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TAKING THE PIT BULL OFF THE LEASH: SICCING THE ENDANGERED SPECIES ACT ON CLIMATE CHANGE

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Abstract: Environmentalists have been warning of catastrophic climate change for years, often getting only minimal attention from lawmakers and, until recently, the public. With the political climate still moving only incrementally, citizen groups and states may have a tactic in the Endangered Species Act to jumpstart the reduction of CO_2 emissions. This Note examines the implications of a citizen suit to reduce emissions based on the section 9 "take" provisions of the Endangered Species Act. It examines Article III standing requirements alongside the citizen-suit provisions of the Endangered Species Act, and the possible existence of a nonjusticiable political question. The Note takes the position that such a suit could move forward successfully, given the right judicial circumstances.

Introduction

The last several years yielded an ongoing, passionate debate between those who "believe" in anthropogenic climate change,[1] and those who remain skeptical of its science, its purported threats, and its political uses.[2] The debate is lively in the United States Congress, with

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[1] Throughout this Note, the terms "climate change," "global climate change," and "global warming" are used interchangeably. Unless otherwise noted, the climate change referred to is at least partially anthropogenic.

[2] *Compare Wildlife and Oceans in a Changing Climate: Oversight Hearing Before the Subcomm. on Fisheries, Wildlife and Oceans of the H. Comm. on Natural Resources*, 110th Cong. 75 (2007) [hereinafter *Oversight Hearing*] (statement of Rep. Dale E. Kildee, Member, H. Comm. on Natural Resources) (recognizing the moral and political responsibility of combating climate change) *and* Intergovernmental Panel on Climate Change [IPCC], *Climate Change 2007: Synthesis Report, Summary for Policymakers*, at 1–6, AR4-SYR (2007) [hereinafter *IPCC Report*] (presenting substantial evidence of the threats and causes of climate change) *with Oversight Hearing*, *supra*, at 116–18 (testimony of Dr. Gary Sharp, Scientific Director, Center for Climate/Ocean Resources Study) (focusing dissent on the idea that human contribution to greenhouse gases is only a small percentage of total greenhouse gas concentrations) *and* Maura Reynolds & James Gerstenzang, *Updating His Spin on Climate Change*, L.A.

members taking swipes at dissenters and heel-draggers in committee hearings[3] and in the news.[4] Scientists trade barbs in testimony,[5] some seeming at times to be quoting copy from a bottle of Dr. Bronner's Magic Soap.[6] Congress—with the signature of President George W. Bush—finally passed a previously unimaginable bill,[7] the Energy Independence and Security Act of 2007, which purports to "improve our environment" by "reduc[ing] projected CO_2 emissions by billions of metric tons."[8] The bill increases fuel economy to thirty-five miles per gallon by the year 2020, an "increase [in] fuel economy standards by 40 percent . . . ."[9]

With the May, 2008 listing of the Polar Bear as a threatened species, the Bush Administration seized the opportunity to try to limit the oversight of the courts in climate change matters.[10] In a statement

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TIMES, Feb. 11, 2007, at A30 (citing the Bush Administration's attempt to polish its climate change bona fides).

[3] *Oversight Hearing*, *supra* note 2, at 75 (statement of Rep. Kildee) ("To my mind, those who question global warming are living in an unreal world. It is there, and we actually sponsor it.").

[4] *See* Samantha Young, *EPA Deletes Large Portions of Documents Turned Over in Calif. Greenhouse Gas Case*, ASSOCIATED PRESS, Jan. 19, 2008, *available at* http://www.opennntp.com/Politics/epa-deletes-large-portions-of-documents-turned-over-in-calif-greenhouse-gas-case-737630560.html (noting Senator Barbara Boxer's threats to subpoena EPA materials regarding a rejection of a California tailpipe emissions regulation, should they not be voluntarily turned over in their entirety).

[5] *See Oversight Hearing*, *supra* note 2, at 77 (statement of Dr. Terry L. Root, Senior Fellow, Stanford University) ("There has been a lot of disinformation that has been going out to all of America, and the scientists, we have been sitting here saying this is not right. Here are the facts. This is not right. Here are the facts.").

[6] *Compare Oversight Hearing*, *supra* note 2, at 125 (statement of Dr. Gary Sharp) ("THE AVERAGE FISH DIES WITHIN ITS FIRST WEEK OF LIFE! And—Where does this leave our mathematician? With a lot of surviving, not-so-average fish.") (demonstrating near-hysterical pitch of some scientists' criticism) *with* Charles Leroux, *Soap Opera*, CHI. TRIB., Dec. 7, 1999, § 5 (Tempo), at 1, *available at* http://www.drbronner.com/pdf/chicago_tribune.pdf ("WE'RE ONE! ALL-ONE! EXCEPTIONS ETERNALLY? NONE!") (quoting the soap label).

[7] *See* Richard Simon, *Congress Thought the Unthinkable on Vehicle Mileage*, L.A. TIMES, Dec. 2, 2007, at A17.

[8] Press Release, Office of the Press Sec'y, President Bush Signs H.R. 6, the Energy Independence and Sec. Act of 2007 (Dec. 19, 2007) [hereinafter H.R. 6 Press Release] (transcript of statement by President Bush at the Department of Energy). *See generally* Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (codified in scattered sections of 2, 15, 40, 42, and 46 U.S.C.) (giving a purpose of the law as "promot[ing] research on and deploy[ment of] greenhouse gas capture and storage options.").

[9] H.R. 6 Press Release, *supra* note 8.

[10] *See* Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Polar Bear (Ursus maritimus) Throughout Its Range, 73 Fed. Reg. 28,212, 28,212–303 (May 15, 2008) (to be codified at 50 C.F.R. pt. 17); Press Release, U.S. Dept. of

accompanying the Polar Bear announcement, Secretary of the Interior Dirk Kempthorne claimed that the listing "should not open the door to use of the [Endangered Species Act] to regulate greenhouse gas emissions from automobiles, power plants, and other sources."[11] The Secretary argued that such regulation and policy decisions should instead come from open debate and lawmaking in Congress, as President Bush stated in April 2008.[12]

As the political process finally forces politicians and policymakers to act on the issue of climate change,[13] however, the courts have already handled suits related to climate change for a number of years—particularly in reference to endangered and threatened animals.[14] Various courts have acknowledged anthropogenic climate change as a problem in a series of suits throughout the country.[15] Amid concerns

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the Interior, Sec'y Kempthorne Announces Decision to Protect Polar Bears Under Endangered Species Act (May 14, 2008) [hereinafter Polar Bear Press Release], *available at* http://www.fws.gov/home/feature/2008/polarbear012308/pdf/DOI_polar_bears_news_release.pdf.

[11] Polar Bear Press Release, *supra* note 10.

[12] *See id.*

[13] *See* Anne E. Kornblut & Alec MacGillis, *Warning of Threats, Clinton Sells Clinton: Ex-President Emphasizes Wife's Experience*, WASH. POST, Dec. 30, 2007, at A1 (reporting that President Clinton lists climate change as one of the "challenges" that Senator Clinton would be best able to handle out of the Democratic field); Andrew C. Revkin, *Agency Affirms Human Influence on Climate*, N.Y. TIMES, Jan. 10, 2007, at A16 (noting the National Oceanic and Atmospheric Administration's acknowledgment of a long-term warming trend spurred in part by human activity); *see also* Peter Gelling & Andrew C. Revkin, *Climate Talks Take on Added Urgency After Report*, N.Y. TIMES, Dec. 3, 2007, at A3 ("President Bush recently proposed that the world's biggest countries work toward a common, long-term goal set decades in the future, without specific targets or limits, and more immediate goals set by individual nations using whatever means they choose."); Editorial: In Office, *The One Environmental Issue*, N.Y. TIMES, Jan. 1, 2008, at A16 ("There is . . . a growing appetite for decisive action—everywhere, it seems, except the White House.").

[14] *See* Nw. Envtl. Advocates v. Nat'l Marine Fisheries Serv., 460 F.3d 1125, 1161 n.10 (9th Cir. 2006) (Fletcher, J., dissenting) (threatened salmon); Natural Res. Def. Council (NRDC) v. Kempthorne, 506 F. Supp. 2d 322, 367–70 (E.D. Cal. 2007) [*NRDC v. Kempthorne I*] (threatened smelt).

[15] Massachusetts v. EPA, 549 U.S. 497, 521 (2007) ("The harms associated with climate change are serious and well recognized."); Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 314, 320 (D. Vt. 2007); *see NRDC v. Kempthorne I*, 506 F. Supp. 2d at 367–69 ("At the very least, [submitted] studies suggest that climate change will be an important aspect of [California water works planning], meriting analysis . . . .") (internal quotations omitted); *see also Nw. Envtl. Advocates*, 460 F.3d at 1161 n.10 (Fletcher, J., dissenting) ("Uncertainty as to the accuracy and adequacy of [a salinity model for Columbia River dredging] is compounded by the impacts of climate change on the Pacific Ocean and Columbia River—how will now-certain rising of sea level impact salinity . . . ?"); Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 268–70 (S.D.N.Y. 2005) (discussing problems of climate change and acknowledgement of the same by the government).

that the comparatively liberal Ninth Circuit Court of Appeals would have to blaze a vulnerable path in environmental activism within the courts,[16] the Supreme Court, in its landmark *Massachusetts v. EPA* decision, opened the door for increased use of the scourges of climate change as concrete harms to be redressed.[17]

There are, of course, still plenty of obstacles to overcome to reverse or at least mitigate the harms of climate change, both from the administration,[18] and in the courts.[19] Scientists believe that humans need to take two different kinds of action immediately—mitigation and adaptation.[20] "Mitigation" refers to actions to "reduce causes of climate change . . . [by] support[ing] . . . measures to reduce the levels of greenhouse gas emissions."[21] In terms of wildlife protection, "adaptation" refers to "steps to assist wildlife in navigating effects of climate change . . . ."[22] Concerned private citizens, seeing the need to spur mitigation measures while also working through adaptive responses, could take to the courts to try to effect positive change.[23] Indeed, that pit bull of an environmental statute,[24] the Endangered Species Act,[25] could provide at least one such opportunity to begin the necessary mitigation.[26]

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[16] *See* SCOTUSBlog Stats, Circuit Scorecard—OT06, http://www.scotusblog.com/movable type/archives/ScorecardOT06.pdf (last visited Jan. 23, 2009).

[17] *See* 549 U.S. at 522–23.

[18] *See* Young, *supra* note 4 ("[T]he [EPA] denied California permission to impose what would have been the country's toughest greenhouse gas standards on cars, trucks and sports utility vehicles.").

[19] *See, e.g.*, *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274 ("Because resolution of the issues presented here requires identification and balancing of economic, environmental, foreign policy, and national security interests, 'an initial policy determination of a kind clearly for non-judicial discretion' is required.") (quoting Vieth v. Jubelirer, 541 U.S. 267, 278 (2004)).

[20] *See Oversight Hearing*, *supra* note 2, at 51–52 (statement of Dr. J. Christopher Haney, Chief Scientist, Defenders of Wildlife); *id.* at 163–66 (statement of The Nature Conservancy).

[21] *See id.* at 52 (statement of Dr. J. Christopher Haney).

[22] *See id.*

[23] *See* Endangered Species Act, 16 U.S.C. § 1540(g) (2000).

[24] *See* Paul Boudreaux, *Understanding "Take" in the Endangered Species Act*, 34 ARIZ. ST. L.J. 733, 733 n.2 (2002); George Cameron Coggins, *An Ivory Tower Perspective on Endangered Species Law*, NAT. RESOURCES & ENV'T, Summer 1993 at 3, 3 (noting that early outcomes in ESA cases led to this "sobriquet"); Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act's Best Available Science Mandate*, 34 ENVTL. L. 397, 399 n.2 (2004) (tentatively attributing the "pit bull" moniker to Donald Barry, former majority counsel to the House Committee on Merchant Marine and Fisheries).

[25] 16 U.S.C. §§ 1531–1544.

[26] *See id.* § 1538(a)(1)(B)–(C) (prohibited acts, take provisions). *See generally* Sarah Jane Morath, *The Endangered Species Act: A New Avenue for Climate Change Litigation?*, 29 PUB.

This Note examines one way to harness the Endangered Species Act to reduce CO_2 emissions. Specifically, it argues that climate change—and those causing it—harm threatened shore birds on both coasts of the United States. Part I of this Note examines the causes and effects of anthropogenic climate change on oceans and coastal habitat. Part II discusses provisions of the Endangered Species Act that could be harnessed to force such an injunction. It also presents the concept of standing and other constitutional issues implicated in litigating such a suit. Part III analyzes one possible suit under the Endangered Species Act's take provisions and concludes that an injunction ought to be attainable.

