CLIMATE CHANGE ADAPTATION IN INDIAN COUNTRY: TRIBAL REGULATION OF RESERVATION LANDS AND NATURAL RESOURCES

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From the Everglades to the Great Lakes to Alaska and everywhere in between, climate change is a leading threat to natural and cultural resources across America, and tribal communities are often the hardest hit by severe weather events such as droughts, floods and wildfires.[1]

Secretary of the Interior Sally Jewell
Chair of the White House Council on Native American Affairs
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I. INTRODUCTION

Although some political actors continue to debate the existence of climate change, most scientists agree the phenomenon is, in fact, occurring.[2] Not only has the United States Supreme Court issued decisions that effectively recognize its existence,[3] but government agencies have started preparing for impacts from

1. Press Release, U.S. Dep't of the Interior, Secretary Jewell Announces New Tribal Climate Resilience Program (July 16, 2014).

2. R.K. Pachauri et al., Intergovernmental Panel on Climate Change, *Summary for Policymakers*, *in* CLIMATE CHANGE 2014 SYNTHESIS REPORT 1 (Paulina Aldunce et al., eds., 2014) ("Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems.").

3. *See* Marilyn Averill, *Climate Litigation: Ethical Implications and Societal Impacts*, 85 DENV. U. L. REV. 899, 911 (2008) ("*Massachusetts v. EPA* may profoundly shift the causation debate. Most of the climate science was uncontested by the litigants, and the Court acted as if climate change and its impacts are widely accepted as a reality." (citing 549 U.S. 497 (2007))).

climate change.[4] Experts agree that climate change (also known as global warming) is caused by human behavior.[5] Conversations on climate change among scientists has shifted in recent years to more precisely predicting the specific impacts of climate change and dealing with its most drastic related natural disasters, such as rising sea levels, extreme weather events, and increased risk of wildfire.[6]

At best, the symptoms of climate change alter the ability of individuals and governments to use their lands in ways they have in years past. At worst, they force relocation for entire communities[7] and endanger human lives.[8] In Indian country, the risks associated with climate change are especially grave. There is heightened concern in Indian country for two reasons: (1) the amplified impact of climate change symptoms in indigenous communities[9] and (2) the legacy of the removal of Indian peoples from their lands in this country.[10]

The modern approach to federal Indian policy, labeled the Self-Determination Era, is characterized by federal support of tribal governance over core tribal affairs.[11] Today, tribal nations are

4. *See, e.g.*, Exec. Order No. 13653, 78 Fed. Reg. 66819 (Nov. 1, 2013); RUTH COX, GEN. SERVS. ADMIN., FY 2014 STRATEGIC SUSTAINABILITY PERFORMANCE PLAN (2014); STEPHEN HANDLER ET AL., U.S. FOREST SERV., MINNESOTA FOREST ECOSYSTEM VULNERABILITY ASSESSMENT AND SYNTHESIS: A REPORT FROM THE NORTHWOODS CLIMATE CHANGE RESPONSE FRAMEWORK PROJECT (2014); USDA, CLIMATE CHANGE ADAPTATION PLAN (2014); U.S. DEP'T OF COMMERCE, CLIMATE CHANGE ADAPTATION STRATEGY (2014).

5. John Cook et al., *Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature*, ENVIRONMENTAL RESEARCH LETTERS 6 (May 15, 2013), http://iopscience.iop.org/17489326/8/2/024024/pdf/17489326_8_2_024024.pdf (finding that ninety-seven percent of scholarly works between 1991 and 2011 that expressed an opinion on climate change agreed that climate change exists and is caused by human activities).

6. Patricia Romero-Lankeo et al., Intergovernmental Panel on Climate Change, *North America*, *in* CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY 1439, 1443–48 (Vincente R. Barros et al. eds., 2014), *available at* http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5Chap26_FINAL.pdf.

7. Lorraine Jessepe, *Alaskan Native Communities Facing Climate-Induced Relocation*, INDIAN COUNTRY TODAY MEDIA NETWORK (June 21, 2012), http://indiancountrytodaymedianetwork.com/2012/06/21/alaskan-nativecommunities-facing-climate-induced-relocation-119615.

8. Romero-Lankeo et al., *supra* note 6, at 1461.

9. *See infra* Part II.B.

10. *See infra* Part II.C.

11. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW § 1.07 (Nell Jessup Newton

asserting more control over what are often their most valuable economic resources—their reservation lands and natural resources.[12] Increasingly, tribal nations are directly managing their lands through assumption of land management duties under "638 contracts,"[13] tribally run departments of natural resources,[14] and tribal code development and implementation.[15] Today, when tribal nations are repeatedly demonstrating their willingness and capacity to sustainably manage their reservation lands,[16] these efforts need to be strongly supported by federal and tribal officials alike. The time to act—to empower tribal nations to deal with climate change through comprehensive tribal regulation over reservation lands—is now.

The challenges facing tribal nations as a result of climate-change-related environmental crises meet the threshold for tribal

ed., 2012), *available at* LEXIS.

12. *See, e.g.*, LAC DU FLAMBEAU TRIBAL CODE ch. 62 (2008), *available at* http://www.ldftribe.com/Courts/CHAP62%20Land%20Use%20Ordinance%20corrected%2004-16-08.pdf; MUCKLESHOOT TRIBAL CODE OF LAWS tit. 7, §§ 01.010–.120 (1981). For more information on tribal land use and zoning codes, see *Tribal Legal Code Project: Tribal Zoning Codes*, TRIBAL COURT CLEARINGHOUSE, http://www.tribal-institute.org/codes/part_five.htm (last visited Dec. 28, 2014).

13. *See* Indian Self-Determination and Educational Assistance Act of 1975, Pub. L. No. 93-638, 88 Stat. 2203 (codified as amended at 25 U.S.C. § 450 (2012)). "638 contracts" are arrangements between tribal nations and the federal government in which tribal nations assume management over federal programs, functions, services or activities provided to tribes. For more information on how tribal nations and the Bureau of Indian Affairs (BIA) work together to manage Indian lands and resources via 638 contracts, visit *Branch of Agriculture and Rangeland Development*, BUREAU INDIAN AFF., http://www.bia.gov/WhoWeAre/BIA/OTS/NaturalResources/AgrRngeDev/index.htm (last visited Dec. 29, 2014) and *Branch of Fish, Wildlife, and Recreation*, BUREAU INDIAN AFF., http://www.bia.gov/WhoWeAre/BIA/OTS/NaturalResources/FishWildlifeRec/index.htm (last visited Dec. 29, 2014).

14. *See* INTERTRIBAL AGRICULTURAL COUNCIL, http://www.indianaglink.com (last visited Dec. 29, 2014); INTERTRIBAL TIMBER COUNCIL, http://www.itcnet.org/ (last visited Dec. 29, 2014); NATIONAL TRIBAL LAND ASSOCIATION, http://www.ntla.info (last visited Dec. 29, 2014).

15. *See supra* note 12.

16. In addition to the increasing number of tribally run land and natural resources departments, several national and regional organizations have developed in recent years that indicate a continued willingness and capacity to manage reservation lands and resources. Among these organizations are the Intertribal Timber Council, founded in 1976; the Intertribal Agriculture Council, founded in 1987; and the National Tribal Land Association, founded in 2011. *See supra* note 14.

regulatory authority under the "second exception" outlined in *Montana v. United States*.[17] Congress has acted in recent years to empower tribal nations to regulate their natural resources.[18] Thus, this article argues that full-scale tribal land use regulation of reservation lands to protect tribal economic security, health, and welfare is both warranted under *Montana* and congressionally authorized.

This article provides an introduction to climate change and its impacts,[19] systems of reservation land ownership,[20] and how land ownership impacts tribal nations' ability to address serious community crises arising from climate change.[21] This article also highlights some recent climate change adaptation efforts by and for tribal nations and describes options for moving forward in a way that protects reservation lands and natural resources for the next seven generations.[22]

II. CLIMATE CHANGE IN INDIAN COUNTRY

A. The Causes and Impacts of Climate Change

Climate change is defined as the warming of the earth due to a sharp increase of greenhouse gases, primarily caused by human activity.[23] Greenhouse gases act "like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat."[24] In 2009, the United States Environmental Protection Agency (EPA) found that greenhouse gases include an "aggregate group of the same six long-lived and directly-emitted greenhouse gases: Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride." These gases are "well mixed" together in the atmosphere and cause global climate change.[25]

17. 450 U.S. 544, 565–66 (1981); *see infra* Part III.C.1.
18. *See infra* Part IV.
19. *See infra* Part II.
20. *See infra* Part III.
21. *See infra* Part III.B.
22. *See infra* Part VI.
23. Pachauri et al., *supra* note 2, at 1.
24. Massachusetts v. EPA, 549 U.S. 497, 505 (2007).
25. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,536–37 (Dec. 15, 2009).

