaration on Climate Change and Sustainable Development.”¹⁸⁸ These declarations encourage research on climate change, in order to combat its adverse affects within a suitable framework.¹⁸⁹ The same is being done by the Ramsar Convention through collecting information and the creation of support systems.¹⁹⁰

At the 9th meeting of the Contracting Parties, the Scientific and Technical Review Panel (STRP) of the Ramsar Convention was requested in advance to continue research on the threat of global warming.¹⁹¹ The “IPCC [Intergovernmental Panel on Climate Change] prepare[d] a Technical Paper on the relationship between wetlands and climate change, in time for consideration at the second STRP meeting prior to COP9” for consideration by the parties.¹⁹² Of particular interest at the meeting was the difference between terms like “ecosystem services” and “ecosystem benefits” and how they internationally affect policy.¹⁹³ Such definitions¹⁹⁴ can have a tremendous impact on legal

climate change . . .” Nick Davidson, Deputy Sec’y Gen., Ramsar Convention on Wetlands, Statement to the 15th Session of the Subsidiary Body for Scientific and Technological Advice of the Parties to the United Nations Framework Convention on Climate Change. (June 4-13, 2003), available at http://www.ramsar.org/speech/speech_unfccc_sbsta15_kouvelis.htm.

¹⁸⁷ See Ramsar, *Resolution VIII.3*, *supra* note 185.

¹⁸⁸ *Id.* ¶ 9.

¹⁸⁹ *Id.*

¹⁹⁰ BERGKAMP & ORLANDO, *supra* note 115, at 3.2.1-3.5.3.

¹⁹¹ Cf. Ramsar, *The Ramsar Strategic Plan 2003-2008*, Operational Objective 3.4.8, http://www.ramsar.org/key_strat_plan_2003_e.htm#a3o4o8 (last visited Feb. 4, 2009) [hereinafter *Strategic Plan*] (The request stems from the ongoing concern over climate change that was made an operational objective at the eighth meeting of the Contracting Parties in Valencia, Spain). The Ramsar Strategic Plan and associated Work Plan set out the actions expected or requested of the Parties, the Standing Committee, the Secretariat, the Scientific and Technical Review Panel (STRP), International Organization Partners (IOPs) and other collaborators. RAMSAR MANUAL, *supra* note 65.

¹⁹² Ramsar, *Resolution VIII.3*, *supra* note 185, at ¶ 23.

¹⁹³ Ezequiel Lugo, *Ecosystem Services, The Millennium Ecosystem Assessment, and the Conceptual Difference Between Benefits Provided by Ecosystems and Benefits Provided by People*, 23 J. LAND USE & ENVTL. L. 243, 250-52 (2008).

¹⁹⁴ “The Scientific and Technical Review Panel (STRP) determined that it is appropriate to update and harmonize the Convention’s ‘wise use’ and ‘ecological character’ definitions to

measures and future plans created to protect wetlands. Even a slight difference in understanding can have a large effect on future conservation.¹⁹⁵

In order to have a greater understanding of global warming in a technical sense, the Convention has been collaborating with the Intergovernmental Panel on Climate Change and the UN Framework Convention on Climate Change.¹⁹⁶ Specifically, Ramsar is working “to promote the management of wetlands in relation to adaptive management and mitigation of the impacts of climate change, particularly in the context of land use, land use change and rising sea levels, forestry, peatlands and agriculture.”¹⁹⁷ Ramsar is encouraging individual countries, regional authorities (like the EU) and international conventions to establish legislation to restrict activities such as illegal logging which contribute to climate change problems.¹⁹⁸ The Plan acknowledges the work of the IPCC and its report on Land Use, Land Use Change and Forestry (LULUCF).

Officials such as the Council of Ministers of the European Union still express “deep concern” about the findings of the IPCC Third Assessment Report,¹⁹⁹ which presented a particularly ominous view of climate change’s effects.²⁰⁰ Fortunately, Ramsar is addressing the problem.²⁰¹ The Convention aims “to ensure that national policy responses to the

take into account other now more-widely used terms and definitions relating to ecosystems and sustainable development . . .” *Annex A, supra* note 144, ¶ 4.

¹⁹⁵ Today, the distinct phrase “ecosystem services” is used to describe wetland benefits. “Ecosystem services” is defined as the benefits people obtain from ecosystems. Millennium Ecosystem Assessment, *supra* note 116.

¹⁹⁶ See RAMSAR MANUAL, *supra* note 61.