I. Anthropogenic Climate Change: Causes and Effects

The science of anthropogenic climate change is constantly evolving.[27] New experimental and observational techniques, data, and models provide more and more certain information about the warming planet, as well as the likelihood that such warming results from human contribution to atmospheric greenhouse gases.[28] Through this study, scientists and policy-makers have learned much about the causes and effects of climate change, and have begun to understand how to mitigate those causes and adapt to those effects.[29]

A. *Human Causes of Climate Change*

Human contribution to climate change is acknowledged and accepted in many well-respected venues, and is widely considered to be scientific consensus.[30] In accepting the Nobel Peace Prize on behalf of the Intergovernmental Panel on Climate Change (IPCC)—shared with former vice president Al Gore—chairman Rajendra Pachauri explained that "thousands of scientists had spent two decades documenting global

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Land & Resources L. Rev. 23 (2008) (tracing an ESA suit on the basis of the destruction of the polar bear's critical habitat).

[27] *See Oversight Hearing*, *supra* note 2, at 14 (statement of Dr. Joshua J. Lawler, Assistant Professor, College of Forest Resources, University of Washington) (describing ongoing research techniques and findings).

[28] *See id.*; *IPCC Report*, *supra* note 2, at 1–2.

[29] *See generally Oversight Hearing*, *supra* note 2 (providing substantial testimony and discussion regarding causes and effects of climate change).

[30] *See, e.g.*, Massachusetts v. EPA, 549 U.S. 497, 509–11 (2007); Mary Jordan, *Gore Accepts Nobel Prize with Call for Bold Action*, Wash. Post, Dec. 11, 2007, at A14; Press Release, The Norwegian Nobel Comm., The Nobel Peace Prize for 2007 (Oct. 12, 2007) [hereinafter Nobel Press Release] ("[F]or their efforts to build up and disseminate greater knowledge about man-made climate change . . . .").

warming."[31] The discussion and negotiation is now moving to ameliorating—through mitigation of and adaptation to—the harms caused by climate change.[32] Pachauri, speaking at the December 2007 meeting of government leaders in Bali, demanded, "[w]ill those responsible for decisions in the field of climate change at the global level listen to the voice of science and knowledge, which is now loud and clear?"[33]

Humans contribute to climate change through the release of greenhouse gases at a rate and scale that overwhelms the natural balance of atmospheric gases.[34] Particularly, humans emit CO_2 through the burning of fossil fuels; methane as a result of agriculture, waste, and energy production; and nitrous oxide from agriculture.[35] Power plants and automobiles are major sources of CO_2 emissions.[36] Before the Industrial Revolution, the natural world was "fairly well balanced" in terms of the ambient presence of greenhouse gases, with injections of additional atmospheric CO_2 coming from volcanic activity and similar natural processes.[37] By contrast,current concentrations of CO_2 and methane in the atmosphere "exceed by far the natural range over the last 650,000 years."[38] Indeed, the current human contribution to atmospheric CO_2 is believed to be fifty times that of natural processes over a given period.[39] As Dr. Ken Caldeira noted in his testimony to Congress, assuming "we cut [ninety-eight] percent of our emissions, we would be doubling . . . natural geologic source[s] of CO_2 to our atmosphere."[40]

That said, scientists posit that only approximately three percent of all atmospheric CO_2 is due to human activity, whether through fos-

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[31] *See* Jordan, *supra* note 30, at A14.

[32] *See id.*

[33] *Id.*

[34] *See, e.g.*, Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 309 (D. Vt. 2007) ("'EPA does not dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming . . . .'") (quoting *Massachusetts v. EPA*, 549 U.S. at 523); *Oversight Hearing*, *supra* note 2, at 64 (testimony of Bill McKibben, Author and Scholar in Residence, Middlebury College) (discussing imbalance caused by anthropogenic greenhouse gas emissions).

[35] *See Green Mountain Chrysler*, 508 F. Supp. 2d at 308–09; *IPCC Report*, *supra* note 2, at 4–5.

[36] *See Green Mountain Chrysler*, 508 F. Supp. 2d at 308–09; *IPCC Report*, *supra* note 2, at 4–5.

[37] *Oversight Hearing*, *supra* note 2, at 64 (testimony of Bill McKibben). Mr. McKibben adroitly acknowledged that not even Congress could legislate against volcanoes. *See id.*

[38] *IPCC Report*, *supra* note 2, at 4.

[39] *See Oversight Hearing*, *supra* note 2, at 90 (statement of Dr. Ken Caldeira, Department of Global Ecology, Carnegie Institute of Washington).

[40] *See id.*

sil-fuel use, or deforestation and other land-use changes.[41] Dissenting members of Congress have pounced on this fact to suggest that human contribution is, in fact, minimal.[42] Congressman Wayne T. Gilchrest, Democrat from Maryland, responded to these skeptics: "If you have a scale with 1,000 pounds on each side and it is balanced, you add one pound to one side, which is extraordinarily tiny, and it goes off balance. To some extent, that is what we are doing."[43] As such, burning fossil fuels and otherwise contributing to the greenhouse effect over-saturates the atmosphere in such a way that natural processes cannot counterbalance this anthropogenic influence.[44]

B. *The Effects of Climate Change on Wildlife*

Warming resulting from anthropogenic climate change affects wildlife and their habitats on an increasingly alarming scale.[45] The only slight increase in temperature on land is largely thanks to the oceans, which absorb approximately eighty percent of the heat added to the climate system.[46] The oceans, an integral part of the carbon balance, act both as a depository for excess carbon from CO_2 and as a sink for excess heat, but have been overwhelmed by continuous CO_2 output.[47] Thus, anthropogenic climate change is harming our oceans and shorelines in addition to having effects on ambient temperature on land.[48]

This warming through the increased introduction of CO_2 into the atmosphere alters the "physical and biogeochemical characteristics" of the oceans.[49] Such CO_2 imbalance and the resulting warming leads to actual heating of the oceans and a rise in sea levels.[50] Additionally, the general warming of the planet by a mere one-and-a-half

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[41] *See id.* at 64 (examination of Bill McKibben by Rep. Henry E. Brown, Jr.); *IPCC Report*, *supra* note 2, at 4.

[42] *See, e.g.*, *Oversight Hearing*, *supra* note 2, at 63–64 (examination of Bill McKibben by Rep. Henry E. Brown, Jr.).

[43] *See id.* at 66 (statement of Rep. Wayne T. Gilchrest).

[44] *See id.* at 50 (statement of Dr. J. Christopher Haney); *id.* at 160–61 (statement of The Nature Conservancy).

[45] *See* Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 340–41 (D. Vt. 2007); *Oversight Hearing*, *supra* note 2, at 160–61 (statement of The Nature Conservancy).

[46] *See Oversight Hearing*, *supra* note 2, at 160–61 (statement of The Nature Conservancy); *IPCC Report*, *supra* note 2, at 1.

[47] *See Oversight Hearing*, *supra* note 2, at 161–62.

[48] *See id.*

[49] *Id.* at 161.

[50] *See id.* at 89–91 (testimony of Dr. Ken Caldeira); *id.* at 161 (statement of The Nature Conservancy). Warming will also lead to increased ocean acidification. *Id.* at 90–91.

to two degrees Celsius over end-of-century levels could cause up to thirty percent of species studied by the IPCC—and up to eighty percent in regional biota—to be at a higher risk of extinction.[51]

1. Heating the Oceans, Heating the Planet, and Effects on Wildlife

Actual ocean heating is problematic because it decreases solubility of oxygen into water and harms the ability of deep, cool, nutrient-rich water to mix with and feed the upper, warmer ocean strata.[52] Oxygen dissolves more easily in cold water; many fisheries are dependent on highly active cold-water fish such as tuna.[53] As the waters warm, oxygen-loving fish will follow the cooler waters poleward, leaving behind traditional feeding grounds and the fishermen who frequent them.[54] While many individual species will be so affected, scientists do not believe that entire ecosystems will be able to migrate as one unit.[55] Thus, seabirds, not realizing that their quarry has moved to cooler waters farther poleward, may continue to hunt in traditional feeding grounds only to find them barren or markedly diminished.[56] Seabird deaths in California and Oregon have already been linked to such changes in the availability of food.[57]

In addition to the oxygen provided to fish and other marine creatures by cool, deep water, such water also provides nutrients to much smaller photosynthetic organisms in the surface waters.[58] Decreased mixing of deep wells with surface waters due to a more-marked temperature difference, and the resulting nutrient deprivation to surface strata, could cause widespread harm throughout the oceanic food chain, including harm to great whales and other wildlife dependent on photosynthetic organisms as a food source.[59]

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[51] *See id.* at 29, 32–33 (statement of Dr. Terry L. Root); *IPCC Report*, *supra* note 2, at 9; J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 B.U. L. Rev. 1, 26 (2008).

[52] *Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira).

[53] *See id.*

[54] *See id.*

[55] *Id.*

[56] *See id.*

[57] *Id.*

[58] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira).

[59] *See id.* This same "cap" has potentially catastrophic effects on the meridional overturning circulation of the Atlantic Ocean—the oceanic "conveyor" that circulates ocean waters both from deep to shallow and from West to East—potentially causing widespread decrease in ecosystem productivity and ocean CO_2 uptake, in addition to changes in global weather patterns. *See IPCC Report*, *supra* note 2, at 13.

2. The Rising Sea

As the climate warms from increased anthropogenic introduction of CO_2 and other greenhouse gases into the atmosphere, sea levels are expected to rise precipitously.[60] This is due not only to increased freshwater releases from terrestrial ice sheets or increased flows from snowpack-fed rivers, [61] but also to the simple molecular expansion that occurs in all substances when heated—an effect that has vast consequences when spread across an entire world of water.[62] One estimate predicts that, should CO_2 and other greenhouse emissions go unchanged, there could be as much as a one-foot rise in sea levels worldwide by the end of the century solely as a result of thermal expansion.[63] Whatever the additional rise in sea level because of melting land ice,[64] even a one-foot rise will result in increased beach erosion, destruction of coastal dune and intertidal habitats, and heightened salinity of estuarine deltas.[65]

Increased beach erosion will harm the habitats of several coastal species.[66] Dunes and sandy areas above the high tide line will be particularly vulnerable, as increased severe weather and flooding is expected to impact these loosely packed areas severely. [67] Reduced

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[60] *See* Nw. Envtl. Advocates v. Nat'l Marine Fisheries Serv., 460 F.3d 1125, 1161 n.10 (9th Cir. 2006) (Fletcher, J., dissenting); *Oversight Hearing*, *supra* note 2, at 1–2 (statement of Del. Madeline Z. Bordallo, Chairwoman); *id.* at 91–92 (statement of Dr. Ken Caldeira); *see also IPCC Report*, *supra* note 2, at 13 ("Contraction of the Greenland ice sheet is projected to continue to contribute to sea level rise . . . .").

[61] *See Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira); *IPCC Report*, *supra* note 2, at 13.

[62] *See Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira).

[63] *See id.* (referring to such a rise as far more certain than projected amounts of sea-level rise from melting ice this century). A two-foot level rise would wipe out 10,000 square miles of coastal land and habitat. *See id.* at 92.

[64] Complete elimination of the Greenland ice sheet could result in a sea level rise of seven meters; the good news, though, is that for this to happen, warming would need to continue for millennia at warming between approximately two and 4.5 degrees Celsius above pre-industrial temperatures. *See IPCC Report*, *supra* note 2, at 13.

[65] *See Nw. Envtl. Advocates*, 460 F.3d at 1161 n.10 (Fletcher, J., dissenting); *Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira); *id.* at 142 (statement of Dr. John T. Everett, President and Consultant, Ocean Associates, Inc.); *id.* at 160 (statement of The Nature Conservancy); *IPCC Report*, *supra* note 2, at 13. Scientists also expect flooding of low-lying coastal wetlands and sea grass prairies. *See Oversight Hearing*, *supra* note 2, at 49 (statement of Dr. J. Christopher Haney).

[66] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira); *id.* at 160 (statement of The Nature Conservancy); *see also* Endangered and Threatened Wildlife, 50 C.F.R. § 17.11(h) (2007) (listing coastal habitats for threatened western snowy and piping plovers).