The burning of coal, oil, and gas; the clearing of forests; and agricultural practices are among the primary sources of greenhouse gases.[26] The significant increase in the concentration of greenhouse gases in the atmosphere has coincided with a rise in global average temperatures.[27] The resulting warming has created myriad impacts for the environment and human health.[28]

The EPA has determined that "greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare."[29] The harmful impacts of climate change include longer heat seasons, which result in droughts, shorter and warmer winters, and more frequent extreme weather patterns such as hailstorms and heavier rains.[30] Other harmful impacts are more severe, including flooding, wildfires, mudslides, tornados, hurricanes, and disease outbreaks.[31]

B. The Amplified Impacts of Climate Change in Indian Country

The symptoms of climate change—rising sea levels, extreme weather events, and increased risk of wildfire—put the lands, livelihoods, and lives of tribal members in jeopardy. Indigenous peoples, many of whom have fought for centuries to preserve access to ancestral lands and traditional hunting areas, are often the most profoundly affected by climate change-related disaster.[32] As Congress has recognized, many members of Indian communities practice subsistence hunting and fishing as an integral part of their culture.[33] For many, "subsistence" is synonymous with culture,

26. *See* J. Walsh et al., U.S. Global Change Research Program, *Our Changing Climate*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 19, 23 (J. M. Melillo et al. eds., 2014) [hereinafter CLIMATE CHANGE IMPACTS IN THE UNITED STATES].

27. *Id.* at 26.

28. *See id.* at 68.

29. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. at 66,497.

30. *Id.* at 66,498.

31. *Id.* at 66,497.

32. *See* Romero-Lankeo et al., *supra* note 6, at 1444, 1471–72.

33. The congressional findings detailed in the Alaska National Interest Lands Conservation Act (ANILCA) recognized that Native subsistence—in this instance Native Alaskan subsistence—is culture-based and essential to communities, noting that "the opportunity for subsistence uses by rural residents of Alaska . . . is essential to Native physical, economic, traditional and cultural existence." 16 U.S.C. § 3111(1) (2012). The ANILCA also recognized the role subsistence

identity, and self-determination.[34] Areas long inhabited by subsistence-based communities are being altered or destroyed by thawing tundra or rising sea levels.[35] Indigenous communities across the country have already been forced to relocate entire village populations, dismantle existing infrastructure, seek out new hunting and fishing areas, and rebuild community-gathering spaces as traditional villages are overcome by flooding as a result of rising sea levels.[36] Federal officials recognize that Indian communities are more severely impacted by climate change than are other areas of the country.[37]

Climate change impacts in Indian country are—and will continue to be—diverse due to the dispersed geography of tribal nations as well as their varied subsistence economies and natural resource industries. While the impacts are diverse, scholars have recognized that the stakes are high and that "[a]lthough only a few tribal economies in Alaska and other regions are primarily based on subsistence, many tribal communities depend on their environment for many types of resources. A changing environment puts such resources at risk, which will affect both sustenance and cultural dependence on environmental resources."[38]

Sacred places, historically significant sites (and the experiences associated with them), and cultural traditions are likely to be significantly affected by climate change as well. Because some sites are located in extremely vulnerable locations, changes in climate and ecosystems are likely to alter the site environment.[39] Changes in animal migration timing, as well as in the seasonal appearance and

hunting and fishing played in non-Native Alaskan residents' lives as well, but made a distinction in characterizing Alaska Native interests as "cultural" rather than "social," the language that was used to describe non-Native interests. *Id.*

34. Thomas F. Thornton, *Alaska Native Subsistence: A Matter of Cultural Survival*, CULTURAL SURVIVAL Q., Fall 1998, at 29, 29.

35. *See* Rebecca Tsosie, *Indigenous People and Environmental Justice: The Impact of Climate Change*, 78 U. COLO. L. REV. 1625, 1639–41 (2007).

36. *Id.*

37. *See* Press Release, U.S. Dep't of the Interior, Secretary Jewell Announces New Tribal Climate Resilience Program (July 16, 2014).

38. Schuyler Houser et al., *Potential Consequences of Climate Change Variability and Change for Native Peoples and Homelands*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE 351, 359 (2000), *available at* http://www.gcrio.org/NationalAssessment/12NA.pdf.

39. *Id.* at 368.

abundance of plants and animals, are also likely.[40] Taken together, the myriad impacts of climate change on the environment have profound impacts for communities practicing subsistence- and place-based ways of life.

C. Regional Overview of Climate Change Impacts in Indian Communities

A review of the climate change impacts to the various regions throughout Indian country demonstrates how those impacts jeopardize land and water resources on reservations. Throughout Indian country, climate change threatens to degrade or eliminate fish, game, and wild and cultivated crops that have been used for food, medicine, and economic and cultural purposes for generations. The following observed and future impacts from climate change threaten tribal economic security and community health and welfare, determining factors under *Montana* for the ability of tribal nations to regulate activity on and off their reservation lands.[41]

In the Midwest, tribal nations have already reported climate change–associated impacts to their lands and resources. The maple syrup supply has decreased, water levels are low, and there is an increased incidence of algae blooms that endanger fish populations.[42] At the same time, the deer population has risen, negatively affecting forest regeneration due to over browsing.[43] Longer summer months and milder winters have also led to infestation by new types of pests, requiring greater pesticide use.[44] In 2014, the U.S. Department of Agriculture (USDA) confirmed the occurrence of these trends in a climate change vulnerability assessment of Minnesota's northern forests.[45] The assessment area encompassed forest lands of the Bois Forte Band of Chippewa, Fond Du Lac Band of Lake Superior Chippewa, Grand Portage Band of the Minnesota Chippewa, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, and Red Lake Band of Chippewa.[46]

40. *Id.* at 353.

41. Montana v. United States, 450 U.S. 544, 565–66 (1981).

42. NAT'L TRIBAL AIR ASS'N, IMPACTS OF CLIMATE CHANGE ON TRIBES IN THE UNITED STATES 4 (2009).

43. Houser et al., *supra* note 38, at 5.

44. *Id.*

45. *See* HANDLER ET AL., *supra* note 4, at 53–65.

46. *Id.* at 9–36.

Reported climate change impacts included shorter winters with decreasing annual snowfall amounts, more frequent intense rainfall and flooding events, and increasing occurrence of tornadoes and windstorms.[47] The findings also highlighted that higher winter and summer temperatures have exacerbated stresses on moose populations, including prolonging the existence of life-threatening parasites, and resulted in a fifty-two percent decline in population from 2010 to 2013.[48]

Tribal nations in Minnesota are not alone in experiencing harmful impacts associated with climate change. In the Northeast, the Passamaquoddy Tribes have reported reduced wild blueberry and shellfish harvests due to the increase of invasive species and ocean acidification, [49] both known negative impacts of a changing climate.[50] Blueberries and shellfish have been traditional food staples and income generators for the Passamaquoddy people.[51] The Tribes have also reported changes in the species composition of its forest and a loss of their medicinal plants.[52]

In the Rocky Mountain West, tribal nations have reported significant impacts related to higher temperatures and drought conditions,[53] both well-known results of climate change.[54] The cumulative effect has included higher risks from fire hazards, increases in stream and lake temperatures, melting glaciers, and reduced snowpack.[55] Higher mortality rates in native wildlife species, such as bighorn sheep, were also reported on the Wind River Reservation.[56]

47. *Id.* at 58–62.

48. *Id.* at 64.

49. NAT'L TRIBAL AIR ASS'N, *supra* note 42, at 4.

50. Scott Doney et al., U.S. Global Change Research Program, *Oceans and Marine Resources*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES, *supra* note 26, at 557, 562.

51. Dennis Wall, Inst. for Tribal Envtl. Prof'ls, *Passamaquoddy Tribe at Pleasant Point: Climate Change Impacts and Strategies*, NATIVE COMMUNITIES & CLIMATE CHANGE (2008), http://www.tribesandclimatechange.org/docs/tribes_378.pdf.

52. NAT'L TRIBAL AIR ASS'N, *supra* note 42, at 4.

53. *Id.* at 7.

54. *Climate Change Indicators in the United States*, EPA, http://www.epa.gov/climate/climatechange/science/indicators/weather-climate/index.html (last visited Oct. 27, 2014).

55. NAT'L TRIBAL AIR ASS'N, *supra* note 42, at 7.

56. *Id.* at 8.

