CHRISTOPHER BROWN*

A Litigious Proposal: A Citizen's Duty to Challenge Climate Change, Lessons from Recent Federal Standing Analysis, and Possible State-Level Remedies Private Citizens Can Pursue

* Christopher Brown serves as an Assistant Professor in the Political Science Department at Texas State University, where he focuses on legal studies and public administration. He completed his undergraduate studies at Northwestern University in Evanston, Illinois, and his graduate work in law and public administration at the University of Texas in Austin, Texas. Before arriving at Texas State University, he served as a judicial clerk on a Texas appellate court and a federal district court, litigated on behalf of the Texas Attorney General's Office in federal and state courts, instructed third-year law students in the Tulane Law School's environmental law clinic, and worked on surface water environmental flow issues for the National Wildlife Federation.

This Article examines climate change as an ethical and moral issue from the perspective of an American citizen, and considers concrete legal remedies she might pursue.[1]

1 Sincere thanks to Professor Dianne Rahm for her expertise and insights into the climate change crisis.

The moral challenge with which climate change confronts an individual citizen differs from that of officials representing political institutions. This Article urges that, in times of crisis, a citizen faces a heightened duty to act. The fundamental duty of a citizen with respect to climate change—to reduce greenhouse gas emissions by changing her way of life—should not be regarded as the sole obligation a citizen has in the face of this crisis. If the society offers remedies to individual citizens through its institutions, citizens should pursue those remedies even if federal regulation is absent. Whether the moral duty manifests itself as changing one's individual habits or availing oneself of remedies the society's institutions offer, different ways of evaluating the extent of one's responsibilities present themselves. Two broad categories suggest opposite ends of a moral spectrum. Consequentialism evaluates the morality of an action on the basis of its utility in solving the problem. If an action would make no difference, one cannot commit an immoral act. The deontological view, by contrast, evaluates the moral duties one possesses before undertaking the act to decide whether an obligation exists to do it. This Article argues that, in the context of climate change, the deontological view provides the most persuasive argument for the individual citizens or small neighborhood groups. A dilemma of historic dimensions such as the one that climate change presents may confront citizens with the duty to litigate when possible to mitigate or adapt to its effects.

Avenues for citizen litigation seem limited, however. This Article analyzes the current federal statutory and regulatory landscape, and concludes that citizens find themselves in the anomalous position of trying to combat a serious problem of federal dimensions without federal statutory redress, whether under proposed new federal legislation or the Clean Air Act. Given this vacuum at the federal level, three theories—public nuisance, the public trust doctrine, and state-level environmental citizen suits—may provide remedies in the climate change context. Most promising are those jurisdictions that allow plaintiffs to prove damages under these three theories without first satisfying administrative prerequisites that apply federal or state statutory standards to determine whether any violation occurred. With few exceptions, those standards do not address greenhouse gases and would therefore preempt climate change suits. If the court evaluates harm without administrative prerequisites, it becomes possible to fashion judicial remedies. Statutes or doctrines that make it possible to sue private as well as governmental entities are also important. The

Article gives examples of cases and statutes that have already demonstrated their potential utility in reducing greenhouse gas emissions.

The next question becomes how to approach litigation based on climate change. The approach to standing that recent federal decisions, particularly *Massachusetts v. EPA*[2] and *Connecticut v. American Electric Power Company*,[3] have established provide citizens with an approach to harm (future damages should be considered in the present), attributability (if the defendant contributes an increment of greenhouse gases, this suffices to connect its actions to the harm), and redressability (the court can offer a measure of redress by decreasing the problem even by a small quantity).

Further, these federal decisions appear to support a deontological view of the moral duty to confront climate change: mitigating the emission of greenhouse gases even by a fraction suffices as a remedy and warrants judicial intervention, in part because of preexisting duties the United States possesses. Granted, these findings involved mobile source emissions in the entire country on the one hand and emissions from coal-fired power plants in several states on the other. By accepting small increments of change as sufficient, the federal courts suggest that the moral decision whether to act depends not on the percentage of the climate change crisis the act solves, but whether, ex ante, it is the right thing to do.

These new judicial approaches would apply to cases brought under a number of legal theories that could form the basis of citizen suits. At a minimum, one must identify the existence of such legal theories to support the somewhat outlandish proposal that time-consuming, expensive actions such as litigation could constitute part of a citizen's moral duty in the face of serious ecological harm.

I
RETHINKING THE MORAL DUTY TO CONFRONT CLIMATE CHANGE ON AN INDIVIDUAL LEVEL

When one speaks of moral duties associated with climate change, a vast distance separates individual Americans from those who represented them at the 2009 United Nations Climate Change Conference in Copenhagen, Denmark, and elected federal

2 549 U.S. 497 (2007).

3 582 F.3d 309 (2d Cir. 2009).

representatives who currently debate legislation to reduce greenhouse gas emissions. Diplomats and legislators have an official duty to ensure the safety of the country's citizens and the preservation of its natural resources. The historical role of the United States in creating the climate change dilemma, its ongoing contribution to the problem, and its efforts to mitigate the problem all speak to moral issues imposed on the United States as a country, and its leaders in their official capacities. When one speaks of the moral duties of citizens, one often uses this term to signify individuals acting in their official capacity as representatives of the United States. With respect to the collective moral responsibility of countries, their leaders, and their citizens in their official capacities, a number of moral philosophers have concluded that moral responsibility exists where a clear decision-making structure exists and the population participates, at some level, in those decisions. As Professor Virginia Held writes, "[w]hen a group such as a nation or a corporation has a relatively clear structure and set of decision procedures, it certainly seems that it is capable of acting and, one can well argue, that it should be considered morally, as well as legally, responsible."[4]

Those individual Americans who comprehend climate change as a real threat must assess the nature and extent of their own moral responsibility in light of the actions their representatives have taken in their official capacities. Such an assessment is well known and sobering. At present the United States faces an anomalous situation: despite a grave ecological crisis whose harbingers have already manifested themselves, the United States has not yet ratified the Copenhagen Accord that President Barak Obama negotiated at the 2009 United Nations Climate Change Conference. Even if the most recent treaty becomes effective, questions remain regarding the new treaty's specifics and legal status.[5] The House of Representatives approved comprehensive legislation to reduce greenhouse gas emissions by changing the way America produces and uses energy, but the legislation failed for lack of a Senate version. Observers have argued that the House will fail to achieve needed reductions by exempting existing coal-fired electric plants from the Environmental

4 VIRGINIA HELD, HOW TERRORISM IS WRONG: MORALITY AND POLITICAL VIOLENCE 91 (2008).

5 *Copenhagen Accord Marks First Step Towards Legally Binding Global Climate Agreement*, EU ENVIRONMENT POLICY BRIEF (Eur. Comm'n Env't, Brussels, Belg.), Dec. 2009, at 2, *available at* http://ec.europa.eu/environment/news/brief/2009_12/newsletter_12_2009.pdf.

Protection Agency's (EPA) command-and-control regulations, creating an incentive to expand existing facilities to circumvent this form of regulation.[6] After the Supreme Court finally resolved whether the EPA was required to evaluate whether greenhouse gases from mobile sources were air pollutants under the Clean Air Act, the EPA has notified the public that it will seek rules to regulate a defined set of greenhouse gases, both from mobile sources and, over several years, from stationary sources as well.[7]

Years before the federal government had progressed even this far, other units of government sought to fill the void. State governments acted within their own jurisdictions to regulate greenhouse gases and to form regional agreements for this purpose.[8] Agreements among mayors across the country are also well documented.[9] As this Article discusses, state governments have played a critical role in federal litigation to challenge national climate change policy as well as coal-fired electric generating plants.

On a federal level, legislation, Clean Air Act rules, or both may be passed sometime in the future. States may form cap-and-trade agreements with some uncertainties as to their constitutionality. Aside from these different levels of government, the question remains whether individuals bear moral responsibility to assist in society's adaptation to climate change or its efforts to mitigate it. Aside from acting as a concerned voter, individual responsibility in the climate change context usually brings strictly individual practices to mind: the myriad ways in which each person can reduce his or her carbon footprint. Without question, the individual decisions that millions of people make each day play a decisive role in decreasing greenhouse gas emissions.

When faced with such a grave issue, however, one must question whether one's moral responsibility ends with the ecological impact of personal habits. This Article assesses the adequacy of strictly

6 Gethin Chamberlain, Luke Harding, Lizzie Davies & Xan Rice, *Copenhagen Summit: "First Step" to a New Order—Or a "Betrayal of Our Grandchildren,"* GUARDIAN (U.K.) (Dec. 20, 2009), http://www.guardian.co.uk/environment/2009/dec/20/copenhagen-climate-summit-deal-reactions.

7 *See infra* notes 71–75 (mobile sources), 76–78 (stationary sources).

8 *See* Eleanor Stein, *Regional Initiatives to Reduce Greenhouse Gas Emissions*, *in* GLOBAL CLIMATE CHANGE AND U.S. LAW 315 (Michael B. Gerrard ed., 2007); David Hodas, *State Initiatives*, *in* GLOBAL CLIMATE CHANGE AND U.S. LAW 343 (Michael B. Gerrard ed., 2007).