[67] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira).

beaches would mean a smaller feeding and nesting ground for shore birds like the piping plover, a threatened species on the Atlantic coast, and the western snowy plover, a threatened species on the Pacific coast.[68] Though such erosion is an ongoing process, the natural response has been to slowly move the beach and coastal habitats inland.[69] With human development along the coasts, however, habitats have no room to recede, and can be easily lost.[70]

3. Shore Birds: The Western Snowy Plover and the Piping Plover

Two species that are particularly sensitivite to rising oceans are the threatened Pacific coast population of western snowy plovers, and the threatened Atlantic coast population of piping plovers.[71] Both species of plover nest and feed on the coasts: the western snowy plover's range extends from mid-Washington all the way into Mexico; piping plovers range from the Canadian Maritime Provinces to North Carolina, with wintering habitats in the Gulf of Mexico.[72] Both species breed and nest on sandy beaches above the high tide line, on flats, or on shallow-sloping foredunes.[73] While new broods of both species

[68] *See id.* at 49 (statement of Dr. J. Christopher Haney); 50 C.F.R § 17.11(h) (listing both plovers as threatened and giving respective ranges); Endangered and Threatened Wildlife and Plants; Determination of Endangered and Threatened Status for the Piping Plover, 50 Fed. Reg. 50,726, 50,726–34 (Dec. 11, 1985) (codified at 50 C.F.R. § 17.11(h)); New Jersey Dep't of Envtl. Prot., Div. of Fish & Wildlife, Piping Plover, *Charadrius melodus* 1–2, *available at* http://www.state.nj.us/dep/fgw/ensp/pdf/endthrtened/plover.pdf; WesternSnowyPlover.org, Western Snowy Plover Natural History and Population Trends 1 (2001), *available at* http://www.westernsnowyplover.org/pdfs/plover_ natural_history.pdf; *see also* discussion *infra* Part I.B.3. Increased ocean waters in river delta areas can also inhibit spawning or feeding of threatened estuarine fish, which require specific salinity and temperature levels to propagate new broods. *See Nw. Envtl. Advocates*, 460 F.3d at 1161–62 (Fletcher, J., dissenting) (Columbia River salmon); NRDC v. Kempthorne, No. 1:05-cv-1207, 2007 WL 1989015, at *2 (E.D. Cal. July 3, 2007) [*NRDC v. Kempthorne II*] (California Delta smelt); *NRDC v. Kempthorne I*, 506 F. Supp. 2d 322, 335, 369–70 (E.D. Cal. 2007) (California delta smelt).

[69] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira).

[70] *See id.*

[71] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira); *id.* at 161–62 (statement of The Nature Conservancy); 50 C.F.R § 17.11(h) (listing the species as threatened); Anne Hecht et al., United States Fish & Wildlife Service (USFWS) Region Five, Piping Plover (*Charadrius melodus*) Atlantic Coast Population Revised Recovery Plan 6–7 (1996), *available at* http://ecos.fws.gov/docs/recovery_plan/960502.pdf; Kelly Hornaday et al., USFWS, California/Nevada Operations Office, Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*) 7–8 (2007), *available at* http://ecos.fws.gov/docs/recovery_plan/070924.pdf.

[72] *See* Hecht, et al., *supra* note 71, at 2; Hornaday et al., *supra* note 71, at 2.

[73] Hecht et al., *supra* note 71, at 6; Hornaday et al., *supra* note 71, at 11–12.

generally do not stay in the nest area after hatching, they will typically range along the shore in habitats similar to their natal areas.[74] Driftwood, seaweed, and light vegetation—in combination with natural cryptic coloration—are used by chicks and adults of both species for cover from predators, as well as for other sheltering purposes.[75] Plovers of both species feed on insect larvae, mollusks, and other invertebrates in the moist intertidal sands, in kelp and other organic detritus at the wrack-line, and in washover areas where storm surges have washed between dunes.[76] As such, much of the threatened plovers' breeding, feeding, and sheltering habitat and habits are vulnerable to the expected sea-level rise and increase in severe weather from climate change.[77]

As waters rise, oceans and skies warm, and coastal habitat goes the way of the dodo, conservationists, policymakers, and concerned citizens will need legal avenues to enjoin activities that harm species native to these habitats.[78] The Endangered Species Act comes ready-equipped with some of the tools necessary to achieve such protection.[79]

II. Citizen Mitigation Measures: The Endangered Species Act's Prohibition Against Take, and Citizen-Suit Provisions

The early 1970s saw a marked increase in the amount of environmental legal activism in the United States.[80] In his first State of the Union Address following his reelection, President Richard M. Nixon called

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[74] *See* Hecht et al., *supra* note 71, at 8–9; Hornaday et al., *supra* note 71, at 14–15.

[75] Hecht et al., *supra* note 71, at 11; Hornaday et al., *supra* note 71, at 12.

[76] Hecht et al., *supra* note 71, at 11; Hornaday et al., *supra* note 71, at 17–18. A wrack-line is the line of seaweed and debris deposited on a beach by tidal movement. Hecht et al., *supra* note 71, at 11 n.1.

[77] *See Oversight Hearing*, *supra* note 2, at 92 (statement of Dr. Ken Caldeira), 161–62 (statement of The Nature Conservancy); Endangered and Threatened Wildlife, 50 C.F.R. § 17.11(h) (2007); Hecht et al., *supra* note 71, at 6–11; Hornaday et al., *supra* note 71, at 11–18; *IPCC Report*, *supra* note 2, at 1, 11–12.

[78] *See, e.g.*, *Oversight Hearing*, *supra* note 2, at 37 (statement of Monica Medina, Acting Director, International Fund for Animal Welfare) ("[T]he government must use the . . . [ESA] to begin to take actions that will conserve these animals and their habitat.").

[79] *Id.*; *see* Endangered Species Act, 16 U.S.C. §§ 1531–1544 (2000).

[80] *See, e.g.*, 16 U.S.C. §§ 1531–1544; Clean Water Act, 33 U.S.C. §§ 1251–1387 (2000); Clean Air Act, 42 U.S.C. §§ 7401–7671 (2000). The Clean Air Act (CAA) was passed in its modern form in 1970, and was extensively amended in 1977 and 1999. Plater et al., Environmental Law and Policy: Nature, Law, and Society, at Reference 50 (3d. ed. 2004). The Clean Water Act (CWA) was passed in its modern form in 1972, with significant amendments in 1977 and 1987. *Id.* The Endangered Species Act (ESA) was passed in 1973 with significant amendments in 1978 and 1982. *Id.*

for strengthening regulations for the protection of endangered species.[81] Support in Congress for what became the Endangered Species Act (ESA) was overwhelming,[82] as judged by the dearth of dissent and discussion regarding the original bills.[83] The only substantive debate in each house addressed the potential division of responsibilities between the National Marine Fisheries Service (NMFS) and the Fish and Wildlife Service (USFWS).[84] As he signed the final bill, President Nixon stated, "[t]his legislation provides the Federal Government with needed authority to protect an irreplaceable part of our national heritage—threatened wildlife."[85]

The ESA has been described as one of the most effective environmental statutes ever passed by Congress, largely because of its absolutist stance.[86] Its most powerful provisions strictly forbid certain actions,[87] while others absolutely require action,[88] regardless of cost or convenience.[89] For instance, whether or not Congress realized exactly how strong a statute it was creating, the authorizing conference committee added the low-threshold term "harm" to the statutory definition of "take," the prohibited act of killing or otherwise harassing an endangered species.[90] While Congress certainly intended to protect widely-recognized charismatic megafauna,[91] they probably were not thinking about diminutive, widely—but thinly—dispersed, uncharismatic creatures.[92]

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[81] Stan. Envtl. Law Soc'y, The Endangered Species Act 20 (2001).

[82] 16 U.S.C. §§ 1531–1544.

[83] Stan. Envtl. Law Soc'y, *supra* note 81, at 21.

[84] *See id.* NMFS is under the Department of Commerce's National Oceanographic and Atmospheric Administration, and is responsible for maritime species under the ESA; USFWS, under the Department of the Interior, is responsible for "terrestrial and avian species," as well as freshwater species. *Id.*; *see also* USFWS, ESA Basics: 30 Years of Protecting Endangered Species 1 (2006) [hereinafter ESA Basics], *available at* http://permanent.access.gpo.gov/lps56603/ESA+BASICS_050806.pdf.

[85] *See* Statement on Signing the Endangered Species Act, 5 Pub. Papers 374 (Dec. 28, 1973). President Nixon continued, "[N]othing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed." *Id.*

[86] *See* Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 Iowa L. Rev. 1405, 1411–12 (2005).

[87] *See* 16 U.S.C. § 1538(a)(1) (prohibition of take).

[88] *See Id.* § 1536(a) (agency cooperation and no-jeopardy provisions).

[89] *See* Sinden, *supra* note 86, at 1411.

[90] *See* Stan. Envtl. Law Soc'y, *supra* note 81, at 21; Coggins, *supra* note 24, at 3; *see also* § 1532(19) (defining "take"); § 1538(a)(1)(b) (prohibiting "take").

[91] *See* Coggins, *supra* note 24, at 3 (listing several "glamour" species, including wolves, grizzly bears, whales, and bald eagles).

[92] *See* Stan. Envtl. Law Soc'y, *supra* note 81, at 21–22; Coggins, *supra* note 24, at 3.

The ESA yields many protections of—and suits based on—small, less conventionally charismatic species.[93] As an early case—*Tennessee Valley Authority v. Hill*—noted, the plain language of the ESA requires that priority be given to the endangered species, regardless of its stature or the pressing equities against its preservation.[94] Additionally, in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*—a Supreme Court case pitting significant family-owned and corporate timber interests against an endangered woodpecker and a threatened owl—the Court upheld a broad regulatory definition of "harm," part of the "take" provisions, based on clear congressional intent.[95] The forest-products companies challenged the regulation facially, likely fearing an injunction under the ESA against their activities should they threaten the designated endangered or threatened species.[96] The Court cited both Senate and House reports that explicitly stated that "take" is to be defined to have the "broadest possible" meaning and effect, and upheld the regulation.[97] This case introduces several important concepts in endangered species law: listing of species,[98] prohibition against take,[99] and the remedy of injunction.[100]

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[93] *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 692 (1995) (red-cockaded woodpecker, in addition to the northern spotted owl); Tenn. Valley Auth. v. Hill, 437 U.S. 153, 158–62 (1978) (snail darter, a diminutive perch-like fish); Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1062 (9th Cir. 1996) (marbled murrelet, a solitary seabird); *NRDC v. Kempthorne I*, 506 F. Supp. 2d 322, 328 (E.D. Cal. 2007) (delta smelt); Endangered and Threatened Species, 50 C.F.R. § 17.11(h) (2007) (listing all currently endangered and threatened animals).

[94] *Tenn. Valley Auth.*, 437 U.S. at 184, 194–95 ("The plain intent of Congress in enacting [the ESA] was to halt and reverse the trend toward species extinction, *whatever the cost.*") (emphasis added); *see* § 1531(c) (policy); § 1532(3) (definition of "conserve" and related variants); § 1536; STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 22. Though the *Hill* decision focused on the agency-related section 7 of the ESA, and this Note focuses on the protections in section 9, courts looking at section 9 protections have heeded the *Hill* Court's admonition regarding priorities. *See Sweet Home*, 515 U.S. at 698–99 ("Although the [section] 9 'take' prohibition was not at issue in *Hill*, we took note of that prohibition, placing particular emphasis on the Secretary's inclusion of habitat modification in his definition of 'harm.'") (citing *Hill*, 437 U.S. at 184 n.30); Strahan v. Coxe, 127 F.3d 155, 167–68 (1st Cir. 1997) (including the strong language of *Hill* in its discussion of preemption, section 9, and the Marine Mammals Protection Act).

[95] *See Sweet Home*, 515 U.S. at 704–05.

[96] *See id.* at 692–93; *Marbled Murrelet*, 83 F.3d at 1068 (remedy of injunction).

[97] *Sweet Home*, 515 U.S. at 704 (citing S. REP. No. 93-307, at 7 (1973) and H.R. REP. No. 93–412, at 15 (1973)).

[98] § 1533(a)(1) (section 1533 is generally referred to as section 4, based on the original Act's numbering); *see also* discussion *infra* Part II.A.

[99] § 1538(a)(1)(B)–(C) (section 9); *see* § 1532(19) (defining "take"); Boudreaux, *supra* note 24, at 739–43 (introducing the concept of "take").

The ESA provides separate sections for congressional findings, statutory definitions, and listing of species.[101] Analyzing the possibility of an injunction against CO_2 emissions through an ESA suit requires an examination of sections 4, 9, and 11 of the Act. Section 4 provides for the listing of species as either endangered or threatened.[102] Section 9 sets out prohibitions on certain actions with regard to those listed species.[103] Section 11 provides wide private empowerment through its citizen-suit provisions.[104]

A. *Section 4: Listing of Endangered and Threatened Species*

Section 4 of the ESA provides the framework for how a species gains its special protected status.[105] Under section 4, the designated Secretary—Interior or Commerce—may list a species either at the initiative of USFWS or NMFS, or in response to a petition by an interested party.[106] The procedure is similar for either route, with the citizen petition receiving a ninety-day review to screen for a lack of "substantial scientific or commercial information indicating that the petitioned action may be warranted."[107] According to the ESA:

> The Secretary shall . . . determine whether any species is an endangered species or a threatened species because of any of the following factors:
>
> (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
>
> (B) overutilization for commercial, recreational, scientific, or educational purposes;
>
> (C) disease or predation;

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[100] *See* § 1540(g)(1)(A); *Marbled Murrelet*, 83 F.3d at 1068 (citing Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 783 (9th Cir. 1995)); Boudreaux, *supra* note 24, at 750–52 ("[T]he Court of Appeals for the species-rich Ninth Circuit[] has concluded that the ESA entitles a plaintiff to an injunction against conduct that is expected to cause a take in the imminent future.").