Along the coast of the Pacific Northwest, symptoms of climate change have had grievous impacts on tribal economies and ways of life. Severe storms and rising sea levels are forcing tribal villages of the Quinault Indian Nation to relocate at the time of this writing.[57] The Swinomish Tribe, a frontrunner in climate change adaptation planning in Indian country, drafted a Climate Adaptation Action Plan in 2010 in response to pressing environmental concerns.[58] The Tribe's website provides insight into the community's primary motivations: "We want . . . a clean environment. We want to preserve our traditions, culture, foods, dances, crafts; in essence, our way of life. As a community, we work together to sustain these values and further our hopes and dreams for generations to come."[59] The Tribe's plan detailed climate change–related impacts on the reservation. The plan found that as shorelines and low-lying areas were being inundated from flooding due to sea level rise, more frequent and intense storm or tidal surges were likely to occur.[60] Specifically, the Tribe found approximately fifteen percent of the uplands on the reservation, including agricultural lands and shorelines, are vulnerable to inundation from sea level rise.[61] The reservation is also at risk of isolation from the mainland during high tidal events, cutting off transportation corridors and access routes.[62] The Tribe estimates that the total potential economic loss of all structures and buildable lots on the reservation from sea level rise, tidal surge, and risk zones to be $107,193,860 (2010 dollars).[63] In this instance, it seems apparent that not only is the "health and welfare" of the Swinomish Tribe in jeopardy due to climate change, but its "economic security" is at stake as well.[64]

57. Brandi N. Montreuil, *Quinault's Taholah Lower Village to Relocate Due to Ocean Threats*, TULALIP NEWS (June 4, 2014), http://www.tulalipnews.com/wp/2014/06/04/quinaults-taholah-lower-village-to-relocate-due-to-ocean-threats/.

58. SWINOMISH INDIAN TRIBAL CMTY. OFFICE OF PLANNING & CMTY. DEV., SWINOMISH CLIMATE CHANGE INITIATIVE CLIMATE ADAPTATION ACTION PLAN (2010) [hereinafter CLIMATE CHANGE ACTION PLAN].

59. *Community*, SWINOMISH INDIAN TRIBAL COMMUNITY, http://www.swinomish-nsn.gov/community.aspx (last visited Nov. 7, 2014).

60. CLIMATE CHANGE ACTION PLAN, *supra* note 58, at 27.

61. *Id.* at 26.

62. *Id.* at 27 (noting that such flooding can also inhibit economic development).

63. *Id.*

64. Montana v. United States, 450 U.S. 544, 566 (1981).

Native communities in coastal Louisiana are already facing climate change–induced rising sea levels, saltwater intrusion, erosion, land loss, and other ill effects due to oil and gas extraction and river management techniques[65] that threaten tribal ways of life. These factors are forcing communities there "to either relocate or try to find ways to save their land."[66] Erosion in the region coupled with intense storms and rising sea levels, all tell-tale signs of climate change, have devastated the Biloxi-Chitimacha-Choctaw community of the Isle de Jean Charles. Once 15,000 acres, the island is now a quarter-mile strip of land a half-mile long.[67] As a result of climate change, the land is literally disappearing beneath the feet of those who have remained on the community's traditional lands.

Tribal nations in the Southwest "have observed damage to their agriculture and livestock, the loss of springs and medicinal and culturally important plants and animals, and impacts on drinking water supplies."[68] In one recent instance, the San Carlos Apache reservation was declared a primary natural disaster area in 2011 by the USDA as a result of a combination of drought, high winds, excessive heat, and wildfires;[69] future impacts to the region will likely include increased desertification due to rising temperatures.[70]

Perhaps the most profoundly impacted Native communities are located in the Bering Strait region. Alaska Native villages' subsistence culture is threatened as rising temperatures have caused thinner ice buildup along the coast and melted permafrost over which villages were built.[71] Communities there may have to

65. T.M. Bull Bennett et al., U.S. Global Change Research Program, *Indigenous Peoples, Land, and Resources*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES, *supra* note 26, at 297, 307.

66. *Id.*; *see also* Inst. for Tribal Envtl. Prof'ls, *Vulnerability of Coastal Louisiana Tribes in a Climate Change Context*, TRIBES & CLIMATE CHANGE 6–7 (2012), http://www4.nau.edu/tribalclimatechange/tribes/docs/tribes_CoastalLA.pdf.

67. INST. FOR TRIBAL ENVTL. PROF'LS, BILOXI-CHITIMACHA-CHOCTAW INDIANS: RISING TIDES (2008).

68. Bennett et al., *supra* note 65, at 303.

69. Ron Capriccioso, *USDA Designates Reservation in Arizona as Disaster Area*, INDIAN COUNTRY TODAY MEDIA NETWORK (July 21, 2011), http://indiancountrytodaymedianetwork.com/2011/07/usda-designates-reservation-in-arizona-as-disaster-area.

70. *See* Gregg Garfin et al., U.S. Global Change Research Program, *Southwest*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES, *supra* note 26, at 462–63.

71. F. Stuart Chapin III et al., U.S. Global Change Research Program, *Alaska and the Arctic*, *in* CLIMATE CHANGE IMPACTS IN THE UNITED STATES, *supra* note 26, at

relocate due to danger from flooding and erosion.[72] Patricia Cochran, Inupiat Eskimo and executive director of the Alaska Native Science Commission, said, "We're seeing huge impacts now . . . . When your homes are falling into the sea it's hard not to notice."[73] Members of Alaska Native villages sometimes rely on subsistence for survival[74] and are severely impacted by a changing climate.[75]

D. Legacy of Removal of Indigenous Peoples

The second factor playing uniquely into any discussion around tribal climate change adaptation, the long history of the removal of Indian people from their traditional homelands, has complex implications for tribal nations—and the federal government. The federal government's policies toward Indian people have been consistent only in the sense that they are prone to significant shifts every few decades. Some federal policies have operated to force Indian people from their traditional homelands for the benefit of non-Indian interests. The Removal Era of the nineteenth century was a time of forced marches and devastation for many Indian peoples.[76] After centuries of treaty-making with tribal nations, the practice was formally ended by Congress in 1871.[77] The period referred to as the Allotment Era followed, when tribal lands reserved by treaty were parceled out among individual Indian families and remaining lands were purposefully opened to non-Indian settlement.[78] Congress formally ended allotment by passing the Indian Reorganization Act (IRA, or the Wheeler-Howard Act) in 1934.[79]

514, 518, 523; Daniel Cordalis & Dean B. Suagee, *The Effects of Climate Change on American Indian and Alaska Native Tribes*, NAT. RESOURCES & ENV'T, Winter 2008, at 45, 47.

72. Cordalis & Suagee, *supra* note 71, at 47.

73. *Indigenous Peoples and Climate Change: From Recognition to Rule of Law*, CHRISTENSEN FUND (Jan. 13, 2014), http://www.christensenfund.org/2014/01/13/indigenous-peoples-climate-change/.

74. *See supra* note 33.

75. *See* Houser et al., *supra* note 38, at 359.

76. *See generally* L.R. BAILEY, THE LONG WALK: A HISTORY OF THE NAVAJO WARS, 1846–1868 (1964); STEPHEN DOW BECKMAN, REQUIEM FOR A PEOPLE (1971).

77. Indian Appropriations Act of 1871, ch. 120, 16 Stat. 544, 566 (codified as amended at 25 U.S.C. § 71 (2012)).

78. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW, *supra* note 11, § 1.03[6][b].

79. Indian Reorganization Act of 1934, ch. 576, § 1, 48 Stat. 984, 984

Federal policy shifted toward dispossession again during the Termination Era,[80] when the federal government systematically and unilaterally terminated the nation-to-nation relationship between tribal nations and the federal government and extinguished the trust status of reservation lands held by tribal nations and individual Indian people.[81] Between 1954 and 1962, more than one hundred tribal nations across eight states lost federal legal protections pursuant to the government's termination policies.[82] In addition, major changes to jurisdiction in Indian country took place in the 1950s as a result of Public Law 280,[83] further complicating the relationships between tribal, federal, and state governments.[84] While many Americans have heard about the Cherokee Trail of Tears of the nineteenth century, it seems few know about the several (and some recent) instances of shifting federal policy and dispossession of Indian people from their resources in more recent years. With regard to effective community responses to climate change, concerns are heightened in Indian country due to complicated historical events and their real world implications in a rapidly changing modern environment.