9 *See, e.g.*, J. Kevin Healy, *Local Initiatives*, *in* GLOBAL CLIMATE CHANGE AND U.S. LAW 421 (Michael B. Gerrard ed., 2007).

individual practices from a moral perspective when one is confronted by such a grave ecological threat. Various moral claims of organizations that represent many different points of view, whether religious or secular, suggest that common ground exists as to the moral obligations that climate change imposes on individuals. Based on the morality of these diverse points of view as well as the moral assumptions that inform strictly individual actions to mitigate climate change, the consequences of climate change create a higher moral obligation than one might normally impose on individuals. This obligation includes the willingness to join in litigation to deter governmental and corporate actions that exacerbate the climate crisis.

If one accepts the proposition that the grave exigencies of our historical period impose on individuals a higher moral duty to help society adapt to and mitigate climate change, viable legal remedies must exist for a person to act on that duty. This Article considers federal citizen suits, public nuisance, the public trust doctrine, and state citizen suits in the climate change context.

A. Some Ethical and Moral Interpretations of the Climate Change Problem

A number of considerations inform a person's individual moral duties with regard to climate change. For an American citizen, an assertion of less developed countries is relevant: that those countries bearing primary historical responsibility for our global environmental problem should assume greater responsibility for resolving it.[10] Further, lesser developed countries point out that they will suffer harsher climate impacts because of their geographical locations, a prediction made more unjust given their countries' minor historical contribution to the problem.[11] These realities have led developing nations to insist on special consideration in any international agreements; other nations question the fairness of absolving rapidly industrializing countries such as China or India of greater obligations by labeling them as "developing." Countries agree, however, that the current generation should do everything possible to minimize the

10 United Nations Framework Convention on Climate Change, *opened for signature* May 9, 1992, S. TREATY DOC. NO. 102-38, 1771 U.N.T.S. 107, *available at* http://unfccc.int/resource/docs/convkp/conveng.pdf.

11 Michael Grubb, *Seeking Fair Weather: Ethics and the International Debate on Climate Change*, 71 INT'L AFF. 463, 463 (1995), *cited in* DIANNE RAHM, CLIMATE CHANGE POLICY IN THE UNITED STATES: THE SCIENCE, THE POLITICS, AND THE PROSPECTS FOR CHANGE 112 (2010).

extent to which the present ecological crisis is shifted onto future generations. These moral obligations vie for inclusion in the international ethical framework to deal with climate change.

The ethical and moral reactions of individual citizens and nongovernmental institutions to climate change share basic themes. Dianne Rahm has analyzed the varying religious and secular reactions to climate change as a moral issue; her observations provide helpful insight into the issues this Article addresses.[12] Obviously, environmentalists and their organizations urge the existence of a moral obligation to alter one's individual habits to ensure a sustainable future for posterity.[13] Further, the Catholic Church has spoken in strong terms on the need to prevent climate change, to use natural resources prudently, to live in harmony with God's Creation, to recognize that climate change is a nonpartisan issue that calls us to protect "the one human family" of God, to protect future generations, and to recognize as well that the poor and vulnerable will suffer more than others as a result of climate change.[14] The mainstream Protestant churches have also called for changes in policy and individual behavior through the National Council of Churches.[15] A contingent of

12 DIANNE RAHM, CLIMATE CHANGE POLICY IN THE UNITED STATES: THE SCIENCE, THE POLITICS, AND THE PROSPECTS FOR CHANGE 108–25 (2010).

13 Walter Gibbs, *Gore and U.N. Panel Are Awarded Nobel Peace Prize*, N.Y. TIMES, Oct. 12, 2007, http://www.nytimes.com/2007/10/12/world/europe/12iht-13nobel.7866739.html (quoting Gore's comments on climate change as a moral issue), *cited in* RAHM, *supra* note 12, at 113; *see also* Fen Osler Hampson & Judith Reppy, *Environmental Change & Social Justice*, ENV'T, Apr. 1997, at 13, *cited in* RAHM, *supra* note 12, at 114.

14 *U.S. Catholic Bishops on Ecology and Environmental Justice*, CATHOLIC CONSERVATION CENTER, http://conservation.catholic.org/u_s_bishops.htm (last visited Nov. 16, 2010) (quoting U.S. CONFERENCE OF CATHOLIC BISHOPS, RENEWING THE EARTH (1992)), *cited in* RAHM, *supra* note 12, at 116–18; Melissa Stults, *Religious Groups Becoming a Factor in Climate Policy Debate*, CLIMATE.ORG, http://web.archive.org/web/20070407060340/http://www.climate.org/topics/localaction/religion-climate-change.shtml (last visited Nov. 16, 2010) (accessed by searching for climate.org in the Internet Archive index), *cited in* RAHM, *supra* note 12, at 116–19; Thomas G. Wenski & Nicholas DiMarzio, *Faithful Stewards of God's Creation: A Catholic Resource for Environmental Justice and Climate Change*, U.S. CONFERENCE OF CATHOLIC BISHOPS, http://www.usccb.org/sdwp /ejp/climate/index.shtml (last visited Nov. 16, 2010), *cited in* RAHM, *supra* note 12, at 116–18; James Macintyre, *Pope to Make Climate Action a Moral Obligation*, INDEPENDENT (Sept. 22, 2007), http://news.independent.co.uk/europe/article2987811.ece, *cited in* RAHM, *supra* note 12, at 117.

15 *An Examination of the Views of Religious Organizations Regarding Global Warming: Hearing on Religious Groups' Views and Global Warming Before the S. Comm. on Environment and Public Works*, 110th Cong. (2007) (written testimony of John L. Carr, Secretary, Department of Social Development and World Peace, U.S. Conference of Catholic Bishops), *cited in* RAHM, *supra* note 12, at 118; *see also* Stults, *supra* note 14.

evangelical Christians has also called for federal climate change legislation and for education in churches and schools on the issue.[16]

In addition to those who see moral responsibility for climate change in theological terms, secular moral philosophers have also concluded that Americans bear moral responsibility for their failure to acknowledge their disproportionate contribution to the climate crisis.[17]

These moral arguments—whether those of countries, non-governmental entities, churches, or philosophers—share certain concepts in common that are relevant to one's decision as to whether one should pursue legal remedies to combat climate change. First, whatever vocabulary one may use, human beings bear a moral responsibility to combat climate change because beauty, complexity, and sublimity of the natural world possess intrinsic value. Second, human beings bear a moral responsibility to preserve their own civilization, which has intrinsic worth, makes existence as we know it possible, and faces incalculable harm in the absence of concerted action. Third, this generation bears a grave responsibility to minimize the suffering that climate change will inflict on the poor and future generations. Fourth, in part because carbon dioxide distributes quickly, it affects regions the world over, regardless of where the emissions originated. As a result, one region that produces a disproportionate quantity of carbon dioxide should bear a commensurate burden to reduce the pollution. One should consider these four moral principles when evaluating the extent of a citizen's duty to combat climate change, which may include something as onerous as legal action.

B. Climate Change Arguably Heightens a Citizen's Duty in the Legal System

On its face, the notion that citizens bear a moral responsibility to combat climate change in a legal forum seems outlandish. Common sense would dictate that the decision to instigate something as expensive, time-consuming, and emotionally trying as litigation

16 EVANGELICAL ENVTL. NETWORK, http://creationcare.org/blank.php?id=35 (last visited Nov. 16, 2010); Laurie Goodstein, *Living Day to Day by a Gospel of Green*, N.Y. TIMES, Mar. 8, 2007, http://www.nytimes.com/2007/03/08/garden/08ball.html, *cited in* RAHM, *supra* note 12, at 121; *Climate Change: An Evangelical Call to Action*, CHRISTIANS & CLIMATE, http://christiansandclimate.org/learn /call-to-action/ (last visited Nov. 16, 2010).

17 HELD, *supra* note 4, at 8.

should be left to the discretion of would-be litigants. Further, no public opprobrium should accompany whatever decision those individuals make. Even if one concluded that an individual moral duty to combat climate change existed, common sense might well reject any obligation to do so in a legal forum.

However, as a popular paraphrase of Dante goes, "the hottest places in hell are reserved for those who in a period of moral crisis maintain their neutrality."[18] All indications, including those addressed in this Article, point toward the need to change our concept of civic duty to combat climate change. In the present, indications of climate change in the United States have already manifested themselves: increased air and water temperature, decreased frost days, increased region-specific downpours, increased sea level, decreased snow cover, shrunken glaciers, melted permafrost, decreased sea ice, and harm to sea life from acidified oceans.[19] In the coming decades, scientists predict severe environmental impacts for different regions of the United States and resulting effects on human beings:[20] large regions without sufficient water to sustain themselves, for example. The United States will also feel international consequences from famine, disease, and war.[21] In the long term, at least one study questions whether human beings can adapt to the results of quick and abrupt climatic conditions at all.[22]

Whether one considers the present situation, the near future, or the long term, the consequences of climate change require us to change many assumptions about our duties as citizens. This includes a citizen's obligation to contest environmentally damaging actions by government or industry. In our historical period, human actions—both institutional and personal—carry unprecedented consequences for posterity. Civic participation in the form of litigation that enables citizens to combat ecologically damaging institutional behavior may also reach the level of a moral duty.

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18 Remarks of John F. Kennedy in Bonn, West Germany (June 24, 1963), *in* RESPECTFULLY QUOTED: A DICTIONARY OF QUOTATIONS REQUESTED FROM THE CONGRESSIONAL RESEARCH SERVICE 230 (Suzy Platt ed., 1989) (misquoting lines 35–42 of DANTE'S INFERNO).