[101] § 1531 (section 2 findings); § 1532 (section 3 definitions); § 1533 (section 4 listing).

[102] § 1533.

[103] *Id.* Section 7 also provides protections through requirements for federal agencies. § 1536. Additionally, section 10 builds exceptions, permit programs, and conservation plans into the statutory scheme. § 1539.

[104] § 1540(g).

[105] *See generally* § 1533(a)–(b) (providing for listing of threatened or endangered species).

[106] *See* § 1533(a)(1), (b)(3); Stan. Envtl. Law Soc'y, *supra* note 81, at 38–39.

[107] § 1533(b)(3)(A); *see* Stan. Envtl. Law Soc'y, *supra* note 81, at 38–39.

> (D) the inadequacy of existing regulatory mechanisms; or
> (E) other natural or manmade factors affecting its continued existence.[108]

By declaring the species endangered, the relevant Service has decided that the species is "in danger of extinction throughout all or a significant portion of its range."[109] A threatened species is one that is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."[110]

In deciding whether to list a species, economic considerations *are not* to enter into the determination, as the purpose of listing is solely the preservation or recovery of the species.[111] Indeed, Congress inserted the words "solely on the basis of the best scientific and commercial data available"[112] to remove any other factors from consideration of listing.[113] Species are not protected by the ESA until they have been listed, and any positive finding—a finding that a species should be listed as either endangered or threatened—is not reviewable by a court.[114]

B. *Section 9: Prohibition Against Take*

1. Definitions and Hurdles

While the ESA provides some protection in section 7 through a requirement of consultation and study before most government actions might impact an endangered or threatened species,[115] it is the

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[108] § 1533(a)(1).

[109] § 1532(6).

[110] § 1532(20).

[111] *See* STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 39–40. *Compare* § 1533(b)(1)(A) (scientific and ecological bases for consideration of *listing species*) (emphasis added) *with* § 1533(b)(1)(B)(2) (scientific, *economic*, and "any other" bases—for example, national security—for consideration of *designation of critical habitat*) (emphasis added).

[112] § 1533(b)(1)(A). This is also reflected in USFWS regulations. *See* Factors for Listing, Delisting, or Reclassifying Species, 50 C.F.R. § 424.11(b) (2007).

[113] *See* STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 39–40.

[114] Bldg. Indus. Ass'n v. Babbitt, 979 F. Supp. 893, 904 (D.D.C. 1997); STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 49; *see* § 1533(b)(3)(C)(ii) ("Any negative finding . . . shall be subject to judicial review."). At the same time that USFWS determines a species is endangered or threatened, Congress requires a designation of a critical habitat for the species, to the "maximum extent prudent and determinable." § 1533(a)(3).

[115] *See generally* § 1536 (interagency cooperation); STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 78–103 (discussing section 7 requirements for federal agencies); Christopher H. M. Carter, Comment, *A Dual Track for Incidental Takings: Reexamining Sections 7 and 10 of the Endangered Species Act*, 19 B.C. ENVTL. AFF. L. REV. 135, 136 (1991).

Act's section 9 that provides most of the bite for private citizens.[116] Section 9 prohibits any person to "take" endangered or threatened species, either within the United States or its territorial seas, or "upon the high seas."[117] "Person" is broadly defined as any "individual, corporation . . . or any other private entity; or any officer [or] employee . . . of the Federal Government, of any State . . . or political subdivision . . . or . . . foreign government . . . subject to the jurisdiction of the United States."[118]

"Take" is a somewhat unfortunate term, both because of occasional confusion with the concept of a Fifth Amendment "taking," when both concepts are implicated in the same paper or pleading,[119] and because of how much is meant to be encompassed in just one short word.[120] As defined by the ESA, the provision forbids persons to "harass, *harm*, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt" to do any such violence to an endangered species.[121] Regulations extend such protection to threatened species as well.[122]

The prohibition against take further protects endangered and threatened species through regulatory definition of the word "harm."[123] While most of the other prohibited acts under "take" are more direct, "A does X to B" acts, like hunting or harassing, "harm" allows for a more attenuated causal connection between a person's action and the effect on the species.[124] The Supreme Court, in its

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[116] *See* § 1538(a) (prohibited acts); Boudreaux, *supra* note 24, at 733.

[117] § 1538(a)(1)(B)–(C).

[118] § 1532(13).

[119] *See* U.S. CONST. amend. V ("[N]or shall private property be taken for public use, without just compensation."); Bruce Babbitt, *The Endangered Species Act and "Takings": A Call for Innovation Within the Terms of the Act*, 24 ENVTL. L. 355, 360–62 (1994); Cori S. Parobek, *Of Farmers' Takes and Fishes' Takings: Fifth Amendment Compensation Claims When the Endangered Species Act and Western Water Rights Collide*, 27 HARV. ENVTL. L. REV. 177, 193–94, 211–12 (2003).

[120] § 1532(19); *see* Boudreaux, *supra* note 24, at 735–36; Federico Cheever, *An Introduction to the Prohibition Against Takings in Section 9 of the Endangered Species Act of 1973: Learning to Live with a Powerful Species Preservation Law*, 62 U. COLO. L. REV. 109, 109–11 (1991).

[121] §§ 1532(19), 1538(a)(1)(B)–(C) (emphasis added); Endangered Wildlife: Prohibitions, 50 C.F.R. § 17.21(c) (2007); *see* ESA BASICS, *supra* note 84, at 1; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 106.

[122] Threatened Wildlife: Prohibitions, 50 C.F.R. § 17.31(a) (2007) ("[A]ll of the provisions in § 17.21 shall apply to threatened wildlife . . . .").

[123] *See* Endangered and Threatened Wildlife and Plants, 50 C.F.R. § 17.3 (2007) (definitions); STAN. ENVTL. L. SOC'Y, *supra* note 81, at 106–07; Cheever, *supra* note 120, at 110.

[124] 50 C.F.R. § 17.3; *see* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 704–05 (1995) (citing H.R. REP. NO. 93-412, at 15 (1973) (noting Congress's intent that "take," and its constituent parts, be construed in the "broadest possible

Sweet Home decision, upheld the Department of the Interior's regulation defining "harm" to include acts that "actually kill[] or injure[] wildlife . . . . Such act[s] may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[125] Indeed, the Court's examination of Senate and House reports affirmed its interpretation that "take" ought to be defined to have the "broadest possible" meaning and effect.[126] Additionally, though the regulation seems to require evidence of death or injury, the U.S. District Court for the District of Hawaii found in *Palila v. Hawaii Department of Land and Natural Resources* (*Palila II*), that regulations *do not* first require a "finding of death to individual species members" before finding or acting on a take.[127]

If harm has not already occurred, a take can still be proven by demonstration of "a reasonable certainty of imminent harm."[128] Following the *Sweet Home* decision, the Court of Appeals for the Ninth Circuit reaffirmed its *Forest Conservation Council v. Rosboro Lumber Co.* holding, stating that "a reasonably certain threat of future harm is sufficient to support a permanent injunction under the ESA."[129] However, the *Palila II* court declined to require imminence, noting that all that is required is "[h]abitat destruction that prevents the recovery of the species by affecting essential behavioral patterns," which, in turn,

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terms")); Palila v. Haw. Dep't of Land and Natural Res., 649 F. Supp. 1070, 1077–83 (D. Haw. 1986) [*Palila II*], *aff'd*, 852 F.2d 1106 (9th Cir. 1988) [*Palila II Aff.*]; Palila v. Haw. Dep't of Land and Natural Res., 471 F. Supp. 985, 995 (D. Haw. 1979) [*Palila I*], *aff'd*, 639 F.2d 495 (9th Cir. 1981) [*Palila I Aff.*].

[125] *Sweet Home*, 515 U.S. at 691 (quoting 50 C.F.R. § 17.3 (1994)). The language from 1994 is identical to that published in 2007. *See* 50 C.F.R. § 17.3. It should be noted, however, that the harm need not be to officially designated critical habitat, but to any habitat used by the species. *See* Cheever, *supra* note 120, at 157–58 (citing Sierra Club v. Lyng, 694 F. Supp. 1260 (E.D. Tex. 1988), *aff'd in part, vacated in part sub nom.* Sierra Club v. Yeutter, 926 F.2d 429 (5th Cir. 1991)).

[126] *See Sweet Home*, 515 U.S. at 703–05 (citing S. REP. No. 93-307, at 7 (1973) and H.R. REP. No. 93–412, at 15 (1973)).

[127] *Palila II*, 649 F. Supp. at 1077; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 107–08.

[128] STAN. ENVTL. L. SOC'Y, *supra* note 81, at 111–12 (citing Marbled Murrelet v. Babbit, 83 F.3d 1060, 1068 (9th Cir. 1996)); *see also* Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 783 (9th Cir. 1995).

[129] Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1068 (9th Cir. 1996); *see Sweet Home*, 515 U.S. at 702–03. The *Sweet Home* Court compared section 9's prohibitions against habitat modification with section 5's enabling of the Secretary to purchase land to protect species. In its comparison, the Court seemingly overlooked 9th Circuit jurisprudence and claims that injunction cannot issue until actual harm occurs. *See Sweet Home*, 515 U.S. at 702–03; *see also* Boudreaux, *supra* note 24, at 750–51.

causes actual injury to the listed species.[130] The court emphasized that a showing of harm "does not require a decline in population numbers."[131] The court contended that, otherwise, such a wait-and-see attitude towards species extinction would be "shortsighted."[132]

2. Causation

The definition and interpretation of harm bring into question the traditional tort concept of causation, both cause-in-fact and proximate cause.[133] ESA harm cases should generally be no different from a normal torts case in that—in addition to a harm and an action—one must show cause-in-fact as well as proximate cause linking the action to the harm.[134] Cause-in-fact looks to see if a harm would be avoided, but for the actions of a defendant.[135] Proximate cause, as in tort, is judged by the foreseeability harm arising from a given action.[136] So long as the actions are not severed from the causal chain by the subsequent, intervening acts of a third party, a defendant can be held to have proximately caused the harm, leading to liability under the ESA.[137]

C. *Section 11 and Litigation Issues: Parties, Standing, Justiciability, and Injunction*

Under section 11 of the ESA, "any person may commence a civil suit on his own behalf to enjoin any person . . . who is alleged to be in violation of . . . [the Act] or regulation issued under the authority thereof."[138] ESA suits commence in the federal district courts within

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[130] 649 F. Supp. at 1075.

[131] *Id.* at 1077.

[132] *See id.* at 1075; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 112.

[133] *See Sweet Home*, 515 U.S. at 697–98 (rejecting reading "directly" caused into the definition of harm); *id.* at 699 (characterizing as "strong" respondent Sweet Home's arguments that "unforeseeable" harm would not violate the harm provision); *id.* at 708–09 (O'Connor, J., concurring) (limiting application of the harm provision to cases where proximate cause can be shown); *see also* Cheever, *supra* note 120, at 179–184.

[134] *See Sweet Home*, 515 U.S. at 700 n.13; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 109; Boudreaux, *supra* note 24, at 748–50; Ruhl, *supra* note 51, at 40.

[135] *See* James R. Rasband, *Priority, Probability, and Proximate Cause: Lessons from Tort Law About Imposing ESA Responsibility for Wildlife Harm on Water Users and Other Joint Habitat Modifiers*, 33 ENVTL. L. 595, 599 (2003).

[136] *See Sweet Home*, 515 U.S. at 700 n.13.

[137] *See* Bennett v. Spear, 520 U.S. 154, 168–69 (1997); Rasband, *supra* note 135, at 598.

[138] Endangered Species Act, 16 U.S.C. § 1540(g)(1), (g)(1)(A) (2000). *See* Coggins, *supra* note 24, at 3 ("[T]he ESA so far has turned out to be a triumph for the rule of law as enforced through citizen suits by private attorneys general.") In addition to this provision,

the judicial district of the alleged violation.[139] A plaintiff must first give sixty days notice to the alleged violator and the appropriate Secretary before commencing suit.[140] Despite these generous provisions, an action brought to an Article III court must also satisfy basic constitutional requirements, including standing and justiciability.[141] As the case law shows, getting into court can be harder than it sounds.[142]

1. Parties

Because of standing requirements discussed *infra*, choice of plaintiffs and defendants for ESA litigation must be delicately considered.[143] Environmental groups like the Natural Resources Defense Council (NRDC) are reasonably successful at bringing suits alleging injury to members, both because of their extensive experience in such litigation and relatively high financial assets.[144] Private citizens, naturalists, and scientists can also make good plaintiffs, in that they can easily demonstrate their aesthetic and scientific injuries.[145] States have also gained wide standing rights in environmental suits.[146] Because choice of plaintiffs is intricately bound up with the concept of injury as part of standing requirements, a separate section *infra* is devoted to this concept.[147]

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there are also two additional avenues for citizen enforcement, both of which would compel the relevant secretary to act, either under section 9 or section 4. *See* § 1540(g)(1)(B)–(C).