¹⁹⁷ *Id.*

¹⁹⁸ BIOLOGICAL DIVERSITY, *supra* note 172, at 21.

¹⁹⁹ Paper No. 8: Spain on Behalf of the European Community and its Member States, and Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia. THIRD ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (2002), available at <http://www.ccsr.u-tokyo.ac.jp/unfccc3/pdfs/unfccc.int/resource/docs/2002/sbsta/misc05.pdf>.

²⁰⁰ BOB FOSTER, IPCC’S THIRD ASSESSMENT REPORT: TOO MUCH ‘IMAGINATION BLOCK’ (2001), available at [http://www.lavoisier.com.au/articles/greenhouse-science/climate-change/Foster3\(2001\).pdf](http://www.lavoisier.com.au/articles/greenhouse-science/climate-change/Foster3(2001).pdf).

²⁰¹ BERGKAMP & ORLANDO, *supra* note 115.

implementation of the Kyoto Protocol,²⁰² including revegetation and management, afforestation and reforestation, do not lead to damage to the ecological character of wetlands.”²⁰³

The Kyoto Protocol has “extremely significant implications for the health of ecosystems including the world’s wetlands,” so it is important for the Contracting Parties (CPs) to remain aware of their repercussions.²⁰⁴ One of the goals is for “all relevant CPs to have assessed implications²⁰⁵ of Kyoto Protocol implementation on wetlands (including applying COP8 restoration guidelines).”²⁰⁶

In July of 2008, the Ramsar Secretariat released draft resolutions that were considered at the 10th Meeting of the Parties in Changwon, Republic of Korea.²⁰⁷ One of the Resolutions stated a goal to move toward “an ecosystem-based approach to policy and decision making that affects the wise use of wetlands.”²⁰⁸ According to a draft resolution for the 10th Meeting of the Parties, Ramsar “aim[ed] to recognize the state of play and draw[] attention to the importance of wetlands in the climate change debate[.]”²⁰⁹ Similarly, the Standing Committee approved a draft Resolution to the Conference on wetlands and biofuels, with the goal of

²⁰² The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The main feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, U.N. Doc. FCCC/CP/1997/7/Add.2, *available at* <http://unfccc.int/resource/docs/convkp/kpeng.pdf> [hereinafter The Kyoto Protocol].

²⁰³ *Strategic Plan*, *supra* note 191, at 3.4.9.

²⁰⁴ Ken Lum, Ramsar and Climate Change: Report on Kyoto, http://www.ramsar.org/about/about_kyoto.htm (last visited Feb. 4, 2009).

²⁰⁵ An implication of the Kyoto Protocol is that, in Article 2, it requires that “carbon sinks” be incorporated to accommodate and absorb carbon dioxide. Found in all corners of the world, carbon sinks are expansive areas of vegetation, like biospheres and forests, among other areas. See The Kyoto Protocol, *supra* note 202. “This requirement gives the UN a basis for dictating the management of carbon sinks” and is potentially a protection tool for wetlands. Land Use Control Tutorial, *supra* note 50.

²⁰⁶ *Strategic Plan*, *supra* note 194.

²⁰⁷ CLIMATE-L.ORG: Draft Ramsar COP10 Resolutions Highlight the Role of Wetlands in Climate Change Mitigation and Adaption, <http://www.climate-l.org/2008/07/draft-ramsar-co.html> (last visited Feb. 4, 2009).

²⁰⁸ *Id.*

²⁰⁹ CLIMATE-L.ORG: Ramsar Standing Committee Addresses Climate Change and Biofuels, <http://www.climate-l.org/2008/06/ramsar-standing.html> (last visited Feb. 4, 2009).

having policy measures take into account the “potential for adverse impacts upon wetlands.”²¹⁰

When the 10th Meeting of the Parties took place in the fall of 2008, the parties were ready to address the many issues facing wetlands. As suspected, high on the list of issues was the subject of climate change.²¹¹ The Conference urged parties to monitor water distribution and promote the restoration of wetlands, the surrounding areas and peatlands.²¹² Further, the Conference urged the integration of national policies related to water management, to ensure that consistency was another theme that arose.²¹³ The Conference also requested that the Ramsar Convention collaborate with other relevant agencies, and highlighted the importance of working with others to maintain the ecological health of the world’s wetlands.²¹⁴

As evidenced by the 10th Conference of the Parties and other recent efforts, the Ramsar Convention is taking a direct and well-planned approach to a burgeoning problem by raising awareness and promoting “wise use” in an unambiguous manner. The Parties themselves have recognized the significance of climate change and have put an emphasis on understanding its consequences.²¹⁵

VI. CONCLUSION

Considering its evolution over the last couple of decades, the Ramsar Convention has been quite an influential venture. The effectiveness of an international treaty often depends on the attention and support received in the world arena.²¹⁶ Much of Ramsar’s success relies in part on coordinating its goals with those of other parties, at both the national

²¹⁰ *Id.*

²¹¹ Ramsar, *Resolution X.24: Climate Change and Wetlands*, http://www.ramsar.org/res/key_res_x_24_e.pdf (last visited Feb. 4, 2009).