19 U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 9–10 (Thomas R. Karl et al. eds., 2009).

20 *See id.* at 12.

21 *See id.*

22 *See id.* at 156.

C. Opposing Moral Interpretations: Personal Practices to Reduce Greenhouse Gas Emissions

In light of the grave consequences that could result from climate change, some ethicists, including Professors Virginia Held and Marcus Hedahl, have considered not just the duty of governments, but the nature and extent of the moral obligation imposed on individuals to reduce carbon dioxide emissions through their individual behavior.[23] Clearly, these individual practices consume far less time, energy, or money than litigation. The moral considerations that accompany such individual practices provide a basis for evaluating whether one can consider litigation to combat climate change as a duty as well.[24]

Myriad examples illustrate individual practices that reduce carbon emissions. Here are a few: Eliminate the use of plastic grocery bags. Americans use 100 billion of these annually, enough to require 12 million barrels of oil to produce.[25] Replace incandescent bulbs with fluorescent ones. Install small home solar panels to run appliances. Use clotheslines instead of dryers when possible. Walk, use mass transit, or carpool whenever possible. Buy locally grown produce when possible, since fresh produce in the United States can travel up to 1,500 miles to market.[26] Except for carpooling, these practices are simple and unilateral, and the personal cost to carry them out is low. In fact, the individual often benefits economically by adopting them.[27]

Such actions share certain characteristics. In addition to requiring very little cooperation with other people and incurring little cost, very little uncertainty exists that each of these actions reduces greenhouse gas emissions. Each of these acts share another trait: the incremental benefit of a single individual taking one of these actions is

23 *See generally* HELD, *supra* note 4; Marcus Hedahl & Kyle Fruh, *Coping with Climate Change: What Justice Demands of Surfers, Mormons, and the Rest of Us*, 94 MONIST (forthcoming 2011) (both discussing the ethical and moral duties of individuals and governments to minimize their carbon footprints on the environment).

24 *See* Hedahl & Fruh, *supra* note 23 (discussing individual responsibility for climate change).

25 *America's Dirty Little Oil Secret: Plastic Bottles and Bags*, BUS. SHRINK (Apr. 26, 2008), http://businessshrink.biz/psychologyofbusiness/2008/04/26/americas-dirtly-little-oil-secret-plastic-bottles-and-bags/.

26 Enrique Gili, *A Budding Market for Food Less Travelled*, INTER PRESS SERVICE NEWS AGENCY (Oct. 4, 2007), http://ipsnews.net/news.asp?idnews=39522 (conversion to miles added).

27 MICHAEL E. MANN & LEE R. KUMP, DIRE PREDICTIONS: UNDERSTANDING GLOBAL WARMING 180 (2008).

infinitesimal in comparison with the magnitude of the climate change problem. From a consequentialist point of view, the moral obligation to engage in these practices is almost nonexistent because the individual's actions result in almost no benefit.

The consequentialist view is just one way to evaluate one's moral obligation, however. If one dismisses any consideration of an individual action as moral or immoral because it results in no appreciable benefit or harm, one falls into further moral dilemmas. First, if individual action is irrelevant as to any pressing moral dilemma that confronts mass society, individuals never have a duty to take any action. In each case, the cosequentialist argument outlined in this Article absolves the individual from the duty to act if doing so would fail to produce some undefined quantum of benefit. Second, in a sense, the consequentialist view erodes the very sense of duty that would result in collective action to address the problem, in this case, the climate crisis. That view precludes citizens from acting together based on the belief in the morality of a discrete action which, taken collectively, would result in a tremendous benefit.

Third, the consequentialist view fails to consider whether a person possesses a moral duty to reduce greenhouse gases that arises from personal identity and conscience without regard to the social utility. From this perspective, one might conclude that the failure to adopt the practice would violate one's moral duty. One might call this the deontological view. The person's way of life—if it reflects typical American habits—caused her to contribute to climate change in gross disproportion to people in other countries, and she benefitted personally from this consumption. In addition to this individual responsibility is collective responsibility for her country's actions. If one accepts that collective responsibility exists, a citizen bears responsibility because she is a citizen of a country that has contributed the lion's share of carbon emissions to the atmosphere. Because of her citizenship and the benefits she derived from this collective behavior, she should assume responsibility in whatever minute way possible. Anchoring the moral obligation in individual and collective duty this way comports with considerations of historical, intergenerational, and geographical equity already discussed. Preexisting duties, not utility after the fact, create a moral obligation to adopt certain individual practices.

Fourth, one could also arrive at the conclusion that one bears a duty to decrease carbon dioxide emissions even without reference to preexisting individual or collective duty. The harms that climate

change will cause in the future could form the basis for a prospective duty to adopt practices consistent with reducing carbon dioxide emissions. In this view, to act in manner that contributes to the future consequences of climate change is immoral. Again, under this view, the quantum of benefit that would result from an individual act is irrelevant. Thus far this discussion has focused on unilateral behaviors an individual can adopt that: (1) almost certainly decrease the quantity of greenhouse gases emitted, (2) pose little cost and possible benefit to the individual, and (3) taken alone, produce infinitesimal benefit. How moral duties that individuals bear translate to moral duties of groups remains unexamined.

D. From Individual to Group Responsibility for Climate Change

The so-called collective action problem is an obvious place to start. Applied to the climate crisis, the collective action theory would recognize that if everyone, or a significant majority of individuals, were to perform acts, those acts, when considered alone, would make no difference.[28] Yet, their collective acts would make a huge difference in combating climate change.[29] According to the collective action theory, however, the larger the group, the less likely the individuals who comprise it will engage in the desirable behavior.[30]

The collective action problem constitutes an observation of human behavior rather than a moral assessment. Its observations are useful, however, when determining whether groups of varying size bear moral responsibility for combating climate change. From a consequentialist perspective, one might argue that the collective action problem only confirms that the individual bears no moral obligation to engage in personal actions that infinitesimally decrease greenhouse gas emissions. Not only would the individual action fail to make a difference, the individual actions would fail to motivate other citizens in numbers significant enough to make a difference.[31]

However, such an argument leaves a number of questions unanswered. First, at what point does one consider the actions of a group or a nation to have made a significant difference? As the Supreme Court concluded in the redressability portion of its standing

28 MANCUR OLSON, JR., THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS 9–15, 53–57 (rev. ed. 1971).

29 *Id.*

30 *Id.*

31 Hedahl & Fruh, *supra* note 23.

analysis in *Massachusetts v. EPA*,[32] the EPA's failure to regulate carbon dioxide emissions from mobile sources contributed to the problem but was not its sole cause.[33] Even if one viewed carbon dioxide emissions on an international level, EPA regulation would improve the situation incrementally. Similarly, there has to be some threshold at which, even from a consequentialist perspective, the individual actions of a group of people matter because they make a detectable difference in mitigating a problem that threatens nature and all people.

Second, the collective action problem suggests that the larger the group, the less likely the individuals in the group will engage in constructive behavior. But the precise group size at which individuals cease to engage is not static or empirical. While the theory of the collective action problem is useful in analyzing whether groups of people bear moral obligations with regard to social problems, it leaves important questions unanswered.

A number of moral philosophers reject the concept of group responsibility. They observe that a collection of individuals lacks the volition, emotions, and reasoning that an individual possesses.[34] Many disagree with this conclusion, however. The philosopher Larry May has written that "people should see themselves as sharing responsibility for various harms perpetrated by, or occurring within, their communities."[35] The moral philosopher Virginia Held inquires what kinds of communities should share the responsibility May describes.[36] She first argues that a "nation or a corporation" with a "relatively clear structure and set of decision procedures" should be "considered morally, as well as legally, responsible."[37] She contrasts the moral responsibility of such an entity in its official capacity with the individual moral responsibility of its employees or citizens. "[M]uch more needs to be ascertained about which officials or executives are responsible for what before we can consider individual members of nations or corporations responsible."[38]

32 549 U.S. 497, 525–26 (2007).

33 *Id.*

34 *See* HELD, *supra* note 4, at 94 (discussing philosophers who reject the concept of group responsibility).

35 *Id.* at 97 (quoting LARRY MAY, SHARING RESPONSIBILITY 1 (1992)).

36 *Id.* at 96–100.

37 *Id.* at 91.

38 *Id.*

The larger and more organized the group—a nation or corporation, for example—the more difficult to relate the moral obligations of individuals to those of the institution. For example, a private American citizen cannot file suit or otherwise take action as a representative of the United States government, just as a dues-paying National Wildlife Federation member cannot file a pleading on behalf of the organization. In each case, a hierarchical decision-making process would determine whether the proposed action comported with the priorities and budget of the organization.

But one should not confine the moral issues associated with climate change to those who act in an official capacity for a political entity, the responsibilities a citizen bears by virtue of his or her citizenship, or strictly individual responsibility. As Held puts it, "[t]he group can be collectively responsible for the failure to take responsibility when it ought to."[39] Held concludes that North Americans bear varying degrees of moral obligation, not because of their citizenship, but because of habits they collectively embrace and the consequences they collectively ignore:

> North Americans, for instance, are at present collectively responsible for not taking responsibility for their immoral overconsumption of the world's resources and overproduction of the world's pollution and climate change. North Americans are morally responsible for failing to acknowledge that they share responsibility for these harms and ought to reduce such overconsumption and climate change.[40]

The assertion of moral responsibility for contributing to climate change based on collective habits of consumption, along with a collective denial of responsibility, shifts the focus of moral responsibility away from citizenship in a large structured entity. Even so, the habits of large groups are difficult to assess. Held, for example, qualifies her general assessment of North Americans by differentiating between groups within the culture. She distinguishes those who do not engage in overconsumption, such as Native Americans, from those who do.[41]

A more helpful inquiry concerns small groups of individuals: large enough that they can accomplish more collectively than any one member of the group, but small enough that each individual plays an

39 *Id.* at 103.