[139] § 1540(g)(3)(A).

[140] § 1540(g)(2)(A).

[141] *See* U.S. CONST. art. III, § 2 (ability to hear cases or controversies); § 1540(g) (penalties and enforcement, citizen suits); Massachusetts v. EPA, 549 U.S. 497, 516 (2007); Lujan v. Defenders of Wildlife, 504 U.S. 555, 560–61 (1992); Defenders of Wildlife v. Hodel, 851 F.2d 1035, 1038–39 (8th Cir. 1988).

[142] *See, e.g.*, *Lujan*, 504 U.S. at 560–61; *Hodel*, 851 F.2d at 1038–39; Hawaiian Crow ('Alala) v. Lujan, 906 F. Supp. 549, 551–52 (D. Haw. 1991) (rejecting an animal's standing under the ESA).

[143] *See, e.g.*, *Lujan*, 504 U.S. at 562–64; *Hawaiian Crow*, 906 F. Supp. at 551–52; *see also* STAN. ENVTL. L. SOC'Y, *supra* note 81, at 203 (considering animal standing).

[144] *See generally NRDC v. Kempthorne I*, 506 F. Supp. 2d 322 (E.D. Cal. 2007) (NRDC as plaintiff); NRDC: Our Conservation Victories, http://www.nrdc.org/about/victories.asp (last visited Jan. 23, 2009) (listing victories in petitions and litigation on behalf of endangered and threatened wildlife).

[145] *See Lujan*, 504 U.S. at 562–64; *see also* discussion *infra*, Part II.C.2.a–c.

[146] *See generally Massachusetts v. EPA*, 549 U.S. 497 (granting states wider standing in environmental suits).

[147] *See id.*; discussion *infra* Part II.C.2.a.

The issue of choice of defendants is also bound up with the ideas of standing.[148] In *Marbled Murrelet v. Babbitt*, the Ninth Circuit Court of Appeals reviewed a permanent injunction granted to an environmental organization against a forest-products company to prevent logging in an old-growth forest used by the marbled murrelet for nesting.[149] Appellants argued that the district court had erred in finding a violation of the take provisions, since no logging had yet occurred, and therefore no harm had yet befallen the murrelet.[150] The circuit court rejected this argument, saying the future harm to come from their logging was sufficient to support the take finding, since the destruction of habitat was a "reasonably certain threat of imminent harm" that would cause a disruption of essential behavioral patterns, including breeding, sheltering, and nesting.[151]

2. Standing

As explained in *Lujan v. Defenders of Wildlife*, the Supreme Court has developed a three-part test to satisfy the standing requirement present in all civil suits, whether or not under the ESA.[152] First, the plaintiff must establish injury in fact.[153] A plaintiff must next show a causal nexus between her harms and the defendant's conduct.[154] Finally, a plaintiff must show that her injury is likely to be redressed by

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[148] *See* Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 272–73 (S.D.N.Y. 2005); *see also* discussion *infra* Part II.C.2.b–c.

[149] Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1062 (9th Cir. 1996). *Forest Conservation Council v. Rosboro Lumber Co.* had previously held that the very purpose of the ESA required that injunction be available to prevent imminent threats of harm. 50 F.3d 781, 785 (9th Cir. 1995).

[150] *Marbled Murrelet*, 83 F.3d at 1064 (noting appellants' contention that *Sweet Home* required actual harm before a court could find a take to have occurred).

[151] *Id.* at 1064–66 (citing Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 694 (1994) and *Rosboro Lumber*, 50 F.3d at 781). Relatedly, in *American Electric Power Co.*, defendants—being sued to abate the public nuisance caused by their contribution to climate change—were a group of power companies, who together emit twenty-five percent of power industry emissions and a full ten percent of anthropogenic CO_2 emissions in the United States. 406 F. Supp. 2d at 268. Though the court dismissed the case for presenting a nonjusdiciable political question, the choice of defendants was particularly well-made, because the group of defendants together allegedly contributes so significantly to the problem complained of. *See id.*; Brief for Plaintiffs-Appellants at 8, Connecticut v. Am. Elec. Power Co., No. 05-5104cv (2d Cir. Dec. 15, 2005); Complaint of State Plaintiffs at ¶¶ 2, 100, Connecticut v. Am. Elec. Power Co., No. 04 Civ. 5669 (S.D.N.Y. Jul. 21, 2004).

[152] 504 U.S. 555, 560–61 (1992).

[153] *Id.* at 560; *see* STAN. ENVTL. L. SOC'Y, *supra* note 81, at 206.

[154] *Lujan*, 504 U.S. at 560.

the relief requested of the court.[155] These requirements are in place to assure that sufficiently interested parties take part in suits to "ensure the proper adversarial presentation . . . ."[156]

a. Injury in Fact

Plaintiffs must show particularized injury in fact, whether actual or imminent.[157] Harms shared equally by a large number of the general public would not satisfy this requirement.[158] However, *Massachusetts v. EPA* explained that, at least for State plaintiffs, a generalized, widespread harm would not preclude standing because, at the state level, such seemingly widespread harm—loss of wide swaths of coastal land—is actually a particularized injury to the state as a landowner.[159] The Court also noted that the increasing severity of the injury over the next century could lead to severe economic injury in terms of remediation and protection costs.[160]

In *Lujan*, plaintiff-naturalists claimed that they were injured by overseas harm to endangered species because they had once and would one-day again travel to visit the imperiled species.[161] The Court found the alleged harm to lack the imminence of injury required, absent concrete plans that were or would be thwarted.[162] That is, had the plaintiff-naturalists already bought plane tickets and planned itineraries including visiting the imperiled species, Justice Scalia suggested that this case could have come out the other way.[163] The Ninth Circuit Court of Appeals has similarly ruled on visitor standing, holding in *Idaho Farm Bureau Federation v. Babbitt* that plaintiff-intervenors

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[155] *Id.* at 561.

[156] Massachusetts v. EPA, 549 U.S. 497, 517 (2007) (citing *Lujan*, 504 U.S. at 560–61).

[157] *Lujan*, 504 U.S. at 560.

[158] *Id.* at 560–62; *see Massachusetts v. EPA*, 549 U.S. at 522.

[159] *Massachusetts v. EPA*, 549 U.S. at 522 ("[W]here a harm is concrete, though widely shared, the Court has found injury in fact.") (citing Fed. Election Comm'n v. Akins, 524 U.S. 11, 24 (1998)) (internal quotations omitted). Such coastal land is also piping plover habitat. *See* Endangered and Threatened Species, 50 C.F.R. § 17.11(h) (2007); HECHT ET AL., *supra* note 71, at 2, 6.

[160] *See Massachusetts v. EPA*, 549 U.S. at 522.

[161] *Lujan*, 504 U.S. at 563–64.

[162] *See id.* at 564; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 206. *But see Lujan*, 504 U.S. at 582 (Stevens, J., concurring in judgment) ("[A] person who has visited the critical habitat of an endangered species has a professional interest in preserving the species and its habitat, and intends to revisit them in the future has standing to challenge agency action that threatens their destruction.").

[163] *See Lujan*, 504 U.S. at 564.

satisfy the injury-in-fact requirement "by showing that group members have direct contact with the environmental subject matter . . . ."[164]

b. Causation

To satisfy standing, a plaintiff must next show a causal connection between her injury and the defendant's conduct.[165] Though this is not as stringent a requirement as the eventual proximate cause inquiry that a court must execute, the plaintiff must demonstrate that her injury is "fairly traceable" to the defendant's actions.[166] For example, the appellant lumber companies' planned lumbering in *Marbled Murrelet* was fairly traceable to the injury complained of, namely that deforestation would harm the species' breeding and sheltering—that is, deforestation would *harm* the species.[167] At this early point in ESA litigation, plaintiffs need only show that there is a substantial likelihood that the harm is caused by the defendant's actions.[168]

c. Redressability

Finally, a plaintiff must show that the relief requested will, to a significantly likely degree, ameliorate the injury complained of.[169] Justice Scalia wrote for the plurality in *Lujan* that a requested injunction would have limited usefulness due to actors outside the reach of the Court, thus finding that plaintiffs lacked standing because of a failure of redressability.[170] However, in a concurring opinion, Justice Stevens opined that, though the immediate harm would not necessarily be reached, the Court's influence on agency heads would lead to influence internationally, as foreign projects would conform to the re-

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[164] Idaho Farm Bureau Fed'n v. Babbitt, 58 F.3d 1392, 1398 (9th Cir. 1995).

[165] *Lujan*, 504 U.S. at 560–61. Traditionally, the Supreme Court dealt with both causation and the next requirement, redressibility, as one analysis. Erwin Chemerinsky, Constitutional Law: Principles and Policies 75–76 (3d ed. 2006). Originally, the Court considered that the purpose of the causation requirement was to make sure that any action taken to limit a defendant's activities would actually redress the injury, thus conflating the two requirements. *See id.* Recent case law, however, suggests that they ought to be considered to be separate functions of the standing requirement, each deserving of its own inquiry. *See id.* (citing Allen v. Wright, 468 U.S. 737, 751 (1984)).

[166] Bennett v. Spear, 520 U.S. 154, 168–69 (1997); *Lujan*, 504 U.S. at 560–61; Stan. Envtl. L. Soc'y, *supra* note 81, at 207.

[167] Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1062 (9th Cir. 1997).

[168] Stan. Envtl. L. Soc'y, *supra* note 81, at 207 (citing Fla. Key Deer v. Stickney, 864 F. Supp. 1222, 1226 (S.D. Fla. 1994)).

[169] *See* Massachusetts v. EPA, 549 U.S. 497, 525–26 (2007); *Lujan*, 504 U.S. at 561; Stan. Envtl. L. Soc'y, *supra* note 81, at 207–08.

[170] *Lujan*, 504 U.S. at 568–71 (plurality opinion).

quirements of U.S. law in order to keep their American contracts.[171] As such, Justice Stevens believed the plaintiff's harms were redressible by the Court, and would have found that the plaintiffs had satisfied this prong of the standing requirements.[172]

Massachusetts v. EPA highlighted the common-sense idea that, though a harm could not be completely redressed by the Court's action, a plaintiff would not be barred from pursuing his suit.[173] There, the Court held that though "regulating motor-vehicle emissions will not by itself *reverse* global warming, it by no means follows that we lack jurisdiction to decide whether EPA has a duty to take steps to *slow* or *reduce* it."[174] The Court held that though a complete amelioration is impossible, it could still offer relief from some portion of the harm.[175] In fact, the Court concluded, "'a plaintiff satisfies the redressability requirement when he shows that a favorable decision will relieve a discrete injury to himself. He need not show that a favorable decision will relieve his *every* injury.'"[176] Justice Stevens also eviscerated the EPA's attempt to hide behind India and China, refuting its claim that because the newly industrialized countries will produce an increasing amount of greenhouse gases, regulation at home would do little to redress Massachusetts's injury.[177] Noting that "[a] reduction in domestic emissions would slow the pace of global emissions increases, no matter what happens elsewhere," thus at least partially ameliorating the risk of "catastrophic harm" to the Massachusetts coast, the Court held that plaintiffs satisfied the redressability requirement.[178]

3. Justiciability and the Political Question Doctrine

Environmental cases can implicate hard decisions in waters the courts despair of dipping their toes.[179] Global warming cases in particular have, until recently, frightened the federal courts away from

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[171] *See id.* at 584–85 (Stevens, J., concurring in judgment).

[172] *See id.* (Stevens, J., concurring in judgment).

[173] *See Massachusetts v. EPA*, 549 U.S. at 525.

[174] *Id.*

[175] *See id.*

[176] *Id.* (quoting Larson v. Valente, 456 U.S. 228, 244 n.15 (1982)).

[177] *See id* at 525–26.

[178] *Id.* at 526. It is important to note, though, that this opinion has muddied the waters slightly, because in its section on injury, the injury was the loss of coast line. *See id.* at 522–23. In its redressibility section, the Court speaks of the injury as the "risk of catastrophic harm," not the harm itself. *See id* at 525–26.