III. RESPONDING TO CLIMATE CHANGE VIA TRIBAL LAND USE REGULATION

Given the serious threat that climate change presents in Indian country, sustaining economic vitality, health, and welfare in Indian communities requires the creation and enforcement of land use planning policies and regulations among Indian and non-Indian populations throughout the reservation. Land use regulation is

(codified at 25 U.S.C. § 461 (2012)).

80. The United States adopted a formal policy of termination in 1953 when it passed a congressional resolution calling for tribal nations in certain geographic areas to be "freed from Federal supervision and control." H.R. Con. Res. 108, 83d Cong., 67 Stat. B132 (1953).

81. Robert T. Coulter, *Termination*, *in* NATIVE LAND LAW § 8.2 (2014).

82. Charles F. Wilkinson & Eric R. Biggs, *The Evolution of the Termination Policy*, 5 AM. INDIAN L. REV. 139, 151–52 (1977).

83. *See* Act of Aug. 15, 1953, Pub. L. No. 83-280, 67 Stat. 505 (codified at 18 U.S.C. § 1162 (2012), 25 U.S.C. §§ 1321–1326, and 28 U.S.C. § 1360) (extending state jurisdiction over reservation lands in certain states). For more information on Public Law 280, see *Public Law 280*, TRIBAL COURT CLEARINGHOUSE, http://www.tribal-institute.org/lists/pl280.htm (last visited Oct. 26, 2014).

84. Korey Wahwassuck, *The New Face of Justice: Joint Tribal-State Jurisdiction*, 47 WASHBURN L.J. 733, 740 (describing jurisdictional challenges in Minnesota).

especially critical in Indian country because so many reservation economies depend on agriculture, forest products, and tourism,[85] all of which are inherently linked to the natural environment and are significantly "affected as the climate shifts and warm extremes become more frequent."[86] The threshold for restoring tribal regulation under what is commonly referred to as the "*Montana* exception" requires tribes to demonstrate that a conduct "threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe."[87] The crises facing tribal nations all across the country as a result of climate change[88] meet the thresholds for tribal regulation outlined in *Montana v. United States*,[89] as the loss of reservation lands, food sources, and infrastructure directly threatens the economic security, health, and welfare of tribes and their community members. Exactly how tribal nations might go about this full scale regulation of reservation lands and resources warrants further study.

A. Origins of Land Use Regulation

Land use regulation in America has been contentious since it was first developed at the turn of the twentieth century.[90] At that point, Americans were displeased to find that "[i]ndustrialization, the main creative force of the nineteenth century, [had] produced the most degraded urban environment the world had yet seen."[91] Urban residents, and the courts that heard their land use–related complaints, realized that nuisance law could only be effective in compensating those who were already suffering from bad results arising from environmentally degrading land use.[92] Land use regulation, also referred to as zoning, developed as a method to

85. *See* Houser et al., *supra* note 38, at 353.

86. *Id.*

87. *Id.* at 566.

88. *See supra* Part II.C.

89. 450 U.S. 544, 565–66 (1981).

90. *See id.*

91. LEWIS MUMFORD, THE CITY IN HISTORY: ITS ORIGINS, ITS TRANSFORMATIONS, AND ITS PROSPECTS 447 (1961).

92. Morris v. Borough of Haledon, 93 A.2d 781, 784 (N.J. Super. Ct. App. Div. 1952); Recent Decisions, *Public Nuisance—Special Damage—Extent Of*, 23 ALB. L. REV. 447, 447 (1959); Comment, *Zoning and the Law of Nuisance*, 29 FORDHAM L. REV. 749, 750 (1961) (citing Schroder v. City of Lincoln, 52 N.W.2d 808 (Neb. 1952)).

prevent, rather than address after the fact, these ill effects.[93] Our modern concerns about climate change's impacts for Native communities resonate with these early justifications for land use regulation; tribal communities should be able to identify and respond to climate change–related disasters, with prevention as a goal and mitigation as a last resort. In any case, land use regulation—on the front end—is key to any discussion of long-term solutions to climate change.

B. Ownership of Lands in Indian Country

The historical foundation and the current legal status of reservation lands are critical to a discussion of land use regulation in Indian country. Tribal nations once occupied—and governed over—the great expanse of lands known today as North America. Indian authority over Indian lands predates the formation of the United States and the writing of the U.S. Constitution.[94] The federal government recognized tribal nations as separate sovereign bodies early, most directly during treaty making, as treaties by their nature define nation-to-nation dealings.[95]

The right of tribal nations to govern their lands and citizens was acknowledged in the early years of the Supreme Court in the case of *Worcester v. Georgia*, when Chief Justice John Marshall wrote that Indian nations "had always been considered as distinct, independent political communities, retaining their original natural rights," and held that states were generally restricted from exercising authority over Indian lands.[96] Tribal nations' status as governing bodies with authority to regulate their territories has been recognized by the U.S. government from the earliest points in our nation's history. But the extent of that governance has been the subject of many a courtroom debate.

There has been nearly two hundred years of Supreme Court case law and federal statutory regulation since *Worcester*, which have chipped away at the ability of tribal nations to regulate wholesale

93. Stuart Meck, Paul Wack & Michelle J. Zimet, *Origins of Land Use Controls in the United States*, *in* THE PRACTICE OF LOCAL GOVERNMENT PLANNING 343–46 (3d ed. 2000).

94. *See* United States v. Wheeler, 435 U.S. 313, 322–23 (1978).

95. Philip P. Frickey, *(Native) American Exceptionalism in Federal Public Law*, 119 HARV. L. REV. 431, 438 (2005) ("The federal government's repeated treaty making with tribes also demonstrated an understanding of tribes as separate sovereigns.").

96. Worcester v. Georgia, 31 U.S. 515, 559–60 (1832).

their reservation lands and natural resources.[97] Today, tribal nations exercise their governance powers through land use codes, including land use and planning ordinances[98] and zoning regulations.[99] The force and effect of these regulations varies across reservation lands and requires an understanding of ownership patterns found throughout Indian country.

In terms of basic ownership framework, reservation lands are held under a legal ownership system unique to Indian country.[100] As a direct result of the General Allotment Act of 1887 (the Dawes Act),[101] many Indian reservations are a quagmire, checkerboarded with tribal and federal jurisdiction over trust lands and state jurisdiction over non-Indian fee lands.[102] When reservation lands were allotted to individual Indian people more than a century ago, lands that remained unallotted were declared surplus and sold to non-Indian settlers.[103] However, the boundaries of the reservation

97. S*ee generally* Richard A. Monette, *Treating Tribes as States Under Federal Statutes in the Environmental Arena: Where Laws of Nature and Natural Law Collide*, 21 VT. L. REV. 111 (1996); Daniel I.S.J. Rey-Bear, Comment, *The Flathead Water Quality Standards Dispute: Legal Bases for Tribal Regulatory Authority Over Non-Indian Reservation Lands*, 20 AM. INDIAN L. REV. 151 (1995–96).

98. *See, e.g.*, NAVAJO NATION CODE ANN. tit. 16 (1995). For additional information on land use and land planning codes, see *Tribal Legal Code Project: Land Use and Planning*, TRIBAL COURT CLEARINGHOUSE, http://www.tribal-institute.org/codes/part_four.htm (last visited Oct. 29, 2014).

99. *See, e.g.*, MUCKLESHOOT TRIBAL CODE OF LAWS tit. 7, §§ 01.010–.120 (1981).

100. Indian country is defined by statute as:

> (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

18 U.S.C. § 1151 (2012).

101. General Allotment (Dawes) Act, ch. 119, §§ 1–3, 24 Stat. 388, 388–91 (1887), *repealed by* Indian Land Consolidation Act Amendments of 2000, Pub. L. No. 106-462, tit. I, § 106(a)(1), 114 Stat. 1991.

102. *Checkerboarding*, INDIAN LAND TENURE FOUND., https://www.iltf.org/land-issues/checkerboarding (last visited Oct. 9, 2014); *see also* Wahwassuck, *supra* note 84, at 740 (describing jurisdictional challenges in Minnesota); *infra* Part III.C.

103. KLAUS FRANTZ, INDIAN RESERVATIONS IN THE UNITED STATES: TERRITORY,

did not change.[104] This mixed pattern of reservation ownership creates regulatory difficulties for federal, state, and local officials.[105] Of greater concern, particularly as related to dealing with the impacts of climate change, is the set of challenges this presents for tribal nations and their citizens.