40 *Id.*

41 *Id.*

important role in the decisions the group makes. Professor Held agrees with those moral philosophers who consider it possible to assign moral responsibility to relatively small, minimally organized groups.[42] She offers the example of passengers on a subway who witness a larger child beating a smaller child to the point of serious harm or death. Under such circumstances, Held writes, the unorganized nature of the passengers as a group becomes irrelevant.[43] As a group they bear responsibility at least to notify the conductor. Further, unlike members of a highly structured organization like a nation or corporation, the individual group members in this example face few institutional barriers to taking action, so that one can ascertain whether an individual in the group acted on his or her individual responsibility.

The example of an unorganized group facing a situation that morally requires response sheds light on the question posed in this Article: whether an individual or group bears a moral responsibility to take legal action in order to combat actions that exacerbate climate change. A neighborhood organization in New Orleans, Louisiana, provides a real-world example of the way the "unorganized group" scenario can apply in the legal context.[44] Without question, the Holy Cross Neighborhood Association (Association) in New Orleans' Ninth Ward is more organized than Held's subway passengers: the association has officers, a board of directors, and an organizational goal to make the Holy Cross community "the best place in the city to live and raise a family."[45] Nevertheless, the small size of the

42 *Id.* at 97.

43 *Id.*

44 *See* HELP HOLY CROSS, http://www.helpholycross.org (last visited Nov. 19, 2010).

45 *About the Holy Cross Neighborhood Association*, HOLY CROSS NEIGHBORHOOD ASS'N NEWSL. (Holy Cross Neighborhood Ass'n, New Orleans, La.), June–Aug. 2009, at 1, 12, *available at* http://davidrmacaulay.typepad.com/HCNA_Newsletter16.pdf. The Holy Cross Neighborhood Association conveys the sense of group responsibility for concrete problems in the community:

> We know our neighborhoods are vulnerable to the water and we are working to make that water a resource. We know that current protections are inadequate; we are rebuilding higher, stronger, better, working for enhanced natural protections (restoration of Bayou Bienvenue) and for effective built protections and infrastructure. We know most of our neighbors are not back and that there's been no concerted, effective effort to help them return. We're finding them ourselves and person to person, organization to organization, family to family, doing everything in our power to help our former residents make informed decisions. We continue advocating for ourselves at every level.

Id. at 1.

organization and the specific objective to improve a single neighborhood make the Association far more porous than a unit of government or a corporation. Its small size and loose organization also make individual participation in the Association of paramount importance.

Although the Associations' members share more in common and more organization than Held's subway passengers, the moral responsibilities they bear resemble those of the unorganized group. The Association's priorities originate with individual members who report problems in the community.[46] For example: Over an extended period of time, members observed an environmentally damaging dredging project by the United States Army Corps of Engineers (Corps) that involved contaminated sediment from a canal that barges had used for decades to transport hydrocarbon-containing cargo.[47] Association members learned the Corps planned to dredge the contaminated sediment and relocate it to an estuary despite its toxic effect on benthic organisms upon which the entire food chain relied.[48] Association members sought to negotiate with Corps representatives for changes to the plan.[49] Ultimately the Association coalesced with environmental organizations and the Tulane Environmental Law Clinic to bring suit under the National Environmental Policy Act[50] (NEPA) and the Resource Conservation and Recovery Act[51] (RCRA).[52] The suit met with significant success, including the requirement that the Corps reassess the environmental impact of its project.[53]

One should note fundamental characteristics of this scenario. First, the Association is small and concerns itself with the well-being of a

46 *Id.* at 12.

47 *See* Holy Cross v. U.S. Army Corps of Eng'rs, 455 F. Supp. 2d 532 (E.D. La. 2006). *See generally Politics*, HELP HOLY CROSS, http://www.helpholycross.org/politics/ (last visited Nov. 19, 2010).

48 *See Holy Cross*, 455 F. Supp. 2d at 532.

49 *See id.*

50 Pollution Prosecution Act of 1990, 42 U.S.C. §§ 4321–4347 (2009).

51 Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6908 (2009).

52 *See Recent Accomplishments*, TUL. ENVTL. L. CLINIC, 3, http://www.tulane.edu/~telc/accomp.pdf (last visited Nov. 19, 2010) ("On October 6, 2006, the court in *Holy Cross Neighborhood Association, Louisiana Environmental Action Network, and Gulf Restoration Network v. U.S. Army Corps of Engineers* . . . enjoined the Corps['] . . . plan to dredge contaminated sediments from the Industrial Canal in New Orleans and to dispose of them in the Mississippi River and adjacent wetlands.").

53 *Id.*

specific neighborhood.[54] Second, the size of the Association enables individual members to play a greater role, notifying other members of problems that affect the quality of life in the neighborhood. An individual member understands his role in the Association to exceed membership in a social organization. Instead, protecting the neighborhood from environmental threats likely rises to the level of duty to protect the member's home. The Industrial Canal, where the Corps dredged toxic substances, is contiguous with the Holy Cross neighborhood. Individual Association members observed the activity and raised the issue with the Association. Third, the Association's members saw the Corps' dredging as significant enough to fight in court.[55] The members perceived their obligation to contest the project as one that extended to the federal courthouse. The scale of the neighborhood organization and the immediacy of its focus suggest that it differs from "organized groups or random collections."[56]

It is important to note that, even if a neighborhood association had not existed, the same progression from individual moral duty to group action could have occurred. Neighborhood residents could have contacted other neighbors in the area and notified them of the environmental problem. Although the transaction costs would have been higher in the absence of the Association, concerned citizens could have reacted to the problem in a manner analogous to Held's subway passengers by recognizing immediate options to stop the problem, which could include litigation to challenge the

54 A Holy Cross Neighborhood Association Newsletter explains:

> [C]arbon neutrality refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset. Best practice for organizations and individuals seeking carbon neutral status entails reducing and/or avoiding carbon emissions first so that only unavoidable emissions are offset.
>
> The term can refer to the practice of balancing carbon dioxide released into the atmosphere from burning fossil fuels, with renewable energy that creates a similar amount of useful energy, so that the carbon emissions are compensated, or alternatively using only renewable energies that don't produce any carbon dioxide.
>
> . . . Being carbon neutral means that our community recognizes its contribution to global warming and takes responsibility to offset its carbon footprint or the effect of greenhouse gas emissions, so that our activities will not contribute to global warming.

News from the Lower Ninth Ward Center for Sustainable Engagement and Development, HOLY CROSS NEIGHBORHOOD ASS'N NEWSL. (Holy Cross Neighborhood Ass'n, New Orleans, La.), Sept.–Oct. 2008, at 1, 1, *available at* http://davidrmacaulay.typepad.com /HCNANEWSLETTER_SeptemberOctober2008.pdf.

55 Yolanda Carrington, *Hopes for Holy Cross*, 34 S. EXPOSURE, no. 2, 2006 at 10.

56 HELD, *supra* note 4, at 97.

environmentally damaging actions. Held has suggested that the line is blurry when one attempts to impose individual moral responsibility on members of the two types of groups discussed here: the line between an unorganized collection of citizens as opposed to a small citizens' group in which members share decision making.[57] A citizens' group, like Held's subway passengers, would not conclude that the duty to bring such a legal challenge depended on the likelihood of success.[58]

E. Individual and Group Moral Obligations

The foregoing discussion leads to certain conclusions regarding individual practices a person may adopt to decrease greenhouse gas emissions. Alongside such individual practices remains the more problematic question of whether a moral obligation exists, not just to change one's personal practices, but to raise legal challenges in response to actions that exacerbate climate change. Without question, such duty would impose on individuals a moral obligation several orders of magnitude greater than adopting constructive individual practices.

Individual practices to reduce greenhouse gases are usually simple and require little expenditure of time or effort other than a willingness to alter one's behavior in a minor way. In fact, the change in behavior may result in savings or some other advantage. Additionally, the likelihood that an individual practice will decrease carbon dioxide emissions by some measure is high. Finally, the increment of benefit to the environment that results from such acts, taken individually, is low. Although such individual acts on a mass scale would benefit the environment tremendously, the collective action problem suggests that the likelihood of mass participation is low.

Nevertheless, we should conclude that citizens possess a moral obligation to adopt such individual practices. The consequentialist view—that the increment of benefit is so infinitesimal as to be meaningless—makes little sense in the end. This is true for several

57 E-mail from Virginia Held, Distinguished Professor, The Doctorate-Granting Inst. of the City Univ. of N.Y., to Christopher Brown, Assistant Professor, Tex. State Univ. (Oct. 9, 2009, 15:53 EDT) (on file with author).