[179] *See, e.g.*, Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 271–73 (S.D.N.Y. 2005) (dismissing the case as a nonjusticiable political question).

coming to potentially far-reaching decisions, or have taken a back seat to more immediate, pressing interests.[180] Though *Massachusetts v. EPA* certainly seems to have put this issue to rest with regard to climate change, there is still the possibility that a suit involving climate change could trigger an argument that the suit presents a nonjusticiable political question.[181]

The political question doctrine is steeped in the notion of separation of powers.[182] When a question arises that is best left to the political branches because of their constitutionally granted authorities, general expertise, or fact-finding powers beyond those of the courts, the question is to be left to those branches to take up at their discretion.[183] Though the Court in *Baker v. Carr* set out a list of six instances where a political question may be implicated, only two are relevant here: "a lack of judicially discoverable and manageable standards for resolving [the suit]; [and] the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion . . . ."[184] These instances are relevant because they are the two most likely to exclude a climate change suit—whether under the ESA or otherwise—because of the far-reaching, economically tied causes and effects.[185]

The Supreme Court has applied the political question doctrine in limited, discrete areas: "[T]he republican form of government clause and the electoral process, foreign affairs, Congress's ability to regulate its internal processes, the process for ratifying constitutional amendments, *instances where the federal court cannot shape effective equitable relief,* and the impeachment process."[186] The penultimate of these, "instances where the federal court cannot shape effective equitable relief," is the

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[180] *See id.*; *see also* Massachusetts v. EPA, 549 U.S. 497, 516 (2007) (noting that nothing in the case suggested a nonjusticiable political question); *NRDC v. Kempthrone II*, No. 1:05-cv-1207, 2007 WL 1989015, at *14–15 (E.D. Cal. July 3, 2007) (subjugating concerns about an inadequate biological opinion that failed to take climate change into account to the very real, very immediate possibility of widespread water shortages and crop failure). *But see NRDC v. Kempthorne I*, 506 F. Supp. 2d 322, 367–69 (E.D. Cal. 2007) (taking climate change, the ESA, and compelling water-user interests head-on).

[181] *See Massachusetts v. EPA*, 549 U.S. at 516; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 271–73.

[182] Baker v. Carr, 369 U.S. 186, 210 (1962); *see* Vieth v. Jubelirer, 541 U.S. 267, 277–78 (2004).

[183] *See Baker*, 369 U.S. at 210–11; CHEMERINSKY, *supra* note 165, at 132.

[184] *Baker*, 369 U.S. at 217; *see Am. Elec. Power Co.*, 406 F. Supp. 2d at 271–73. Though this list is often quoted in political question cases, scholars bemoan its limited usefulness. *See* CHEMERINSKY, *supra* note 165, at 131.

[185] *See, e.g.*, *Am. Elec. Power Co.*, 406 F. Supp. 2d at 271–73.

[186] CHEMERINSKY, *supra* note 165, at 131 (emphasis added).

instance of the doctrine that climate change litigation would be most likely to implicate, as it did in one recent case.[187]

In *Connecticut v. American Electric Power Co.*, several states, a city, and land trusts brought suit against major emitters of greenhouse gases to abate the public nuisance of global warming.[188] The court, sitting essentially in equity, considered that it had to "strike a balance 'between interests seeking strict schemes to reduce pollution rapidly to eliminate its social costs and interests advancing the economic concern that strict schemes [will] retard industrial development with attendant social costs.'"[189] The court claimed that it could not commit such a balancing without first coming to an "initial policy determination" regarding the relative weight of those interests.[190] Citing the defendants' memorandum, the court noted several of the initial policy determinations that would need to be made by the court:

> [G]iven the numerous contributors of greenhouse gases, should the societal costs of reducing such emissions be borne by just a segment of the electricity-generating industry and their industrial and other consumers?
>
> Should those costs be spread across the entire electricity-generating industry (including utilities in the plaintiff States)? Other industries?
>
> . . . .
>
> What are the implications for the nation's energy independence and, by extension, its national security?[191]

Additionally, the court seemed to implicate congressional and executive inaction, noting that statements made by executive and congressional officials regarding a policy of greenhouse gas reduction did not constitute clear statements of policy, as "policy is expressed by statutes . . . not press releases."[192]

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[187] *See Am. Elec. Power Co.*, 406 F. Supp. 2d at 271–73; CHEMERINSKY, *supra* note 165, at 131, 147–48; *see also* Erin Casper Borissov, Note, *Global Warming: A Questionable Use of the Political Question Doctrine*, 41 IND. L. REV. 415, 445–49 (2008).

[188] 406 F. Supp. 2d at 267.

[189] *Id.* at 272 (quoting Chevron U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837, 847 (1984)).

[190] *Id.*

[191] *Id.* at 273; *see also* CHEMERINSKY, *supra* note 165, at 133 ("The argument is that in certain cases an effective remedy would require judicial oversight of day-to-day executive or legislative conduct.").

[192] *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274; Borissov, *supra* note 187, at 447. However, as this is a relatively stale case in light of *Massachusetts v. EPA*—and has since been appealed—it is possible that current congressional and executive hearings, statements, and

III. A Suit Enjoining an Increase in and Ordering a Reduction of CO_2 Emissions Under Section 9 of the Endangered Species Act

The ESA is a powerful species-protection tool that can be used both prospectively to enjoin future harm, and retrospectively to halt prior and ongoing harm.[193] Harm to endangered and threatened species is to be prevented without regard to cost of implementation or other balancing of conflicting policies.[194] As such, local private citizens and naturalists should be able to successfully bring suit against those contributing to rapid anthropogenic climate change through the release of CO_2 on the basis that such climate change harms or risks harming coastal threatened species—specifically, the western snowy plover and the piping plover—in the habitat-rich states of California, Oregon, Washington, and Massachusetts.[195] The suit should seek both to enjoin increases in CO_2 emissions caused by bringing online new dirty power plants or increasing production at existing

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even statutes could give a case based on the ESA's sweeping take provisions and harms caused by climate change its day in court. *See* Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (codified in scattered sections of 2, 15, 40, 42, and 46 U.S.C.); Massachusetts v. EPA, 549 U.S. 497, 525–26 (2007); *Am. Elec. Power Co.*, 406 F. Supp. 2d at 265. *See generally Oversight Hearing*, *supra* note 2 (providing testimony and congressmen's statements regarding climate change); H.R. 6 Press Release, *supra* note 8 (containing President Bush's remarks on a future "cleaner" nation). *Massachusetts v. EPA* also "attach[ed] considerable significance to EPA's 'agree[ment] with the President that "we must address the issue of global climate change,"'" suggesting a willingness to count executive and administration statements as declarations of policy. 549 U.S. at 526 (quoting Control of Emissions from New Highway Vehicles and Engines, Notice of Denial of Petition for Rulemaking, 68 Fed. Reg. 52,922, 52,929 (Sept. 8, 2003)).

[193] *See* Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1068 (9th Cir. 1996) (prospective); *Palila II*, 649 F. Supp. 1070, 1082–83 (D. Haw. 1986), *aff'd*, 852 F.2d 1106, 1110 (9th Cir. 1988) (retrospective and ongoing harm); Boudreaux, *supra* note 24, at 750–52 ("The teeth of the ESA's section 9 . . . are found in its empowerment of plaintiffs to enjoin conduct *before* it occurs.").

[194] *See* Endangered Species Act, 16 U.S.C. § 1538(a)(1)(B)–(C) (2000) (prohibition of take); Sinden, *supra* note 86, at 1411–12.

[195] *See* § 1538(a)(1)(B); Lujan v. Defenders of Wildlife, 504 U.S. 555, 564–66 (1992); *Marbled Murrelet*, 83 F.3d at 1064; Idaho Farm Bureau Fed'n v. Babbitt, 58 F.3d 1392, 1395, 1398 (9th Cir. 1995); Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 785 (9th Cir. 1995); Endangered and Threatened Wildlife and Plants, 50 C.F.R. § 17.3 (2007) (definition of "harm"); § 17.11(h) (listing range of threatened western snowy plovers as Pacific Coast; range of threatened piping plovers as Atlantic Coast); Stan. Envtl. L. Soc'y, *supra* note 81, at 202–04 (discussing bringing suit and categories of causes of action). There are likely as many such ESA suits as there are coastal endangered or threatened animal species. *See* 50 C.F.R. § 17.11(h); discussion *infra* Parts III.A–D.

plants, and order a reduction in such emissions by the defendant power-producers throughout the United States.[196]

A. *Parties to the Litigation*

Such a suit, under the take provisions of section 9 and citizen suit provisions of section 11 of the ESA,[197] could have a number of plaintiffs, as well as myriad defendants.[198] Private individuals, particularly those studying or accustomed to observing the plovers, are especially well-positioned to act as plaintiffs.[199] Thus, birdwatchers, habitat-visitors, and naturalists should join the suit, both in the west-coast habitats of the snowy plover and in the Massachusetts habitat of the piping plover.[200]

As power generation accounts for much of the CO_2 expelled into the atmosphere,[201] utility companies are an obvious target of this type of litigation.[202] Targeting groups of power producers that generate a

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[196] *See* Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 268–69 (S.D.N.Y. 2005); *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben) (regarding 150 new coal-fired power plants in some stage of development in the United States); STAN. ENVTL. L. SOC'Y, *supra* note 81, at 109 (discussing the form of an ESA case based on the harm vein of the take provisions); Boudreaux, *supra* note 24, at 750–52.

[197] §§ 1538(a)(1)(B), 1540(g)(1)(A) (respectively).

[198] *See, e.g.*, Massachusetts v. EPA, 549 U.S. 497, 522 (2007); Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 300–01 (D. Vt. 2007); *Am. Elec. Power Co.*, 406 F. Supp. 2d at 268–69.

[199] *See Lujan*, 504 U.S. at 582 (Stevens, J., concurring) (suggesting that visitors of threatened wildlife could be plaintiffs in an ESA suit); *Idaho Farm Bureau*, 58 F.3d at 1395, 1397–99 (holding a group of intervenors could show injury based on living in the state of the species, visiting the specific area of the species, or studying the species); STAN. ENVTL. L. SOC'Y, *supra* note 81, at 206–07 (citing *Idaho Farm Bureau*). Though states—for example California, Oregon, Washington, and Massachusetts—could also make good plaintiffs, as could environmental or bird watcher organizations, this Note will focus on taking advantage of many similarly situated local, private attorneys general. *See Massachusetts v. EPA*, 549 U.S. at 522–23 (state standing in climate change suit); *Lujan*, 504 U.S. at 564 (citizen suits); Nw. Envtl. Advocates v. Nat'l Marine Fisheries Serv., 460 F.3d 1125, 1161–62 (9th Cir. 2006) (conservation organizations); *NRDC v. Kempthorne I*, 506 F. Supp. 2d 322, 328–29 (E.D. Cal. 2007); 50 C.F.R. § 17.11(h); *see also* NRDC: Our Conservation Victories, *supra* note 144.

Additionally, as Professor Ruhl notes, USFWS probably has little stomach for such a politically charged suit, and he dismisses the likelihood of such a suit being prosecuted. *See* Ruhl, *supra* note 51, at 41–42 (citing Rasband, *supra* note 135). Professor Ruhl does not, however, consider citizen suits, except in that they likewise face difficult evidentiary and causation hurdles. *Id.* at 40–41. Such citizen groups do not, however, have the same political pressures against them, and, as such, are better able to withstand potential failure, having less distance to fall. *See id.* at 40–42.

[200] *See Lujan*, 504 U.S. at 562; *Idaho Farm Bureau*, 58 F.3d at 1398; 50 C.F.R. § 17.11(h); HECHT ET AL., *supra* note 71, at 6–7; HORNADAY ET AL., *supra* note 71, at 7–8.

[201] *Green Mountain Chrysler*, 508 F. Supp. 2d at 309; *IPCC Report*, *supra* note 2, at 4–5.

[202] *See, e.g.*, *Am. Elec. Power Co.*, 406 F. Supp. 2d at 268–69.

large share of the nation's energy and, therefore, CO_2 emissions, would allow plaintiffs to draw connections to the destructive harm occurring on the coasts, where the effects are particularly pronounced.[203]

B. *Allegations, Remedies Requested, Venue and Jurisdiction*

In bringing a suit under sections 9 and 11 of the ESA, plaintiffs will have to allege a take of endangered or threatened species, specifically, the western snowy plover and the piping plover.[204] For purposes of this suit, the term "take" should focus on its definition as "harm" to an endangered or threatened species.[205] Harm, as defined by regulation and confirmed by Supreme Court and circuit court decisions, means "an act which actually kills or injures wildlife."[206] The suit should focus on "harm" where acts "include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including *breeding*, *feeding* or *sheltering*."[207]

Specifically, plaintiffs should allege that actions taken by defendant power companies have constituted a take of threatened plover species, since by their contribution to anthropogenic climate change and resulting sea-level rise, these companies have harmed, or threaten imminent harm to, the plovers by significantly impairing their ability

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[203] *See id.* at 268; *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben); *IPCC Report*, *supra* note 2, at 4–5; Complaint of State Plaintiffs at ¶¶ 98–100, Connecticut v. Am. Elec. Power Co., No. 04 Civ. 5669 (S.D.N.Y. Jul. 21, 2004); *see also* HECHT ET AL., *supra* note 71, at 2, 6; HORNADAY ET AL., *supra* note 71, at 2, 7–8. Whether automobile and truck manufacturers could be added to the suit, or whether Congress's recent regulation constitutes an occupation of the field that could trigger a nonjusticiable political question is not considered in this Note. *See* Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 § 102(b)(2) (codified in scattered sections of 2, 15, 40, 42, and 46 U.S.C.) (setting corporate average fuel economy standards at thirty-five miles per gallon by model-year 2020); Baker v. Carr, 369 U.S. 186, 217 (1961) ("[T]extually demonstrable constitutional commitment of the issue to a coordinate political department" yields a nonjusticiable political question.); CHEMERINSKY, *supra* note 165, at 131, 147–48 (discussing a limit on judicial oversight under the political question doctrine where review would unnecessarily interfere with the political branches' powers).