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.* (instructing the Ramsar Secretariat and the Scientific and Technical Review Panel to collaborate with international conventions and agencies).

²¹⁵ Nick Davidson, *Defining IUCN’s Role on Climate Change: Viewpoint from the Ramsar Convention on Wetlands*, http://www.ramsar.org/speech/speech_amman_nick1.htm (last visited Feb. 4, 2008).

²¹⁶ W. Bradnee Chambers, *Towards an Improved Understanding of Legal Effectiveness of International Environmental Treaties*, 16 *GEO. INT’L ENVTL. L. REV.* 501 (2004).

and international level.²¹⁷ Non-governmental organizations have been particularly involved in Ramsar's work, and have helped to build international recognition.²¹⁸

The Ramsar treaty has taken on the enormous role of aiding the conservation of international wetlands during a time of significant environmental degradation.²¹⁹ Such a role is challenging on its own because of the circumstances, but also because of the complexity of underlying international law and transboundary issues. Further, water's tendency to ignore borders articulates a distinct, yet fundamental difficulty of environmental international law, which demands balance and cooperation between different jurisdictions.²²⁰ It has been noted that "[w]ater not only ignores our political boundaries, it evades institutional classification and eludes legal generalizations."²²¹

Even in the face of phenomena such as climate change, the Ramsar Convention is making a strong attempt to improve environmental protection, through diligent conservation efforts and wise use restrictions.²²² As a result, wetland protection has dramatically improved since the Convention came into effect.²²³ An important ingredient of Ramsar's success is the inherent flexibility in its language, and wide range of its scope.²²⁴ The Convention is useful not only in a conceptual capacity, but also in its implementation of concrete measures.²²⁵

²¹⁷ *See id.*

²¹⁸ *See id.* Five such groups: "IUCN [The International Union for Conservation of Nature], Birdlife International, International Water Management Institute (IWMI), Wetlands International, and the World Wide Fund for Nature have been accorded the formal status of partner organizations for the purposes of the Convention." *Id.*

²¹⁹ Ramsar Convention, *supra* note 2. Chambers, *supra* note 216 (citing SHONA DODDS ET AL., UNA/IAS REPORT, INTERNATIONAL SUSTAINABLE DEVELOPMENT GOVERNANCE: THE QUESTION OF REFORM: KEY ISSUES AND PROPOSALS (2002)).

²²⁰ Sarah C. Schreck, *The Role of Nongovernmental Organizations in International Environmental Law*, 10 GONZ. J. INT'L L. 252 (2006).

²²¹ HEATHER L. BEACH ET AL., TRANSBOUNDARY FRESHWATER DISPUTE RESOLUTION: THEORY, PRACTICE, AND ANNOTATED REFERENCES 13 (2000), <http://www.unu.edu/unupress/backlist/ab-transboundary.html> (last visited Feb. 4, 2009).

²²² Ramsar Convention, *supra* note 2.

²²³ Kruchek, *supra* note 8, at 441.

²²⁴ *Id.*; Ramsar Convention, *supra* note 2.

²²⁵ Ramsar Convention, *supra* note 2.

Despite the Ramsar Convention appearing too expansive at first, its breadth is necessary to protect such an interconnected, transboundary resource.²²⁶ The flexibility of the Convention allows the freedom to change policy, while the broad guidelines of the treaty encourage integrated commitment.²²⁷ As legal terms are refined,²²⁸ boundaries are defined and new problems arise, cooperation between policy makers and parties will fuel progress, by increasing the number of protected wetlands under the Ramsar Convention.

²²⁶ QUEENSLAND EPA, STRATEGY FOR CONSERVATION AND MANAGEMENT OF QUEENSLANDS WETLANDS (1999), available at http://www.epa.qld.gov.au/publications/p00565aa.pdf/Strategy_for_the_conservation_and_management_of_Queenslands_wetlands.pdf.

²²⁷ Kruczek, *supra* note 8.

²²⁸ *See id.*