58 A neighborhood organization would be subject to organizational standing requirements in federal court or state jurisdictions employing the federal standard, whereas a simple grouping of individuals would file and establish standing as individuals. *See* Hunt v. Wash. State Apple Adver. Comm'n, 432 U.S. 333, 343 (1977) (outlining the separate federal standard for Article III standing for organizations).

reasons. First, in the context of a gas that distributes around the globe quickly and originates from endless sources, it becomes meaningless to say that any decrease in carbon dioxide is too small to do any good. There is no real threshold below which a reduction of carbon dioxide becomes irrelevant. Second, that most of the world's governments prefer to measure carbon dioxide on a per capita basis reminds us that each individual contributes to the problem. The collective action problem should not prevent one from acting on a moral obligation. Third, if one accepts the concept of collective responsibility, one cannot escape the conclusion that a United States citizen bears a disproportionate responsibility for the climate crisis. Finally, given a problem so vast, acting within one's personal sphere to reduce the problem must constitute a moral obligation. The deontological view makes better sense.

Any purported moral duty to participate in the legal system to combat climate change involves very different considerations. Most obviously, the scenario this Article envisions depends on the concept of group moral responsibility that some philosophers have posited: individuals bear a moral responsibility as a group to act in concert with their community to combat an environmental threat. Because this sequence of events depends on group action, it differs qualitatively from the duty an individual citizen possesses to decrease carbon dioxide emissions.

Further, if a citizens' group litigates, it undertakes a time-consuming and expensive process with an uncertain result. Despite the argument just discussed as to the moral responsibility a group of people arguably possesses when confronted with actions that damage the environment, common sense may suggest that such a moral obligation exceeds any realistic view of moral obligations. Several considerations contradict such a conclusion.

First, the laws most obviously available to citizens as a means of challenging government actions that exacerbate climate change—the public trust doctrine or statutory citizen suit provisions—seek to protect the interests of citizens in commonly held resources. The existence of such laws does not mean that citizens' groups bear a moral obligation to avail themselves of such remedies. However, when natural resources face increased risk, the fact that these laws protect commonly held resources suggests an increased responsibility to consider whether litigation would mitigate damage wrought by climate change.

Second, the obligation of a citizens' group to avail itself of such laws becomes even more important in light of unpredictable government action that requires sustained consistent action. Scholars such as Sheldon Kamieniecki, who examine corporate influence on environmental decision making, pinpoint climate change as one area in which concerns about the cost of limiting carbon dioxide emissions have generated powerful corporate opposition.[59] Federal agencies will find themselves subject to the same pressures they face in current environmental permitting and rulemaking. The time-sensitive nature of the climate problem makes it critical to combat erratic environmental policy through litigation.

Professor Richard Lazarus recognizes that, because subsequent generations will bear the brunt of this generation's actions with regard to climate change, legal and regulatory action in the present should contemplate possible governmental actions in the future.[60] Lazarus observes that subsequent legislation or regulation could weaken or eliminate such protections altogether despite the need for a sustained effort on this issue.[61] Lazarus's article proposes mechanisms that could be incorporated into the law to combat relaxations or repeals of climate change laws, missed deadlines for achieving carbon emission reductions, and other future actions that could render legislation ineffective.[62] Citizen litigation can act in tandem with the mechanisms Lazarus outlines to fight for consistency in climate change policy.

Third, a successful citizen suit could have a different impact than the efforts of individuals to change their daily habits to decrease carbon emissions—not in the ultimate sense of solving the problem—but nevertheless significant. In an environmental context other than climate change, for example, the Holy Cross litigation discussed above changed the course of an entire government project that threatened an estuary. In the climate change context, a successful citizen suit on this scale would still constitute a tiny increment in addressing the problem, but far greater than the individual practices just discussed.

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59 *See* SHELDON KAMIENIECKI, CORPORATE AMERICA AND ENVIRONMENTAL POLICY: HOW OFTEN DOES BUSINESS GET ITS WAY? 179–96 (2006).

60 *See* Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1210–11, 1226 (2009).

61 *Id.* at 1156.

62 *See id.* at 1184–87 (discussing statutory mechanisms to employ in this generation's climate change laws to protect future generations).

Massachusetts v. EPA was a qualitatively different citizen suit that involved state and local governments alongside nongovernmental entities and private parties as plaintiffs. It far exceeded the scope of a suit brought by a small neighborhood organization.[63] Nevertheless, *Massachusetts* underscores the kind of impact citizens can have on the mitigation of climate change.

The deontological view would prevent citizens from refusing to undertake litigation because of its uncertain outcome: the moral necessity of the act rests on a preexisting set of duties rather than on the possible result, coupled with the possibility of a significant outcome.

Fourth, the assertion of such a moral obligation rests on a well-established principle in the United States that affirmative obligations are an important attribute of citizenship. In the end, this Article speaks to an individual's moral obligations apart from, or in addition to, the obligations of citizenship. However, even if one examines this issue from the perspective of citizenship, times of higher obligation clearly exist. In an indirect sense, the struggle to serve on juries exemplifies such an understanding of citizenship. The first of the Reconstruction Acts abolished the exclusion of African Americans from jury service.[64] Congress viewed jury service—an affirmative and time-consuming duty—as a civil right rather than a form of conscription. Citizenship would be incomplete without this right. At our critical point in history, one's right to enter the courthouse door—not as a juror, but a litigant—should be understood as a duty to combat a grave ecological threat.

Fifth, characterizing citizen litigation to combat climate change as a moral duty rests on an understanding that one's obligations increase during critical historical moments. Citizens have been called upon to make unusual sacrifices for the good of the country. Victory gardens provide a familiar example.[65] By 1943, twenty million Americans had embraced the task of growing such gardens as a duty and had managed to produce approximately nine to ten million tons of home-grown produce.[66] If nothing else, this Article has outlined on an

63 *See generally* Massachusetts v. EPA, 549 U.S. 497 (2007).

64 First Reconstruction Act of 1867, ch. 153, 14 Stat. 428 (1867).

65 Claudia Reinhardt, *Victory Gardens*, WESSELS LIVING HIST. FARM, http://www.livinghistoryfarm.org/farminginthe40s/crops_02.html (last visited Nov. 19, 2010).

66 *Id.*

international, national, and state level that the world now faces such a critical historical period.

Sixth, scientific certainty should not stand in the way of the adoption of individual or group moral responsibility for which this Article proposes. The precautionary principle discussed above should apply to individual and group responsibility to mitigate damage to the environment.

In conclusion, as Professors May and Held argue, a group can bear collective moral responsibility for acts that occur in its midst. Actions exacerbating climate change arguably require a response from the community. In those situations, Americans should employ whatever legal means available to combat climate change. Because the outcome of litigation is uncertain and the incremental benefit to the environment impossible to calculate, the duty to include litigation among the range of actions one takes to combat climate change cannot rest on the outcome. The duty to resort to legal remedies arises from the preexisting duties an American has by virtue of her country's history, continuing policies, and impacts on poorer nations. Without regard to outcome, the deontological view of moral obligation compels one to take action up to and including litigation.

Even if such a moral duty to participate in the legal system exists, fundamental qualifications akin to the doctrine of impossibility clearly apply. If an individual's lack of time and resources preclude the possibility of pursuing a complex and expensive legal remedy, and if she has no way to join together with others who also see the destruction of a natural resource as a result of climate change, it becomes difficult to assert the existence of a moral obligation to do something beyond a person's reach. Similarly, no moral obligation can exist if no legal remedy exists to challenge the environmentally damaging act. It is difficult to assert that a person has a moral obligation to pursue a remedy that does not exist.

Because this Article asserts that one's moral obligations in light of climate change include the use of litigation where necessary, the issue of available legal remedies assumes a great deal of importance. The next section of this Article evaluates legal theories that may provide citizens with the ability to act on the moral obligation to pursue legal remedies if necessary.

II
CARRYING OUT THE MORAL OBLIGATION: LEGAL REMEDIES TO COMBAT CLIMATE CHANGE

A. For Now, a Crisis Without a Federal Statutory Remedy

The preceding section proposed that the nature and extent of moral obligations change in part based on whether exceptional historical circumstances exist. If that is true, the ecological crisis that climate change presents has heightened the moral obligations in our period of history, certainly in the United States. The rough sketch based on reliable data is enough, especially in light of the precautionary principle. Only in a historical period like our own does it make sense to conclude that citizens have a moral obligation to combat climate change, both through individual practices and, if necessary, litigation. How one might use litigation to combat climate change remains unanswered.

It makes no sense to posit the existence of a moral obligation to pursue legal remedies against a problem if no such remedies exist. Any legal approach one takes to decreasing greenhouse gases will apply existing theories to unprecedented facts. Statutory claims against emitters of greenhouse gases or the federal or state agencies that regulate them may come into existence in the foreseeable future. At least on the federal level, however, specific statutory remedies that would enable citizens to seek redress for such damages to natural resources remain to be seen.

First, despite pending rulemakings, a citizen suit under the Federal Clean Air Act to challenge carbon dioxide emissions that exceed federal limits does not yet exist. The Environmental Protection Agency (EPA) has initiated rulemakings under the Clean Air Act (CAA) for both mobile and stationary sources in the aftermath of the Supreme Court's decision in *Massachusetts v. EPA*,[67] which held that carbon dioxide fit the definition of "air pollutant" as the CAA defines the term for mobile sources in 42 U.S.C. § 7602(g) ("any air pollution agent or combination of such agents . . . substance or matter which is emitted into or otherwise enters the ambient air").[68] The Court concluded that the EPA acted arbitrarily and capriciously when it refused to determine whether carbon dioxide could reasonably be "anticipated to endanger public health or welfare" under 42 U.S.C. §

67 549 U.S. 497 (2007).