[204] *See* Endangered Species Act, 16 U.S.C. §§ 1538(a)(1)(B), 1540(g)(1)(A) (2000) (sections 9 and 16, respectively); 50 C.F.R. § 17.11(h) (listing the western snowy plover, a California, Oregon, and Washington coastal threatened species, and the piping plover, a Massachusetts coastal threatened species); STAN. ENVTL. L. SOC'Y, *supra* note 81, at 109.

[205] *See* § 1532(19); *Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira); 50 C.F.R. § 17.11(h); *IPCC Report*, *supra* note 2, at 9, 12.

[206] 50 C.F.R. § 17.3 (definitions); *see* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 704–05 (1995); *Palila II Aff.*, 852 F.2d 1106, 1110–11 (9th Cir. 1988).

[207] *See* 50 C.F.R. § 17.3 (definition of "harm") (emphasis added).

to breed, feed, or shelter in their traditional habitats.[208] Inundation of traditional plover habitat on both coasts by rising waters, coupled with shorelines so developed as to prevent adequate adaptation, will destroy plover habitat, thus injuring their ability to breed, feed, and shelter.[209]

To help avoid such a fate for the threatened plovers, plaintiffs should request an injunction against the defendant power companies requiring them to reduce their CO_2 emissions.[210] Such an injunction would include an order not to increase power production from high-CO_2-emitting plants, and also a prohibition against bringing new coal-powered plants online, as both of these would continue to fuel anthropogenic climate change, harming the coastal plovers.[211]

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[208] *See* 16 U.S.C. § 1538(a)(1)(B); *Sweet Home*, 515 U.S. at 704–05; Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 785 (9th Cir. 1995); *Palila II*, 649 F. Supp. 1070, 1075–76 (D. Haw. 1986), *aff'd*, 852 F.2d 1106 (9th Cir. 1988); *Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira); 50 C.F.R. § 17.3; HECHT ET AL., *supra* note 71, at 6, 11 (noting coastal habitat between dunes and high-tide line for sheltering and breeding, and intertidal beaches and wrack-lines for feeding); *IPCC Report*, *supra* note 2, at 9, 12.

[209] *See* Massachusetts v. EPA, 549 U.S. 497, 522–23 (2007) (noting the concrete harm of loss of coastal land); *Oversight Hearing*, *supra* note 2, at 92 (statement of Ken Caldeira) (noting that the built-up coasts leave coastal ecosystems no retreat from the pounding surf); 50 C.F.R. § 17.11(h) (listing piping plover's habitat in coastal Atlantic states); HECHT ET AL., *supra* note 71, at 2, 6.

[210] *See* Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 270 (S.D.N.Y. 2005) (discussing the request for an injunction to abate a public nuisance, which was not decided because of the political question doctrine); STAN. ENVTL. L. SOC'Y, *supra* note 81, at 213–15 (citing Hill v. TVA, 437 U.S. 153 (1978); Sierra Club v. Marsh, 816 F.2d 1376, 1383 (9th Cir. 1987)).

[211] *See Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira); HECHT ET AL., *supra* note 71, at 2, 6; HORNADAY ET AL., *supra* note 71, at 2, 7–8; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 213–15; *IPCC Report*, *supra* note 2, at 9, 12. Whether plaintiffs could successfully also obtain a preliminary injunction to so enjoin defendants while the suit makes its way through the courts is outside the scope of this Note.

Additionally, there is a question of venue in such a suit: though plaintiffs are explicitly authorized to bring suit under the ESA in Federal District Court, the ESA allows suit in whichever district a harm occurs. *See* 16 U.S.C. § 1540(c), (g)(3)(A) ("Any suit under this subsection *may* be brought in the judicial district in which the violation occurs.") (emphasis added). Since the Ninth Circuit Court of Appeals arguably has the most experience with ESA harm cases, and an enormous portion of the Pacific coast western snowy plover's habitat falls within that circuit, it would behoove the plaintiffs to file suit in a California District Court. *See* § 1540(g)(3)(A); 50 C.F.R. § 17.11(h); HORNADAY ET AL., *supra* note 71, at 2, 7–8; Boudreaux, *supra* note 24, at 750–51. *See generally* Bennett v. Spear, 520 U.S. 154 (1997) (Oregon); Nw. Envtl. Advocates v. Nat'l Marine Fisheries Serv., 460 F.3d 1125 (9th Cir. 2006) (Washington); Marbled Murrelet v. Babbitt, 83 F.3d 1060 (9th Cir. 1996) (California); *NRDC v. Kempthorne I*, 506 F. Supp. 2d 322 (E.D. Cal. 2007) (California). Whether this could open the suit to being split—with Massachusetts and claims relating to the pip-

C. *Standing of the Plaintiffs*

Plaintiffs should be able to satisfy standing to survive early motions to dismiss based on a lack of subject matter jurisdiction.[212] As discussed *supra*, this will include alleging (1) injury in fact; (2) a causal nexus between that injury and the defendant's actions; and (3) a significant likelihood that the injury complained of would be redressed by the relief requested.[213]

1. Injury in Fact

The plaintiffs to this suit should have little difficulty showing injury in fact, both ongoing and imminent.[214] A warming, rising sea is and will continue to inundate plover habitat, thus reducing the species's ability to breed, feed, and shelter, potentially injuring individual specimens and the species's ability to propagate a new brood.[215]

Local, private birdwatchers or other conservationists should be able to show injury under *Lujan*.[216] As the *Lujan* Court states, "the desire to use or observe an animal species, even for purely esthetic purposes, is undeniably a cognizable interest for purpose of standing."[217] Here, this "cognizable interest" would be observation or conservation of the threatened animal; as such, harm to the animal through habitat destruction directly thwarts this interest.[218] To be sure to avoid the problem of the plaintiffs in *Lujan*—that is, failing to show imminent injury because of a lack of concrete plans to visit the endangered spe-

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ing plover severed under the Federal Rules of Civil Procedure—is beyond the scope of this Note.

[212] *See* Fed. R. Civ. P. 12(b)(1); Massachusetts v. EPA, 549 U.S. 497, 521–26 (2007); Chemerinsky, *supra* note 165, at 60–62; Stan. Envtl. L. Soc'y, *supra* note 81, at 205–06.

[213] *See Massachusetts v. EPA*, 549 U.S. at 521–26; Lujan v. Defenders of Wildlife, 504 U.S. 555, 560–61 (1992); Chemerinsky, *supra* note 165, at 60–62; Stan. Envtl. L. Soc'y, *supra* note 81, at 206–09; *see also* discussion *supra* Part II.C.2.

[214] *See Massachusetts v. EPA*, 549 U.S. at 522–23; *Oversight Hearing*, *supra* note 2, at 91–92 (statement of Dr. Ken Caldeira); Endangered and Threatened Species, 50 C.F.R. § 17.11(h) (2007); *IPCC Report*, *supra* note 2, at 9, 12.

[215] *See* 50 C.F.R. § 17.3 (defining "harm" as an act that injures wildlife by "significantly impairing . . . breeding, feeding or sheltering"); *Oversight Hearing*, *supra* note 2, at 49 (statement of Dr. J. Christopher Haney) ("Projections of sea level rise from global warming range from 7 to 23 inches over the next century . . . ."); Hecht et al., *supra* note 71, at 2, 6; Hornaday et al., *supra* note 71, at 2, 7–8; *IPCC Report*, *supra* note 2, at 1, 9 ("Rising sea level is consistent with warming . . . .").

[216] *See* 504 U.S. at 564; Chemerinsky, *supra* note 165, at 69–70.

[217] 504 U.S. at 562–63.

[218] *See id.*; *Oversight Hearing*, *supra* note 2, at 49 (statement of Dr. J. Christopher Haney); 50 C.F.R. § 17.11(h).

cies—the individuals should be locally based, with a documented history of visiting the plovers and a definite, demonstrable plan to continue doing so, but for their injury.[219] Furthermore, as coastal Californians ostensibly enjoy the aesthetics of their rugged coast, with the various animals inhabiting the intertidal and dune zones, such people as plaintiffs should be able to show that an inundation of these zones harms their aesthetic enjoyment of plovers in their habitat.[220]

Defendants' best argument against Plaintiffs' standing here is an argument against the alleged injury itself as harm comprising a take.[221] That is, Defendants would likely argue that there is not yet documented harm or death to the plovers, and that, as such, no take could be committed and no injury to the Plaintiffs is possible.[222] However, as *Palila v. Hawaii Department of Land and Natural Resources* (*Palila II*) reminds us, no actual finding of death or even imminent harm is required to find harm, or therefore, a take.[223] Thus, Plaintiffs ought to be able to show injury in fact, based on the pending or current harm to the plovers as their habitat is inundated, and they are prevented or hindered in breeding, feeding, or sheltering.[224]

2. Causation

The various plaintiffs should also be able to show that their injuries are fairly traceable to the actions of the defendant power companies.[225] The defendant power companies burn various fossil fuels to provide electricity.[226] As Dr. Ken Caldeira noted in his statement to

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[219] *See Lujan*, 504 U.S. at 563–64.

[220] *See id.* at 562–64, 582 (Stevens, J., concurring); Idaho Farm Bureau Fed'n v. Babbitt, 58 F.3d 1392, 1395, 1397–99 (9th Cir. 1995) (injury based on living in the state of the species and visiting the specific area of the species, or studying the species); HECHT ET AL., *supra* note 71, at 2, 6; HORNADAY ET AL., *supra* note 71, at 2, 7–8.

[221] Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 697–98 (1995); 50 C.F.R. § 17.3 (definitions).

[222] *See Sweet Home*, 515 U.S. at 697–98.

[223] 649 F. Supp. 1070, 1075 (D. Haw. 1986), *aff'd*, 852 F.2d 1106 (9th Cir. 1988).

[224] *See Sweet Home*, 515 U.S. at 697–98; *Palila II*, 649 F. Supp. at 1075; 50 C.F.R. § 17.3; HECHT ET AL., *supra* note 71, at 2, 6; HORNADAY ET AL., *supra* note 71, at 2, 7–8; STAN. ENVTL. LAW SOC'Y, *supra* note 81, at 109–10.

[225] *See* Massachusetts v. EPA, 549 U.S. 497, 523–24 (2007) ("EPA does not dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming."); *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben); *id.* at 90 (statement of Dr. Ken Caldeira); *IPCC Report*, *supra* note 2, at 4–6.

[226] Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 339 (D. Vt. 2007) ("Vermont . . . participat[es] in the Regional Greenhouse Gas Initiative . . . an agreement among nine Northeast and mid-Atlantic states to adopt a regional cap and trade program for *GHG emissions associated with large stationary sources such as power*

Congress, "[w]hen we burn coal, oil or gas, we release carbon dioxide into the atmosphere."[227] This, in turn, causes sea level rise through thermal expansion of the water itself and the melting of terrestrial ice sheets due to global warming.[228] Such sea level rise causes the direct harm to plovers and inundates the coastlines, and as such is fairly traceable to the plaintiffs' injuries.[229]

Defendants would likely argue that it is not merely their emissions that contribute to the plaintiffs' injuries, but rather all emitters world-wide.[230] However, both the Supreme Court and the U.S. District Court for the District of Vermont have declared that even incremental steps to alleviate a harm are sufficient to support the requisite causal nexus for standing.[231] Since power producers make a "meaningful contribution to greenhouse gas concentrations and hence . . . to global warming," and since such warming causes the sea-level rise that causes the injuries that plaintiffs complain of, plaintiffs should be able to demonstrate a fairly traceable nexus.[232]

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plants.") (emphasis added); Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 268 (S.D.N.Y. 2005); Complaint of State Plaintiffs at ¶¶ 98–102, Connecticut v. Am. Elec. Power Co., No. 04 Civ. 5669 (S.D.N.Y. Jul. 21, 2004).

[227] *Oversight Hearing*, *supra* note 2, at 90 (statement of Dr. Ken Caldeira).