Much of the reservation lands still held by tribal nations and individual Indian people are held in trust, a land ownership scenario in which the federal government owns record title to the property with the Indian tribe or individual as beneficiary.[106] This system of trust land ownership appears to come from several federal statutory sources but is most clearly promulgated under the Dawes Act.[107] Section 5 of the Dawes Act provided that the United States would hold allotments for individual Indians in trust for twenty-five years but that this period could be extended at the President's discretion.[108] Trust status was extended indefinitely by the IRA in 1934, which called for an end the allotment policy. The IRA authorized the Secretary of the Interior to acquire lands for Indian nations and directed those lands be held in trust.[109] The trust status of lands allotted to individuals was later affirmed by the Supreme Court's decision in *United States v. Mitchell*.[110] Despite the reported failings of the allotment policy in the federal government's management of Indian affairs,[111] trust status continues today. The distinction between trust and fee lands has real world implications in terms of regulation of lands within reservation boundaries.

SOVEREIGNTY, AND SOCIOECONOMIC CHANGE 65 (1999).

104. *Id.*

105. *See* Wahwassuck, *supra* note 84.

106. *See* FRANTZ, *supra* note 103, at 51.

107. General Allotment (Dawes) Act, ch. 119, §§ 1–3, 24 Stat. 388, 388–91 (1887), *repealed by* Indian Land Consolidation Act Amendments of 2000, Pub. L. No. 106-462, tit. I, § 106(a)(1), 114 Stat. 1991. For a listing of allotment legislation, see *Historical Allotment Legislation*, INDIAN LAND TENURE FOUND., https://www.iltf.org/resources/land-tenure-history/historical-allotment-information (last visited Oct. 19, 2014) and *Tribe/Reservation Allotment Information*, INDIAN LAND TENURE FOUND., https://www.iltf.org/resources/land-tenure-history/tribe-reservation-allotment-information (last visited Oct. 19, 2014).

108. Ch. 119, 24 Stat. at 389.

109. Indian Reorganization Act of 1934, ch. 576, §§ 1–3, 5, 48 Stat. 984, 984–86 (1934) (codified as amended at 25 U.S.C. §§ 461–462, 463e–f (2012)).

110. 445 U.S. 535, 548–49 (1980).

111. LEWIS MERIAM ET AL., BROOKINGS INST., THE PROBLEM OF INDIAN ADMINISTRATION 5 (1928).

Conversations about sustainable management of lands and natural resources have taken on an increasingly urgent tone worldwide as global and local leaders reel from the effects of climate change. Dealing with climate change is difficult for any community. Governmental interference with land use decisions sometimes incites hostility among private landowners, no matter the justification for regulatory exercise of authority. In reservation communities, tribal governments find themselves not only more seriously impacted by climate change, but also historically more limited than other governments in the ways they can address it. Supreme Court precedent around land ownership, regulatory authority, and the rights of Indian and non-Indian people on reservations—much of which was formulated long before climate change and its impacts were understood—have called into question the ability of tribal nations to mitigate climate change impacts in reservation communities through comprehensive land use planning.

C. The Historical Limitations on Tribal Regulation of Lands and Natural Resources

The matter of who should regulate reservation lands to protect against external threats has been considered at the highest levels of the U.S. legislature and judiciary and has generally weighed benefits of land ownership against tribal interests in self-determination. Land use is quite thoroughly regulated by the federal government.[112] Given that knowledge of the existence of climate change and its devastating impacts are relatively recent, the right of tribal nations to specifically deal with its impacts through zoning or other land use control was not considered in early Supreme Court decisions. But other types of self-determination via tribal regulation have been considered over the span of several decades.[113]

112. *See* DAVID L. CALLIES ET AL., CASES AND MATERIALS ON LAND USE 253–54 (3d ed. 1999).

113. *See* Plains Commerce Bank v. Long Family Land & Cattle Co., 554 U.S. 316 (2008); Brendale v. Confederated Tribes & Bands of the Yakima Indian Nation, 492 U.S. 408 (1989); Montana v. United States, 450 U.S. 544 (1981); Oliphant v. Suquamish Indian Tribe, 435 U.S. 191 (1978), *superseded by statute*, Pub. L. No. 101-511, tit. VIII, § 8077(b)–(c), 104 Stat. 1892 (1990), *as recognized in* United States v. Lara, 541 U.S. 193 (2004); *see also* Montana v. EPA, 137 F.3d 1135 (9th Cir. 1998); City of Albuquerque v. Browner, 97 F.3d 415 (10th

Under the basic tenets of federal Indian law, Indian nations retain those rights Congress has not expressly taken away.[114] When this retention of rights is considered alongside the Court's later decisions regarding land use regulation, natural resource management, and the increasing threat of climate change, tribal, federal, and state officials are faced with uncertainty over which reservation lands can be regulated by which governmental entity. The Supreme Court has articulated parameters as to the right of Indian nations to govern their lands and natural resources, most directly in *Montana v. United States*[115] and *Brendale v. Confederated Tribes & Bands of the Yakima Indian Nation*.[116] Decisions in these cases support a move toward more wholesale tribal regulation over reservation lands and resources.

1. The Montana *Exception*

In *Montana v. United States*, the Supreme Court considered when a tribal nation may exert its power to regulate the conduct of non-tribal members impacting natural resources within reservation boundaries.[117] The specific question in *Montana* was whether the Crow Tribe had the ability to regulate fishing within the waters of the Big Horn River.[118] When the Crow Tribal Council enacted Resolution Tribal Edict No. 74-05 in 1973, it intended to restrict fishing by non-tribal members in response to increasing food prices, growing tribal enrollment, and the depletion of fish and game on the reservation.[119] The tribal resolution purported to extend to both tribal members and non-Indian individuals, proscribing fishing by non-members entirely.[120] After a non-Indian fished in open defiance of the tribal resolution, the ban was challenged by the State of Montana, which sought to determine "title to the bed of the Big Horn River" and to clarify regulatory authority over the area in question.[121]

Cir. 1996).

114. *See* United States v. Winans, 198 U.S. 371, 384 (1905).
115. 450 U.S. 544.
116. 492 U.S. 408.
117. *Montana*, 450 U.S. at 565–66.
118. *Id.* at 547.
119. *Id.* at 548.
120. *Id.* at 549.
121. *Id.*

The Supreme Court held that the Crow Tribe was outside the bounds of its sovereignty in regulating non-Indian activity on fee-owned lands.[122] The Court applied general principles established in *Oliphant v. Suquamish Indian Tribe*[123]: a tribe's retained inherent sovereignty does not apply to the regulation of non-members "on lands no longer owned by the tribe" when the action at issue "bears no clear relationship to tribal self-government or internal relations."[124] However, the Court outlined two exceptions where a tribe may regulate non-Indian activity: (1) the consensual relationship exception and (2) the health and welfare exception.[125]

Under the first exception, tribal nations may exercise civil jurisdiction over non-members who enter into "consensual relationships with the tribe or its members."[126] Consensual relationships might include contracts or other agreements where a non-Indian may purposefully avail herself to the jurisdiction of the tribal nation.[127] Regarding the second exception, the Court stated that "[a] tribe may also retain inherent power to exercise civil authority over the conduct of non-Indians on fee lands within its reservation when that conduct threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe."[128] More recently, in *Plains Commerce Bank v. Long Family Land & Cattle Co.*, Chief Justice Roberts, in writing for the Court, commented on the second *Montana* exception, clarifying that "[t]he conduct must do more than injure the tribe, it must 'imperil the subsistence' of the tribal community"[129] in order to justify Indian regulation of non-Indian activity on non-trust lands. The *Montana* Court essentially articulated a scenario in which tribal nations are required to justify their regulatory authority over their reservation lands by demonstrating substantial threats to core matters of self-determination: political integrity, economic security, health, and welfare.[130] Within the decade, the

122. *Id.* at 566.

123. 435 U.S. 191 (1978), *superseded by statute*, Pub. L. No. 101-511, tit. VIII, § 8077(b)–(c), 104 Stat. 1892 (1990), *as recognized in* United States v. Lara, 541 U.S. 193 (2004).

124. *Montana*, 450 U.S. at 564–65.

125. *Id.* at 565–66.

126. *Id.* at 565.

127. *See id.*

128. *Id.* at 566.

129. 554 U.S. 316, 341 (2008) (quoting *Montana*, 450 U.S. at 566).

130. *See Montana*, 450 U.S. at 566.

Supreme Court would take up a case that specifically considered land and natural resource management within the context of the framework it outlined in *Montana*.