68 *Id.* at 556.

7521(a)(1).[69] Finally, the Court concluded that the EPA had erred by failing to ascertain whether the agency possessed a duty to regulate carbon dioxide as an air pollutant reasonably anticipated to endanger the public welfare as provided by 42 U.S.C. § 7521(a)(1).[70]

On remand, the EPA proposed a Finding of Endangerment to the effect that "greenhouse gases in the atmosphere [from mobile sources] endanger the public health and welfare of current and future generations" because of climate change.[71] As enacted, this rule determined (1) that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of [42 U.S.C.A § 7521(a)(1)];"[72] (2) that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride constitute the most dangerous greenhouse gases; and, (3) that emissions from new motor vehicles and new motor vehicle engines contribute to the danger to public health, safety, and welfare under 42 U.S.C.A § 7521(a)(1).[73] The agency also promulgated a Proposed Rule that would increase mileage standards for certain categories of vehicles in the 2012 through 2016 model years.[74] The EPA promulgated both the endangerment finding and mileage rules on December 15, 2009.[75]

Several months before the notices for the mobile sources rules appeared, the EPA had issued a rule establishing mandatory reporting of greenhouse gases from broad categories of stationary sources, which laid the groundwork for establishing emissions standards for any future stationary sources regulation.[76]

69 *Id.* at 532–34.

70 *Id.* at 506–07, 529–35.

71 Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18,886 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. ch. 1).

72 *Id.*

73 *Id.*

74 Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 74 Fed. Reg. 49,454 (proposed Sept. 28, 2009) (to be codified at 40 C.F.R. pts. 86 and 600).

75 Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496–66,546 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1).

76 Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 16,448–16,731 (proposed Apr. 10, 2009) (to be codified at 40 C.F.R. pts. 86, 87, 89, 90, 94, 98, 600, 1033, 1039, 1042, 1045, 1048, 1051, 1054, and 1065).

Defining greenhouse gas emissions from mobile sources as an endangerment to public health led to new rulemakings for stationary sources as well. Subsequent to the mobile sources rulemakings, the EPA proposed a rule under which a preliminary six-year phase would provide the EPA with time to establish temporary emissions limits for greenhouse gases under the CAA's Prevention of Significant Deterioration (PSD) standards, as well as for the minimum thresholds necessary for an operating permit under the CAA's Title V.[77] During the first six years, the EPA would take other "streamlining actions" as well to help reduce greenhouse gas emissions.[78] During the sixth year, the EPA would propose new rules to establish thresholds with which facilities would follow to comply with PSD and Title V.[79]

At a minimum, these rulemakings represent real progress by seeking to regulate greenhouse gases under the CAA. The question arises whether these first steps by the EPA should lead to the conclusion that the agency will assume an effective role in forestalling climate change, and whether the agency's role obviates the responsibility of individual citizens to do more than modify their individual life habits. One should bear in mind a few basic observations in response to this question.

First, although the EPA has now issued its Finding of Endangerment, rules predicated on that finding do not yet exist, with the exception of modest requirements for increased fuel economy in certain categories of vehicles.

Second, with respect to stationary sources, the new Prevention of Significant Deterioration standards would apply only to new or significantly modified facilities. (The standards to be developed for Title V operating permits would apply to large categories of emitting facilities.) The CAA defines "stationary source" as "generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle,"[80] or as "any building, structure, facility, or installation which emits or may emit any air

77 Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring, 74 Fed. Reg. 55,292–55,365 (proposed Oct. 27, 2009) (to be codified at 40 C.F.R. pts. 51, 52, 70, and 71).

78 *Id.*

79 *Id.*

80 42 U.S.C. § 7602(z) (2006).

pollutant."[81] The proposed stationary source standards would not apply to the full breadth of stationary sources described here.

Third, all of these rules are subject to legal challenges. Given the level of industry opposition to pending legislation in Congress to regulate greenhouse gas emissions, administrative legal challenges and appeals seem almost certain.

Fourth, because of the phase-in periods in the mobile and stationary source rules alike, any reductions in greenhouse gases as a result of the rules will not occur for many years. Under the stationary sources rule discussed here, the EPA would promulgate interim standards that would be in effect during the six years it will take for the agency to gather the information necessary to formulate more lasting rules. When one combines the phase-in times built into the rules with the delays caused by litigation, any gains from the proposed rules will be realized well into the future. As the Supreme Court noted in *Massachusetts v. EPA*, the planning and rulemaking necessary for the EPA to actively regulate greenhouse gases, even after enacting rules authorizing the agency to regulate greenhouse gases, will require significant time and resources.[82] Climate change scientists warn that time is of the essence. As each year passes and the concentration of carbon dioxide grows higher, prospects for preventing concentrations with irreversible effects diminish.[83]

Finally, and more generally, the EPA's National Ambient Air Quality Standards, requiring the states to formulate State Implementation Plans, do not include carbon dioxide as a "criteria pollutant."[84]

For citizens seeking a legal means of challenging carbon dioxide emissions that result in damage to natural resources, the Clean Air Act does not yet provide a remedy, whether under the statute's citizen suit provisions or otherwise.[85]

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81 *Id.* § 7411(a)(3).

82 549 U.S. 497, 531 (2007) (quoting 42 U.S.C. § 7521(a)(2)).

83 James Hansen, *James Hansen on Climate Tipping Points and Political Leadership*, SOLVE CLIMATE (July 15, 2009), http://solveclimate.com/blog/20090715/james-hansen-climate-tipping-points-and-political-leadership.

84 The following are the criteria pollutants: sulfur dioxide, 40 C.F.R. §§ 50.4, 50.5 (2009); particulate matter, 40 C.F.R. §§ 50.6, 50.7, 50.13; carbon monoxide, 40 C.F.R. § 50.8; ozone, 40 C.F.R. §§ 50.9, 50.10, 50.15; nitrogen dioxide, 40 C.F.R. § 50.11; and lead, 40 C.F.R. §§ 50.12, 50.16.

85 Clean Air Act, 42 U.S.C. §§ 7401–7661 (2006).

Further, the prospects of a new federal energy statute that would create a citizen suit to challenge the emission of greenhouse gases remains in question.[86] Prior to final negotiations in the House of Representatives in May and June 2009, the American Clean Energy and Security Act contained a citizen suit provision that would have enabled small neighborhood organizations or groups of citizens to challenge emitters of greenhouse gases that made incremental contributions to the ecological or physical damage caused by climate change.[87] Section 336 of the Discussion Draft allowed a person to "commence an action when [he] has suffered, or reasonably expects to suffer a harm attributable, in whole or in part, to a violation or failure to act [in conformity with the preceding section]."[88]

"Harm" in the draft version of the Act was defined as "any effect of air pollution (including climate change) currently occurring or at risk of occurring and the incremental exacerbation of any such effect or risk that is associated with a small incremental emission of any air pollutant . . . whether or not the risk is widely shared."[89] At the time of its passage, on or about June 26, 2009, this provision had been deleted after opponents decried the avalanche of frivolous lawsuits that would result, including from environmentalists.[90] The Clean Energy Jobs and American Power Act bill went to the Senate and awaited consideration alongside the Senate version filed on September 30, 2009.[91] On July 22, 2010, Senate Democrats gave up on efforts to develop a bill that incorporated the House and Senate versions.[92]

The deleted language from the Clean Energy and Security Act provides insight into the problems confronting citizens who would

86 Well-established federal citizen suits exist under the National Environmental Policy Act, 42 U.S.C. §§ 4321–4347 (2006), the Clean Water Act, 33 U.S.C. §§ 1251–1376 (2006), the Clean Air Act, 42 U.S.C. §§ 7401–7661 (2006), and the Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2006).

87 American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009).

88 Lucy Wheatley & Cyrus Frelinghuysen, *Removal of "Citizen Suit" Provisions Eased Passage of ACES*, GLOBAL CLIMATE L. BLOG (June 26, 2009), http://www.globalclimatelaw.com/2009/06/articles/climate-change-litigation/removal-of-citizen-suit-provisions-eased-passage-of-aces/.

89 *Id.*

90 *See* Lazarus, *supra* note 60.

91 Clean Energy Jobs and American Power Act, S. 1733, 111th Cong. (2009) (introduced by Senators John Kerry and Barbara Boxer).

92 Perry Bacon, Jr., *Lack of Votes for Senate Democrats' Energy Bill May Mean the End*, WASH. POST, July 23, 2010, http://www.washingtonpost.com/wp-dyn/content/article/2010/07/22/AR2010072203614.html.

litigate to combat the effects of climate change. First, the strong opposition that led to the deletion of the citizen suit provision reflects the incentives of those who seek uniformity and predictability from a federal law. The climate change bill that Senators Boxer and Kerry proposed—the Clean Energy Jobs and American Power Act—similarly contained no citizen suit provision.[93] Statutory suits that provide citizens at the local level with a means to oppose greenhouse gases frustrate one purpose of encouraging federal lawmakers to preempt local regulation and citizen participation.[94] One consequence of this opposition to local initiatives in federal statutes is that citizens who seek legal remedies in the climate change context may find that federal citizen suit options are limited and that state statutory or common law remedies may assume greater importance.