[228] *Id.* at 64 (statement of Bill McKibben) ("[T]he natural world was fairly well balanced for carbon before the injection of anthropogenic CO_2. . . ."); *id.* at 91–92 (statement of Dr. Ken Caldeira) (predicting sea-level rise due to thermal expansion and melting ice sheets); *IPCC Report*, *supra* note 2, at 1 ("Rising sea level is consistent with warming . . . ."); *see* discussion *supra* Part I.B.2.

[229] *See Massachusetts v. EPA*, 549 U.S. at 523–26; Bennett v. Spear, 520 U.S. 154, 168–69 (1997); *Oversight Hearing*, *supra* note 2, at 90–92 (statement of Dr. Ken Caldeira).

[230] *See, e.g.*, *Massachusetts v. EPA*, 549 U.S. at 525–26; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 273 (regarding segment of power industry bearing costs of global emissions); *Oversight Hearing*, *supra* note 2, at 90 (statement of Dr. Ken Caldeira).

[231] *Massachusetts v. EPA*, 549 U.S. at 525–26 ("[The EPA's] argument rests on the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum."); *Green Mountain Chrysler*, 508 F. Supp. 2d at 309 ("Moreover, the Court noted the legitimacy of small and incremental regulatory steps . . . .") (citing *Massachusetts v. EPA*, *supra*). Though *Green Mountain Chrysler* speaks of regulation of auto emissions, the point remains valid for incremental steps and impacts. The Supreme Court noted that auto emissions represent less than one-third of the nation's CO_2 emissions, which alone would place the United States behind only Europe and China in terms of emissions; U.S. power plant emissions represent fully ten percent of worldwide anthropogenic emissions of all kinds. *Massachusetts v. EPA*, 549 U.S. at 524–26; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 268. Additionally, though the *Massachusetts v. EPA* Court attached significant importance to EPA being an agency, and therefore accustomed to working incrementally, there is no reason to believe that the power production industry couldn't be expected to decrease its emissions company-by-company, thus achieving a similar incremental effect. *See* 127 S. Ct. at 1457–58; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 268.

[232] *See Massachusetts v. EPA*, 549 U.S. at 524–25.

3. Redressibility

Plaintiffs to this suit should also be able to satisfy the final requirement for standing, that of redressibility.[233] They will be able to show that their injuries will be redressed by the relief requested.[234]

Specifically, the plaintiffs' injuries—imminent harm to plover habitats from a rise in sea level caused by climate change—could be redressed—avoided or mitigated—by preventing additional coal-burning plants from coming online and requiring a diminution in carbon emissions from defendant power companies.[235] Though all sources of CO_2 are in some way contributing to the rise in sea level— and as such defendant power companies are not alone in their contribution—the requested injunction need not *reverse* climate change.[236] As the *Massachusetts v. EPA* Court explained, a favorable decision need not relieve a plaintiff's "*every* injury."[237] The Court found that, as here, the relief requested would "to some extent" reduce the very real harm done to petitioners, both the already-extant rise in sea levels inundating the Massachusetts coast and the "risk of catastrophic harm."[238] That regulation of CO_2 would not "solve" global warming and the resulting catastrophic coastal injuries did not preclude finding redressibility.[239] Here, then, there is no reason to preclude standing because the requested injunction would not cease all or most CO_2 emission.[240]

D. *No Political Question Presented*

This case should not be barred under the political question doctrine as in *Connecticut v. American Electric Power Co.*, because the plaintiffs would not be asking the court to make an initial policy decision, as warned against in *Baker v. Carr*.[241] In *American Electric Power Co.*, the

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[233] *See id.* at 525–26.

[234] *See id.*; STAN. ENVTL. L. SOC'Y, *supra* note 81, at 207–09.

[235] *See Massachusetts v. EPA*, 549 U.S. at 525–26.

[236] *See id.*

[237] *Id.* (quoting Larson v. Valente, 456 U.S. 228, 244 n.15 (1982)).

[238] *Id.* ("[T]he rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts. The risk of catastrophic harm, though remote, is nevertheless real. That risk would be reduced to some extent if petitioners received the relief they seek.").

[239] *Id.*

[240] *See id.* The Court also found it particularly relevant that EPA had already noted the pressing concerns of global warming, and its support of voluntary emission-reduction programs to strengthen its decision that EPA could redress the problem. *Id.*

[241] *See* Baker v. Carr, 369 U.S. 186, 217 (1962) (listing six criteria which may trigger a finding of a nonjudiciable political question); Connecticut v. Am. Elec. Power Co., 406 F.

court decided that it could not consider the case because it would be forced to balance economic, environmental, foreign policy, and national security interests, deciding that such balancing implicated the political question doctrine.[242] Under the ESA, however, no such balancing is supposed to take place.[243] In passing the ESA, Congress made clear that "the balance has been struck in favor of affording endangered species the highest of priorities . . . ."[244] As such, the balance that the Southern District of New York feared it was unable to strike in *American Electric Power Co.* has been clearly struck in favor of endangered or threatened species.[245] Therefore, no initial policy determination as to the priority given defendant power companies versus the plaintiffs and the threatened plovers is required.[246] The case should therefore not be barred as a nonjusticiable political question.[247]

Defendants could also argue that such a determination unduly interferes with the coordinate branches of the government, making the far-reaching policy decisions based on the ESA outside of its Article III powers.[248] Plaintiffs should respond that the court is merely

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Supp. 2d 265, 272–74 (S.D.N.Y. 2005); Brief for Plaintiffs-Appellants at 28, Connecticut v. Am. Elec. Power Co., No. 05-5104cv (2d Cir. Dec. 15, 2005).

[242] 406 F. Supp. 2d at 274.

[243] TVA v. Hill, 437 U.S. 153, 194–95 (1978); *see* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 698–99 (1995); Strahan v. Coxe, 127 F.3d 155, 167–68 (1st Cir. 1997); *supra* note 91 and accompanying text; *see also* STAN. ENVTL. L. SOC'Y, *supra* note 81, at 22.

[244] *Hill*, 437 U.S. at 194.

[245] *See id.*; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274.

[246] *See* Massachusetts v. EPA, 549 U.S. 497, 516 (2007) (finding no political question defect in a wildly complicated global warming suit to compel the EPA to regulate CO_2); *Hill*, 437 U.S. at 194; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274; Brief for Plaintiffs-Appellants at 28, Connecticut v. Am. Elec. Power Co., No. 05-5104cv (2d Cir. Dec. 15, 2005). In addition to speeches and press releases, policy decisions as to the importance of regulating CO_2 emissions have been announced both in agency regulations and in statutory enactment. *See* Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (codified in scattered sections of 2, 15, 40, 42, and 46 U.S.C.); Control of Emissions from New Highway Vehicles and Engines, Notice of Denial of Petition for Rulemaking, 68 Fed. Reg. 52,922, 52,929 (Sept. 8, 2003). The Federal Register notice has been credited by the Supreme Court as announcing settled policy, effectively wiping away the Southern District of New York's declaration in *American Electric Power Co.* that policy is made solely through statutes and treaties in force. *See Massachusetts v. EPA*, 549 U.S. at 526; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274. The latter statutory enactment—the law—is, of course, a pronouncement of policy as an act of Congress. *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274 ("[O]fficial United States policy is expressed by statutes . . . in force . . . .").

[247] *See Massachusetts v. EPA*, 549 U.S. at 516; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274; Brief for Plaintiffs-Appellants at 28–35, Connecticut v. Am. Elec. Power Co., No. 05-5104cv (2d Cir. Dec. 15, 2005).

[248] *See* U.S. CONST. art. III; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274.

deciding a case, its particularized result impacting only the parties to the matter.[249] Defendants, through their lobby, would then be at their leisure to petition the administration to equalize the rest of the industry's emissions with their own.[250]

E. *Causation Satisfiable*

After passing all of the constitutional hurdles to bring the suit, plaintiffs still need to show that the defendant power producers' actions are both the actual and the legal cause of their injuries.[251] Traditionally, plaintiffs would need to show that, but for the defendants' actions, the harm to plovers—destruction of the plovers' habitat through coastal inundation caused by sea-level rise—would not occur.[252] However, *Massachusetts v. EPA* acknowledges that even a preliminary, tentative step toward remediation exposes links in the causal chain and therefore traces the harm to the defendant.[253] Thus, in a case involving plovers, the fact that but for Defendant's actions, harm would still befall the plovers does not necessarily defeat cause-in-fact, as some movement toward remediation is sufficient.[254]

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[249] *See* U.S. CONST. art. III; CHEMERINSKY, *supra* note 165, at 75 (discussing redressibility as having the desired impact on the parties); Borissov, *supra* note 187, at 445 ("[A] judicial determination of whether defendants' [CO_2] emissions amount to an unreasonable interference with a public right does not impinge upon the executive or legislative branches. Such a decision would apply only to the specific parties in the case, and any relief would likewise be limited.").

[250] *See* U.S. CONST. amend. I; Borissov, *supra* note 187, at 445.

[251] *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 697–98 (1995); *id.* at 708–09 (O'Connor, J., concurring) (limiting application of the harm provision to cases where proximate cause can be shown); *see also* Cheever, *supra* note 120, at 179–84.

[252] *See* Rasband, *supra* note 135, at 599.

[253] *See* Massachusetts v. EPA, 549 U.S. 497, 523–24 (2007) (discussing even incremental contribution to climate change as sufficiently traceable to defendants and justiciable as cause-in-fact). Though this discussion was in relation to agency action, which moves incrementally by nature, it is not at all inappropriate to bring this interpretation to ESA citizen suits, where citizens are encouraged to act as private attorneys general. *See* STAN. ENVTL. L. SOC'Y, *supra* note 81, at 202 (citing Bennet v. Spear, 520 U.S. 154, 164 (1997)). *But see* Polar Bear Press Release, *supra* note 10, at 6 (noting that USFWS Director Dale Hall is to issue guidance to his staff that "the best scientific data available today cannot make a causal connection between harm to listed species or their habitats and greenhouse gas emissions from a *specific* facility, or resource development project or government action.") (emphasis added). Since the action proposed in this Note speaks of aggregate CO_2 emissions from several power producers, and not from a "specific facility," Director Hall's guidance is probably only mildly relevant. *See id.*; *supra* Part III.A.

[254] *See Massachusetts v. EPA*, 549 U.S. at 523–24; Rasband, *supra* note 135, at 598–99. *But see* Ruhl, *supra* note 51, at 41–42 (noting the problems of joint and several liability causing a diffuse causal chain in climate change suits).

Furthermore, the take of the plovers through the harm to their habitats is a foreseeable consequence of defendants' actions in contributing to climate change through their CO_2 emissions from power production, thus also satisfying the proximate cause requirement.[255] While defendants may be able to argue—perhaps straight-facedly—that current sea level rise was not a foreseeable consequence of CO_2 emissions because of ongoing debate over causes of climate change and attendant environmental effects, they will be hard-pressed to argue that bringing additional coal-burning plants online, increasing production, or failing to reduce CO_2 output will not foreseeably contribute to sea level rise.[256] As such, plaintiffs should be able to show defendants' actions are proximate causes of the harm befalling coastal plover habitat.[257]

Conclusion

A suit under the ESA with the intent of limiting CO_2 emissions is an admittedly crude tool that would require a liberal activist court to succeed fully. Surely, the political branches should take real action to force reduction in emissions of all greenhouse gases. While we have seen some small steps towards this goal, our politically responsible national leaders must do more if they are to prevent widespread harm to this and other countries. Since the political branches have not yet done so, the ESA provides ample opportunity for citizen attorneys general who are serious about combating causes of the very real, very imminent scourges of anthropogenic climate change.

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[255] *See Sweet Home*, 515 U.S. at 700 n.13; *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben); *id.* at 90–92 (statement of Dr. Ken Caldeira); *IPCC Report*, *supra* note 2, at 1, 9; Stan. Envtl. L. Soc'y, *supra* note 81, at 109; Boudreaux, *supra* note 24, at 748–50; Rasband, *supra* note 135, at 598–99; *supra* Part III.C.1.

[256] *See Massachusetts v. EPA*, 549 U.S. at 516–19; Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295, 313–14 (D. Vt. 2007); Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 268 (S.D.N.Y. 2005); *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben); *id.* at 90–92 (statement of Dr. Ken Caldeira); Hecht et al., *supra* note 71, at 2, 6; Hornaday et al., *supra* note 71, at 2, 7–8; *IPCC Report*, *supra* note 2, at 1, 9.

[257] *See Massachusetts v. EPA*, 549 U.S. at 516–19; *Oversight Hearing*, *supra* note 2, at 62 (statement of Bill McKibben); *id.* at 90–92 (statement of Dr. Ken Caldeira); Hecht et al., *supra* note 71, at 2, 6; Hornaday et al., *supra* note 71, at 2, 7–8; *IPCC Report*, *supra* note 2, at 1, 9.