2. The Brendale *Decision*

The Court resumed its discussion of the second *Montana* exception in the rather contentious plurality opinion announced in *Brendale v. Confederated Tribes & Bands of the Yakima Indian Nation*.[131] The Court held that the Yakima Nation lacked authority to zone non-member, fee-owned lands in the "open area" of the reservation but retained the right to regulate the "closed" area.[132]

According to the plurality, in order to regulate the open area of the reservation, which was checkerboarded with Indian and non-Indian owned lands,[133] the Tribe should have demonstrated "that its tribal interests were imperiled," but the Tribe had not argued to that effect.[134] The decision in *Montana*, Justice White added,

> should be understood to generally prohibit tribes from regulating the use of fee lands by way of tribal ordinance or actions in the tribal courts, but to recognize, in the special circumstances of checkerboard ownership of reservation lands, *a protectible* [sic] *tribal interest under federal law*, defined in terms of a demonstrably serious impact by the challenged uses that imperils tribal political integrity, economic security, or health and welfare.[135]

The articulation of the concept of a "protectible [sic] tribal interest under federal law" had been recognized in a pre-*Brendale* ruling of the Interior Board of Indian Appeals (IBIA).[136] In 1988, the IBIA found a forty-acre allotment, held in trust for a member of the Agua Caliente Band of Mission Indians in California, was not subject to the City of Palm Springs zoning laws despite California's status as a Public Law 280 state.[137] As described above, Public Law

131. 492 U.S. 408, 408–433 (1989) (plurality opinion for Nos. 87-1699 and 87-1711).

132. *Id.* The part of the reservation labeled "closed" had long been closed to the general public pursuant to the treaty between the United States and the Yakima Indian Nation. *See id.* at 415.

133. *Id.* at 408 ("Almost half of the land in the open area is fee land.").

134. *Id.* at 431.

135. *Id.* (emphasis added).

136. Earle C. Strebe, 16 IBIA 62, 94 (1988).

137. *Id.*; *see* Act of Aug. 15, 1953, Pub. L. No. 83-280, 67 Stat. 505 (codified at

280 extended state jurisdiction over certain matters across reservation lands in several states.[138] The Board ruled that despite the non-Indian lessee having consented to annexation of the property into the City of Palm Springs with full knowledge that the property was subject to a restrictive zoning designation prohibiting development of thirty acres of the site, "P.L. 280 did not authorize the application of local zoning laws to Indian trust land."[139] The Board cited the decision in *Santa Rosa Band of Indians v. King County*, a Ninth Circuit Court of Appeals decision, which found that Public Law 280 did not permit the regulation of the use of Indian trust property where federal law preempted state and local jurisdiction.[140] When the Court heard *Brendale* in 1989, it weighed in on the continuing question of which sovereign entity can zone within reservation communities, regardless of land ownership.

Within the opinions at the district court, the court of appeals, and ultimately the Supreme Court, judges and justices deciding *Brendale* offered six different legal opinions to justify their decisions about whether or not to extend regulatory authority over fee lands to tribal nations.[141] Among the theories discussed were the exceptions outlined in *Montana*, federal preemption, inherent sovereignty, the police power of local governments, the power to exclude, and equitable servitude.[142] The resulting "guidance" provided by *Brendale* offered practitioners muddled direction at best and inherently contradictory logic at worst.[143] Justice White's opinion in *Brendale* articulated in dicta that tribal nations should assert a protectable tribal interest in advocating for applicability of tribal land use regulation to non-trust lands, and that, if that

18 U.S.C. § 1162 (2012), 25 U.S.C. §§ 1321–1326, and 28 U.S.C. § 1360) (extending state jurisdiction over reservation lands in certain states).

138. *See supra* Part II.D.

139. *Strebe*, 16 IBIA at 86 (citing Santa Rosa Band of Indians v. Kings Cnty., 532 F.2d 655 (9th Cir. 1975)).

140. *Santa Rosa Band of Indians*, 532 F.2d at 658.

141. Cathy W. Schindler, *Indian Civil Jurisdiction Over Land Held in Fee by Non-Indians: A Judicial Challenge in* Brendale v. Confederated Tribes & Bands of Yakima Indian Nation, 7 T.M. COOLEY L. REV. 63, 81 (1990). *See generally* Brendale v. Confederated Tribes & Bands of the Yakima Indian Nation, 492 U.S. 408 (1989); Confederated Tribes & Bands of Yakima Indian Nation v. Whiteside, 828 F.2d 529, 533 (9th Cir. 1987); Yakima Indian Nation v. Whiteside, 617 F. Supp. 735, 746–48 (E.D. Wash. 1985).

142. Schindler, *supra* note 141, at 81–82.

143. *See id.* at 82.

argument fails to disastrous results, then "Congress can take appropriate action."[144] Since *Brendale*, tribes have been successful in arguing protectable tribal interests to exercise regulatory land and natural resource use authority.[145] And arguably, congressional action like that called for by Justice White has occurred.[146] Thus, tribal nations are now poised to exercise regulatory authority over their lands and natural resources to protect against environmental crises such as those related to climate change.

D. Threats from Climate Change Imperil Tribal Economic Security, Health, and Welfare

The situations tribal nations increasingly face as a result of climate change are serious and present real threats to tribal "economic security"[147] and "health or welfare."[148] The Swinomish Tribe's efforts to outline climate change impacts across the reservation in its Climate Adaptation Plan provide an excellent illustration of how climate change impacts' imperil tribal economic security, health, and welfare. With fifteen percent of the uplands on the reservation—including agricultural lands and shorelines—vulnerable to inundation from sea level rise,[149] the ability of the tribe and tribal members to grow or harvest food for local consumption and to generate revenue from agriculture, coastal recreation, or fishing practices presents a very real threat to tribal economic security. Additionally, the reservation's risk of isolation from the mainland during high tidal events most certainly imperils the health and welfare of the tribe. With transportation and access routes impassable, the ability to respond to health and safety emergencies presents great risks to the tribe and its members.

Perhaps most compelling, Swinomish quantified the economic impact of the foreseeable results of climate change and found that the total potential economic loss as a result of climate change could top one hundred million dollars.[150] Economic losses so great

144. *Brendale*, 492 U.S. at 431–32 (plurality opinion for Nos. 87-1699 and 87-1711).

145. *See* Montana v. EPA, 137 F.3d 1135 (9th Cir. 1998); City of Albuquerque v. Browner, 97 F.3d 415 (10th Cir. 1996).

146. *See infra* text accompanying notes 158–62.

147. *See supra* note 128 and accompanying text.

148. *See supra* note 128 and accompanying text.

149. *See supra* note 61 and accompanying text.

150. *See supra* notes 62–63 and accompanying text.

certainly imperil tribal economic security. The threats tribal nations are facing as a result of climate change are increasingly implicating the standards for tribal imperilment outlined in *Montana* and *Brendale*.

IV. CONGRESSIONAL SUPPORT FOR TRIBAL LAND AND NATURAL RESOURCE MANAGEMENT IN INDIAN COUNTRY SINCE *BRENDALE*

Legislation since *Brendale* has demonstrated that Congress favors tribal authority to zone their reservation lands—even those owned in fee by non-members—to protect their communities from serious environmental crises.[151] Similarly, in recent years the federal courts have ruled in ways more favorable to tribal nations' wholesale regulation of their reservation lands and resources. Tribal land use codes and zoning ordinances that protect what is absolutely fundamental to tribal ways of life—reservation natural resources, reservation lands, and tribal citizens—are instrumental for bolstering tribal self-determination and effective response to climate change.

In the years since *Montana* and *Brendale*, Congress has acted to empower tribal nations to regulate their lands and natural resources. The American Indian Agricultural Resource Management Act[152] and the Clean Water Act,[153] when evaluated alongside such decisions as *Montana v. EPA*,[154] *City of Albuquerque v. Browner*,[155] and *Massachusetts v. EPA*,[156] indicate that tribal nations should once again enjoy the authority to regulate their lands and resources through comprehensive land use planning.

A stated purpose of the American Indian Agricultural Resource Management Act is to "promote the self-determination of Indian tribes by providing for the management of Indian agricultural lands and related renewable resources in a manner consistent with identified tribal goals and priorities for conservation, multiple use, and sustained yield."[157] Specifically, the

151. *See infra* notes 152–73 and accompanying text.

152. 25 U.S.C. ch. 39 (2012).

153. 33 U.S.C. § 1377(e) (codifying § 518 of the Clean Water Act, an 1987 amendment authorizing the EPA to treat a tribal nation "as a state" for purposes of promulgating water quality standards).

154. 941 F. Supp. 945 (D. Mont. 1996), *aff'd*, 137 F.3d 1135 (9th Cir. 1998).

155. 97 F.3d 415 (10th Cir. 1996).

156. 549 U.S. 497 (2007).

157. 25 U.S.C. § 3702.