Second, the deleted language reflects recurring concerns as one seeks legal remedies for citizens seeking to combat the causes of climate change. The deleted provision includes both current and prospective harms as a basis for bringing suit: the would-be provision addressed harms "currently occurring or at risk of occurring" and a person who has "suffered, or reasonably expects to suffer . . . ."[95] This deleted language contemplates the problem of prospective harms that will result from current emissions. Further, this language echoes recent federal decisions that have interpreted federal standing requirements to consider harms from climate change throughout the twenty-first century.[96] The two federal decisions discussed in this Article also interpret standing in light of present and future harms from greenhouse gases.[97]

Moreover, the citizen suit provision deleted from the energy bill seeks to address what quantity of excessive greenhouse gases should

93 *See Summary of the Clean Energy Jobs and American Power Act (S. 1733) as Passed by the EPW Committee*, PEW CENTER ON GLOBAL CLIMATE CHANGE (Nov. 2009), http://www.pewclimate.org/federal/analysis/congress/111/summary-clean-energy-jobs-and-american-power-act.

94 J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499 (2007); Daniel P. Schramm, *A Federal Midwife: Assisting the States in the Birth of a National Greenhouse Gas Cap-and-Trade Program*, 22 TUL. ENVTL. L.J. 61, 78–82 (2008).

95 Wheatley & Frelinghuysen, *supra* note 88.

96 *See, e.g.*, Comer v. Murphy Oil USA, 585 F.3d 855 (5th Cir. 2009); California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. 2007); Native Village of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009).

97 *See* Massachusetts v. EPA, 549 U.S. 497 (2007); Connecticut v. Am. Elec. Power Co., 582 F.3d 309 (2d Cir. 2009) (both discussing the environmental harms produced by greenhouse gases).

trigger legal protections for those affected by climate change. With regard to standing, for example, should a party be required to show that the requested relief would remedy the entire problem of global warming and, if such a grandiose standard is unworkable, what level of mitigation warrants judicial intervention? The deleted citizen suit would have created a remedy to respond to an "incremental exacerbation" of climate change–related risk "whether or not the risk is widely shared."[98] This incremental approach to reducing greenhouse gases also appears in the two federal climate change–related decisions discussed below.[99] One cannot predict when the EPA's regulation of greenhouse gases from stationary sources will become effective or whether future violations of those rules will prove actionable. Equally uncertain is the prospect of a citizen suit provision in the final version of a federal energy bill. In the meantime, the time-sensitive nature of the climate crisis increases the risks of inaction.[100]

The conclusion of this discussion is clear. Despite proposed and promulgated rules from the EPA—as well as pending legislation in Congress—the fundamental analysis applied in *Connecticut v. American Electric Power Co.*[101] continues to apply. *Connecticut*, discussed at greater length *infra*, involved a public nuisance action that several states, a city, and private land trusts brought against coal-fired power plants for carbon dioxide emissions.[102] The *Connecticut* decision considered in part whether existing federal statutes had extensively addressed the issue of climate change and thereby displaced common law remedies for damages resulting from climate change.[103] *Connecticut* cited extensive authority to establish that, for a federal statute to displace a common law remedy, the statute must speak directly to the problem and actually regulate it, citing for

98 Wheatley & Frelinghuysen, *supra* note 88.

99 *See Massachusetts*, 549 U.S. at 525–26 (requiring EPA to evaluate whether to regulate American car emissions. This will not by itself reverse global warming, but will provide redress to plaintiffs, and eliminating a discrete injury is sufficient). *See also Connecticut*, 582 F.3d at 347–49 (slowing or reducing carbon dioxide emissions from coal-fired electric plants satisfies redressability requirement for standing).

100 *See* James Hansen, NASA Goddard Institute for Space Studies, *Global Warming Twenty Years Later: Tipping Points Near* (June 23, 2008), *available at* http://www.columbia.edu/~jeh1/2008/TwentyYearsLater_20080623.pdf (briefing before the House Select Committee on Energy Independence and Global Warming).

101 582 F.3d at 340–42.

102 *Id.* at 314.

103 *Id.* at 371–88.

example a "precise and comprehensive statutory damage remedy" that Congress had created with respect to maritime torts.[104]

Mindful of this standard, the court of appeals considered federal statutes that had addressed climate change.[105] The court of appeals concluded, however, that none of them imposed anything approximating a binding law or regulation with a present, binding effect on government or the private sector to reduce greenhouse gas emissions.[106]

The CAA was a special case among these laws. As this Article has already mentioned, the EPA issued a Finding of Endangerment that the contribution of six greenhouse gases to climate change endangered the public health and welfare of this and future generations. Once enacted into a law regulating greenhouse gas emissions, this finding would lay the predicate for regulating these greenhouses gases from mobile sources.

The court of appeals noted, however, that this finding would not pertain to stationary sources, the category of emitters in *Connecticut*.[107] The agency would have to issue rules that made emissions of these greenhouse gases from stationary sources subject to regulation, such as, inter alia, placing these emissions on the National Ambient Air Quality List.[108] *Connecticut* did not discuss the EPA rule purporting a six-year period for developing greenhouse gas standards and subsequent rulemaking; however, this two-part rule would provide no emissions limitations until an indefinite time in the future. *Connecticut* concluded that the EPA thus far had proposed rules that would regulate greenhouse gases, but the rules that would satisfy the standard for legislative displacement had just begun.[109]

In discussing whether a court should construe Congress's refusal to legislate mandatory standards as legislative intent to leave the issue unregulated, the *Connecticut* court cited *Illinois v. City of Milwaukee*.[110] As with the regulation of greenhouse gases, Congress had "enacted numerous laws touching interstate waters," which included the Federal Water Pollution Control Act.[111] In that case,

104 *Id.* at 386.
105 *Id.* at 375–88.
106 *Id.* at 378–88.
107 *Id.* at 376–79.
108 *Id.* at 375–81.
109 *Id.* at 381.
110 *Id.* at 380–81.
111 *Id.* at 330.

Illinois had alleged common law nuisance against the City of Milwaukee to reduce water pollution.[112] Despite the existence of the federal statute, the *Milwaukee* court concluded that Illinois sought remedies outside the scope of those the statute provided.[113] In concluding that federal statutes had not displaced the common law public nuisance claim, the court reached a conclusion precisely analogous to the holding reached by the *Connecticut* court:

> It may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution.[114]

This observation from *Milwaukee* applies not only to the public nuisance claims in *Connecticut*, but also to any common law or state law remedy that federal statutes have not preempted. Even if such statutory claims are enacted, the requirement that the statute provide a remedy that precisely addresses the plaintiff's complaint may allow a citizen to invoke the common law if it better addresses the environmental damage at issue.

Given the absence of federal rules or new laws to provide guidance on greenhouse gas regulation from stationary sources, this Article chooses to focus on the public trust doctrine, public nuisance, and the state environmental citizen suits that have evolved from that doctrine. Public nuisance has thus far played the most important role in successful suits against stationary sources; the public trust doctrine has received the most attention from academic observers as a paradigm for evaluating climate change.

Any assessment of climate change issues in relation to these legal theories requires some speculation. However, considering climate change in this way anchors the issue in extant law rather than in speculation regarding statutory claims that do not yet exist. The states' role in environmental and natural resource protection receives less attention than the federal role but is nonetheless critical. As Susan George et al. observe:

> Because state governments are closer than the federal government to the citizenry, they have a perspective on local environmental issues that federal officials, often hundreds or thousands of miles

112 *Id.*

113 *Id.*

114 Illinois v. Milwaukee (*Milwaukee I*), 406 U.S. 91, 107 (1972).

> away, do not. Similarly, citizens are often more likely than federal or state agencies to be sensitive to environmental degradation close to their homes. The recent growth of "grassroots" environmental groups is evidence of the citizenry's healthy concern for local environmental problems, particularly the loss of biodiversity.[115]

George's first observation—that states have often been more effective than the federal government in enacting laws that protect wildlife[116]—has proven even truer in the context of climate change. Many states have been extremely active in seeking new laws to decrease greenhouse gas emission,[117] to encourage conservation, and to create regional cap-and-trade agreements. Moreover, as this article reflects, states have proven instrumental in litigation designed to decrease greenhouse gas emissions. States acting as parens patriae have acted as lead plaintiffs in the most important climate change litigation to date, both under CAA citizen suit provisions in *Massachusetts v. EPA*,[118] as well as under public nuisance in *Connecticut v. American Electric Power Co.*[119] and *North Carolina ex rel. Cooper v. Tennessee Valley Authority*.[120]

George's second observation—that grassroots citizens' groups have also played an important role in addressing environmental problems[121]—constitutes the primary concern of this Article. Without question, citizens' groups have already availed themselves of the courts to challenge greenhouse gas emissions.[122] If individuals or groups of citizens are to act on our moral obligation to combat climate change, the courts should become a more viable alternative. In the absence of federal citizen suits, the need arises to analyze legal

115 Susan George et al., *The Public in Action: Using State Citizen Suit Statutes to Protect Biodiversity*, 6 U. BALT. J. ENVTL. L. 1, 4 (1997).

116 *Id.*

117 *E.g.*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/home (last visited Dec. 1, 2010); *Western Governors' Initiative Focuses on Transportation Fuels*, SOUTHEAST AGRIC. & FORESTRY ENERGY RESOURCES ALLIANCE (Oct. 20, 2008, 3:58 PM), http://www.saferalliance.net/renewsouth/2008/10/western-governors-initiative-f.html.