Act enables tribal nations to develop an "agriculture resources management plan" with land-use authority over all Indian lands within the reservation.[158] Findings contained in the American Indian Agricultural Resource Management Act, as well as the stated support for tribally promulgated objectives outlined in the law, indicate a congressional willingness to put tribal nations at the forefront in managing precious lands and natural resources for reservation communities.[159] When the Act's authorization of tribal regulation over Indian lands is examined alongside post-*Brendale* decisions related to tribal regulation of off-reservation activity, the legal justification for wholesale tribal regulation to protect reservation resources solidifies.

To add to the American Indian Agricultural Resource Management Act's authorization of tribal land use regulation of Indian lands, the Clean Water Act's provisions related to the setting and promulgation of water quality standards indicate clear congressional intent to allow tribal nations to resume the exercise of meaningful regulatory authority over reservation lands and resources,[160] whether threats arise on or off the reservation or are posed by Indian or non-Indian actors. Under section 518(e) of the Clean Water Act, the EPA is authorized to treat tribal nations as states for purposes of administrative regulatory permitting and enforcement of water quality standards.[161] The treatment-as-state status enables a tribe to set water quality standards relevant to both Indian and non-Indian activities in and around Indian communities.[162] The limits of this authority have been tested and tribal ability to regulate has been upheld by the federal courts, even in instances where off-reservation activity on non-trust land was significantly impacted by tribal water quality standards.[163] Two

158. *See id.* §§ 3702, 3711(b).

159. *See, e.g.*, *id.* §§ 3101–3102, 3701–3702.

160. *See* 33 U.S.C. § 1377; *see also id.* § 1251(a) ("The objective of this [Act] is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.").

161. 33 U.S.C § 1377(e).

162. *See id.*; City of Albuquerque v. Browner, 97 F.3d 415, 423–24 (10th Cir. 1996) (providing that a downstream tribe may, with EPA cooperation, effect more stringent water pollution requirements on upstream, non-tribal activities).

163. For an overview of tribal civil jurisdictional issues under the Clean Water Act, see Robin Kundis Craig, *Borders and Discharges: Regulation of Tribal Activities Under the Clean Water Act in States with NPDES Program Authority*, 16 UCLA J. ENVTL. L. & POL'Y 1 (1998).

federal appellate cases, *City of Albuquerque v. Browner*[164] and *Montana v. EPA*,[165] operate to permit tribal nations to regulate activities (water pollution, specifically) on non-Indian fee lands given a demonstrable, water quality–related impact to "tribal health or welfare."[166] Thus, the federal circuit courts in those decisions supported the articulated interests of the tribal nation parties in protecting their lands and resources, even when those interests interfered with non-tribal member activity on off-reservation lands.

In *City of Albuquerque v. Browner*, the Tenth Circuit upheld EPA-approved water quality standards put forth by the Pueblo of Isleta, which had been upheld by the district court upon challenge by the City of Albuquerque. [167] The Tenth Circuit agreed with the lower court's determination that the Pueblo was authorized to regulate wastewater dumping by the City of Albuquerque under the Clean Water Act.[168] The court of appeals held for the EPA, and the Pueblo's water quality standards were upheld.[169] The court held that Congress had expressly granted tribal authority to promulgate water quality standards for administrative approval by the EPA.[170] This holding for the tribal nation was despite the fact that the EPA-approved water quality standards put forward by the Tribe were stricter than those articulated in the state and federal standards and would significantly impact activities by non-Indians in fee-owned lands.[171]

In the 1998 decision of *Montana v. EPA*, the Ninth Circuit came to a similar conclusion as did the Tenth Circuit in *Browner*, finding that the Confederated Salish and Kootenai Tribes of the Flathead Reservation's water quality standards, as approved by the EPA, were authorized under the Clean Water Act and further justified under the health and welfare exception outlined by the Supreme Court's 1981 decision in *Montana*.[172] The courts are

164. 97 F.3d 415.

165. 137 F.3d 1135 (9th Cir. 1998).

166. *See id.* at 1139–40. For a full discussion of how tribal nations are implementing the Clean Water Act through tribal standards and regulations, see Marren Sanders, *Clean Water in Indian Country: The Risks (and Rewards) of Being Treated in the Same Manner as a State*, 36 WM. MITCHELL L. REV. 533 (2010).

167. *See Browner*, 97 F.3d at 429.

168. *Id.*

169. *Id.*

170. *Id.* at 424.

171. *See id.* at 419.

172. Montana v. EPA, 137 F.3d 1135, 1141 (9th Cir. 1998) (discussing

increasingly recognizing the importance of tribal regulation over reservation lands and over conduct that threatens reservation natural resources.

With the enactment of the American Indian Agricultural Resource Management Act, which authorizes land use regulation over Indian lands to protect reservation resources vital to growing and harvesting agricultural products, and the Clean Water Act's "treatment as a state" provisions, which permit tribal nations to regulate the activities of non-Indian actors on off-reservation lands, it seems clear that Congress intends tribal nations to exercise land and natural resource regulation in a bigger way than they had been permitted to earlier in the Self-Determination Era. The court of appeals' decisions in *Browner* and *Montana v. EPA* support the assertion of extensive tribal land use authority to protect vital reservation resources. It stands to reason that the devastating impacts to reservation communities resulting from climate change[173] warrant the same sort of wholesale regulation that Congress and the courts have affirmed in recent years.

V. EXECUTIVE BRANCH SUPPORT FOR TRIBAL LAND AND NATURAL RESOURCE MANAGEMENT IN INDIAN COUNTRY

There are a number of nonbinding indicators—both domestically and internationally—that demonstrate an increasing recognition of the role tribal nations ought to play in addressing climate change in the coming years. As it has with other major shifts in federal Indian policy, executive level support may have a persuasive role in clarifying that tribal nations do indeed enjoy a right to regulate wholesale to protect against the impacts of climate change.[174]

Recent statements made by officials in the Obama administration make clear that tribal nations are gaining headway in regulating the nonmember activities that impact the land and resources within reservation boundaries. Secretary of the Interior

Montana v. United States, 450 U.S. 544 (1981)).

173. *See supra* Part II.B–C.

174. One notable example of executive-led policy shifts is President Nixon's 1970 address, Message to the Congress of the United States, Recommendations for Indian Policy, 116 CONG. REC. 23,258 (1970), which is often credited with bringing an end to the termination policies of the U.S. government. *See* Daniel H. Israel, *The Reemergence of Tribal Nationalism and Its Impact on Reservation Resource Development*, 47 U. COLO. L. REV. 617, 624–29 (1976).

Sally Jewell's July 2014 statement that "climate change is a leading threat to natural and cultural resources across America, and tribal communities are often the hardest hit"[175] affirms that impacts are serious in Indian country, warranting an appropriately comprehensive response. Assistant Secretary of Indian Affairs Kevin Washburn added:

> Impacts of climate change are increasingly evident for American Indian and Alaska Native communities and, in some cases, threaten the ability of tribal nations to carry on their cultural traditions and beliefs . . . . We have heard directly from tribes about climate change and how it dramatically affects their communities, many of which face extreme poverty as well as economic development and infrastructure challenges. These impacts test their ability to protect and preserve their land and water for future generations. We are committed to providing the means and measures to help tribes in their efforts to protect and mitigate the effects of climate change on their land and natural resources.[176]

While cabinet-level statements are not binding on the courts, they can be illustrative of federal governmental policy. Tribal nations are gaining broad-branch recognition of their right to regulate their entire reservation communities for the good of the community, Indian and non-Indian alike. It will be critical over the next several years that tribal nations take hold of this element of their tribal sovereignty and begin asserting jurisdiction over their reservation lands through comprehensive land use planning and tribal code development. Federal agency support, primarily through grant-making or technical assistance for tribal nations to undertake these tasks, could be particularly helpful in the coming years.

The international community has concerns related to both environmental and indigenous issues, particularly where those concerns intersect, that overlap with recent executive level statements on these issues. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) speaks directly to the right of tribal nations to regulate their lands and resources,

175. Press Release, U.S. Dep't of the Interior, Secretary Jewell Announces New Tribal Climate Resilience Program (July 16, 2014).

176. *Id.*

characterizing the matter as one of basic human rights.[177] In September 2007, 143 nations voted in favor of the UNDRIP.[178] Among the four countries that opposed the UNDRIP was the United States.[179] However, during his first term in office, President Obama indicated the nation's official position had changed and that as of December 10, 2010, the United States was proudly lending its support to the UNDRIP.[180] There has been no congressional action to ratify the UNDRIP, but again, executive level policies can have transformative impacts on federal Indian policy.[181]

Article 8 of the UNDRIP specifically calls for states' development of "effective mechanisms for the prevention of, and redress for . . . [a]ny action which has the aim or effect of dispossessing [indigenous peoples] of their lands, territories or resources."[182] Similarly, articles 10, 26, and 28 of the UNDRIP reiterate a prohibition against the forcible removal of indigenous peoples from their lands or territories[183]—a direct repudiation of the termination and removal policies of the U.S. government from the not-too-distant past.[184] When the impacts of climate change operate to force relocation for indigenous communities, as they have done in Alaska, the Northwest, and in Louisiana,[185] fundamental notions of justice, fairness, and human rights are implicated. Indigenous peoples are seldom the cause of the devastating impacts of climate change, but they are often the most affected by them. It is time to give tribal nations a bigger say in addressing climate change in Indian communities.

177. United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, annex, U.N. DOC. A/RES/61/295 (Sept. 13, 2007) [hereinafter UNDRIP].

178. Press Release, Gen. Assembly, General Assembly Adopts Declaration on Rights of Indigenous People; "Major Step Forward" Towards Human Rights for All, Says President, U.N. Press Release GA/10612 (Sept. 13, 2007).

179. *Id.* The other countries that voted against the UNDRIP were Australia, Canada, and New Zealand. *Id.*

180. *Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples: Initiatives to Promote the Government-to-Government Relationship & Improve the Lives of Indigenous Peoples*, U.S. DEP'T STATE, http://www.state.gov/documents/organization/184099.pdf (last visited Oct. 18, 2014).

181. *See supra* text accompanying note 174.

182. UNDRIP, *supra* note 177, art. 8(2)(b).

183. *Id.* art. 10, 26, 28.

184. *See supra* notes 76–84 and accompanying text.

185. *See supra* Part II.C.

VI. ALTERNATIVE TRIBAL RESPONSES: CO-MANAGEMENT AND CONCURRENT JURISDICTION TO ADDRESS LAND AND RESOURCE MANAGEMENT

Practically speaking, it is easier to talk of wholesale tribal land use regulations than to actually implement them. However, there are examples of tribal regulation of reservation lands and natural resources, including regulation that impacts non-Indian activities on fee-owned lands, which have been successful through the use of co-management or shared jurisdiction models. These models can offset some of the burden of enforcement to state agencies with supportive, rather than combative, attitudes toward tribal regulation to protect reservation resources and can be a meaningful step toward wholesale tribal regulation of reservation lands and resources.

As described above,[186] in 2010 the Swinomish Indian Tribal Community published a climate change action plan for the adaptation and mitigation of potential risks and impacts of climate change to its reservation in the State of Washington.[187] The action plan called for numerous implementation strategies, including inter-jurisdictional coordination with Skagit County.[188] In 1998, the Tribal Nation and the County entered into a Memorandum of Understanding (MOU) in order to reduce the potential for jurisdictional disputes over regulation of non-Indian-owned fee lands.[189] The Tribe's action plan proposes to expand the existing MOU between the Tribal Nation and the County to specifically cover climate change adaptation responses, including coordination of building permits where the Tribe may want increased shoreline setbacks.[190] It also calls for the development of a sub-area plan to develop a sea-level-rise risk zone.[191] This new zoning classification would apply to both Indian and fee lands.[192]

The Swinomish model of cooperative management alongside state and local governmental entities is one approach to exercising jurisdiction, albeit shared, over traditional areas threatened by

186. *See supra* note 58 and accompanying text.
187. CLIMATE CHANGE ACTION PLAN, *supra* note 58, at 1–4.
188. *Id.* at 82–84.
189. *Id.* at 82–83.
190. *Id.* at 83.
191. *Id.*
192. *Id.*

climate change. By exercising concurrent jurisdiction of land and natural resource management in and around reservation lands, tribal nations can offset the administrative burdens and financial risks of undertaking these tasks alone. In addition, non-Indian community members may be less hostile to implementation of a tribal regulatory scheme if state or local officials have a hand in carrying it out. Collaboration can provide an entry point for tribally developed reservation land and natural resource management.

In Minnesota, the 1854 Treaty Authority regulates hunting and fishing activities without regard to land ownership.[193] The Treaty Authority represents a partnership between two bands of the Minnesota Chippewa Tribe, the Bois Forte Band and the Grand Portage Band, and the State of Minnesota.[194] The purpose of the 1854 Treaty Authority is to regulate hunting and fishing on off-reservation fee lands that are part of the original boundaries of the reservation as outlined in the 1854 Treaty.[195] As part of a settlement with the State of Minnesota, a Grand Portage and Bois Forte conservation code is broadly applied across fee lands to regulate hunting and fishing among tribal members.[196] Similar to the Swinomish Tribe's work with Skagit County,[197] the Bois Forte Band and the Grand Portage Band work closely with state agents to manage the natural resources that band members rely on for subsistence and commercial activity. While the arrangement specifically addresses Indian activity, it remains a model for how tribes can work with local and state entities to address serious concerns about culturally or economically significant resources.

VII. CONCLUSION: A CALL TO ACTION FOR TRIBAL NATIONS AND THE FEDERAL GOVERNMENT

Since initial European contact with indigenous groups in the fifteenth century, external forces have separated Indian people from their lands and their resources. The systematic dispossession continued through the eighteenth and nineteenth centuries with

193. Treaty with the Chippewa, U.S.-Chippewa, art. 11, Sep. 30, 1854, 10 Stat. 1109; *see also* 1854 TREATY AUTHORITY, http://www.1854treatyauthority.org (last visited Dec. 10, 2014).

194. Telephone Interview with Sonny Meyers, Exec. Dir., 1854 Treaty Auth. (July 31, 2014).

195. *Id.*; *see also* 1854 TREATY AUTHORITY, *supra* note 193.

196. Telephone Interview with Sonny Meyers, *supra* note 194.

197. *See supra* notes 189–92 and accompanying text.

treaty-making between the United States and tribal nations, which ultimately led to removal of Indian peoples from their homelands. It persisted through the twentieth century, pervading the allotment policies which reduced and divided the tribal land base. Allotment alienated Indian people from their tribal identity and created a trust relationship between the federal government and Indian people.[198] As the Court acknowledged in *Montana*, an "avowed purpose of the allotment policy was the ultimate destruction of tribal government."[199] While likely not as purposeful as the allotment policies of the nineteenth century, climate change is the latest threat to tribal nations and individual Indian people living and working on their own lands.

In the current Self-Determination Era, there appears to be little remaining justification for restricting tribal nations from regulating their reservation lands in a way that protects the entire community, Indian and non-Indian alike. The laws and regulations that prevent Indian people from living on and regulating their reservation lands are not only outdated, but they are fundamentally unfair and unconscionable. Tribal nations are gaining support among executive officials, legislators, and the courts, as well as among the international community, for a much bigger role in regulating their lands and resources to combat growing environmental concerns. In getting serious about climate change and bolstering tribal nations' ability to combat the symptoms and protect Indian communities, tribal land use codes and zoning ordinances should be prioritized among the federal government and tribal nations. Some of the most fundamental notions of fairness and justice are relegated to idealistic non-realities in the realm of Indian law, especially when it comes to rights of tribal nations to control their most valuable assets: their lands and natural resources.

Climate change impacts indeed "'imperil the subsistence' of the tribal community"[200] on an increasing basis. This threshold

198. *See supra* notes 100–11 and accompanying text. The trust relationship holds the U.S. government responsible as fiduciary for the protection of Indian interests: assets, lands, water, income from trust property, and proprietary treaty rights. *See* Press Release, U.S. Dep't of the Interior, Secretary Jewell Issues Secretarial Order Affirming American Indian Trust Responsibilities (Aug. 20, 2014).

199. Montana v. United States, 450 U.S. 544, 559 n.9 (1981).

200. Plains Commerce Bank v. Long Family Land & Cattle Co., 554 U.S. 316,

articulated in *Montana*, the requirement that tribal nations justify zoning authority by demonstrating a threat to tribal health and welfare, echoes justifications used by local governments in enacting early zoning codes. The same reasons by which other governments justify the restriction of certain activities on lands within their communities to protect their citizens are the same as those of tribal governments. With the increasing incidence of serious environmental threats to Indian communities as a result of climate change, the authority to respond appropriately, and to act in advance of disaster, is critical.

Everyone is impacted by climate change, Indian and non-Indian alike. The plight of reservation communities already faced with forced relocation is soon to be shared by non-Indian communities. By treating tribal nations as functional local governments with the authority to regulate their lands and resources, we leave behind a legacy of crippling, restrictive federal policy and enter a new age of true self-determination and a better future for our communities.

341 (2008) (quoting *Montana*, 450 U.S. at 566).