118 Massachusetts v. EPA, 549 U.S. 497, 521–22 (2007).

119 Connecticut v. Am. Elec. Power Co., 582 F.3d 309, 340–42 (2d Cir. 2009).

120 North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 593 F. Supp. 2d 812 (W.D.N.C. 2009), *rev'd*, No. 09-1623, 2010 WL 2891572 (4th Cir. July 26, 2010).

121 George et al., *supra* note 115, at 4.

122 *See, e.g.*, Longleaf Energy Assocs. v. Friends of the Chattahoochee, Inc., 681 S.E.2d 203 (Ga. Ct. App. 2009) (exemplifying such attempts to use the courts to help reduce greenhouse gas emissions).

theories at the state level that offer a real chance of ameliorating climate change and its effects.

Federal courts have provided exceptional guidance as to how a litigant should approach climate change. Citizens can learn a great deal from federal suits that states have brought in the last two years, as the subsequent discussion demonstrates.

B. Climate Change and Litigation from a Citizen's Perspective

A real-life scenario helps illustrate the kinds of situations in the present or near future that communities will face and may cause them to become plaintiffs in a climate change–related suit.

Members of the Biloxi-Chitimacha tribe in Terrebonne Parish, located in southeastern Louisiana, have seen their community seriously flooded in five of the last six years.[123] The flooding has become more intense and extensive during the last decade.[124] As the coast continues to erode and the wetlands continue to disappear, the tribe seeks both adaptive measures to cope with the impact of flooding, as well as mitigation to reduce the severity of storms in the future.[125]

Citizens in this situation have certain facts at their disposal but uncertainties as to how they should proceed. Few cases involving climate change provide guidance. The community relies on a natural sense that climate change is damaging. Increased precipitation, intense storms, coastal erosion, loss of wetlands, and flooding are already occurring and will increase in Louisiana.[126]

This Article suggests that citizens such as these bear a moral responsibility to combat climate change, not only by changing their personal habits, but also by resorting to our legal institutions. Two recent federal decisions that address climate change provide guidance in formulating a claim that involves the peculiar facts of damages that result from excessive greenhouse gas emissions. Moreover, these federal decisions would provide guidance not only for similar cases in federal court, but also for cases brought in state court under a variety

123 Sue Sturgis, *As the Land Disappears, an Indian Tribe Plans to Abandon Its Ancestral Louisiana Home*, GRIST.ORG (Oct. 7, 2009, 1:44 PM), http://www.grist.org/article/as-the-land-disappears-an-indian-tribe-plans-to-abandon-its-ancestral-louis.

124 *See* Amy Heinzerling, *Past Decade the Hottest on Record*, EARTH POL'Y INST. (Jan. 14, 2010), http://www.earth-policy.org/index.php?/indicators/C51/.

125 *See* Sturgis, *supra* note 123.

126 *Id.*

of theories. This Article considers public nuisance, the public trust doctrine, and state-level environmental citizen suits.

C. Guidance for Citizens from the Federal Courts

1. Massachusetts v. EPA

Subsequent sections of this Article make clear that the standing requirement imposed on public trust suits or state environmental citizen suits varies by jurisdiction. Federal courts approach state cases with broader standing principles in a manner that reasserts the federal standards in defining the scope of review.[127]

Nevertheless, to assess citizen standing in the states, one should first consider the approach taken by federal courts. This is first true simply because a number of states have adopted the federal standard.[128] Second, the federal standard is stringent with regard to the harm that forms the basis for standing and is useful for analyzing how to argue prospective harm under a difficult test. Third, the Supreme Court's approach to federal standing requirements in *Massachusetts* provides guidance as to how courts may approach other cases involving climate change, including on the issue of future harms. As such, the standing analysis in *Massachusetts* provides guidance, not only on standing, but on how to approach the concepts common to any climate change–related suit.

In *Lujan v. Defenders of Wildlife*,[129] the Supreme Court articulated federal standing requirements under the Constitution's Case or Controversy requirement: one must demonstrate a concrete and particularized injury that is either actual or imminent, that the injury is fairly traceable to the defendant, and that a favorable decision will likely redress that injury.[130] The requirement of imminent harm applies both to legal or prospective equitable relief,[131] which subjects longer-term remedies to threatened harms in the short term. On its

127 ASARCO Inc. v. Kadish, 490 U.S. 605, 622–23 (1989).

128 *See, e.g.*, Mich. Citizens for Water Conservation v. Nestle Waters of N. Am. Auth., Inc., 709 N.W.2d 174 (Mich. Ct. App. 2005), *aff'd in part, rev'd in part*, 737 N.W.2d 447 (Mich. 2007).

129 504 U.S. 555, 562–64 (1992).

130 *Id.* at 560–61; Adarand Constructors, Inc. v. Pena, 515 U.S. 200, 210–11 (1995).

131 Gratz v. Bollinger, 539 U.S. 244, 284 (2003) ("To seek forward-looking, injunctive relief, petitioners must show that they face an imminent threat . . . ." (citing *Adarand*, 515 U.S. at 210–11)).

face, the three-part federal standing requirement would appear to severely limit a court from considering prospective harms.

The Supreme Court's decision in *Massachusetts v. EPA*[132] was the first to interpret federal standing requirements in the context of climate change. In conducting its standing analysis, the *Massachusetts* court applied well-established precedent in a manner that comprehended the unique nature of the problem.[133] With respect to harm, the Court considered both present and future damage to the environment from climate change.[134] As to whether the harm could be fairly attributed to the defendant, the Environmental Protection Agency, the Court accepted the connection between the EPA's refusal to undertake rulemaking on carbon dioxide and greater environmental harm.[135] With respect to redressability, the Court accepted that, although incremental reductions in carbon dioxide from mobile sources in the United States would not solve the global climate change crisis, such reductions would mitigate it.[136] The Supreme Court's approach to standing in *Massachusetts* could have consequences for other types of climate-related claims as well.

Massachusetts differed in fundamental respects from the kinds of citizen suits this Article addresses. The issue presented to the *Massachusetts* Court involved a specific issue of administrative law that carried with it a different standing test than that articulated in *Lujan*. *Massachusetts* concerned the EPA's refusal to initiate a rulemaking that would result in the regulation of carbon dioxide emissions from mobile sources.[137] The EPA asserted that Congress did not intend the agency to regulate carbon dioxide; that, in any event, carbon dioxide from American vehicles made a negligible contribution to the global problem;[138] and, even if this contribution were significant, rulemaking on mobile sources would interfere with other agencies' programs, such as the Department of Transportation's automobile mileage program under the National Highway Traffic Safety Administration.[139]

132 549 U.S. 497 (2007).

133 *Id.*

134 *Id.* at 521–23.

135 *Id.* at 523–24.

136 *Id.* at 525–26.

137 *Id.* at 560.

138 549 U.S. at 528.

139 *Id.* at 531–32.

The EPA also asserted that such a rulemaking would interfere with presidential diplomatic objectives and would lead to piecemeal (and presumably inconsistent) climate policies.[140] In refusing to initiate a rulemaking, the EPA refused to determine whether carbon dioxide fit the CAA's definition of an air pollutant in 42 U.S.C. § 7602(g) ("any air pollution agent or . . . agents . . . substance or matter which is emitted into or otherwise enters the ambient air").[141] Further, even if carbon dioxide met that definition, the EPA asserted that they lacked jurisdiction to determine whether carbon dioxide could reasonably be "anticipated to endanger public health or welfare" under 42 U.S.C. § 7521(a).[142] By refusing to make these findings, the EPA also refused to conclude that the agency possessed a duty to regulate an air pollutant reasonably anticipated to endanger the public welfare as provided by 42 U.S.C. § 7601(a)(1).[143]

The appellants, private parties as well as state and local governments, challenged the EPA under the CAA provision for judicial review of agency action, 42 U.S.C. § 7607(b)(1).[144] Although this provision carried with it an administrative standing requirement, the *Massachusetts* Court concluded that the petitioners had satisfied the higher requirements outlined in *Lujan*, supra:

> [I]t is clear that petitioners' submissions as they pertain to Massachusetts have satisfied the most demanding standards of the adversarial process. EPA's steadfast refusal to regulate greenhouse gas emissions presents a risk of harm to Massachusetts that is both "actual" and "imminent."[145] . . . There is, moreover, a "substantial likelihood that the judicial relief requested" will prompt EPA to take steps to reduce that risk.[146]

The Court considered Massachusetts' basis for standing sufficient, not only to satisfy the administrative standard, but also the test outlined in *Lujan*.[147]

Because Massachusetts acted as the lead petitioner, whose injury served to establish standing for all the complaining parties, the

140 *Id.* at 513–14.

141 *Id.* at 528–30.

142 *Id.* at 528.

143 *Id.* at 510–14, 528–35.

144 *Id.* at 514.

145 *Id.* at 521 (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992)).

146 *Id.* (citing Duke Power Co. v. Carolina Envtl. Study Grp., Inc., 438 U.S. 59, 79 (1978)).

147 *Id.*

Supreme Court approached standing differently than in the case of a private litigant.[148] A state need not establish individualized injury to the state as a plaintiff. The state need not own the flooded land or other damaged resources. Instead, as Justice Holmes declared, a state "has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. [A state] has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air."[149]

Nevertheless, the *Massachusetts* Court identified the state's status as a landowner as an independent basis for standing.[150] This proprietary basis for standing proves relevant to other kinds of litigants in the climate change context. "Massachusetts does in fact own a great deal of the 'territory alleged to be affected' [which] only reinforces the conclusion that its stake in the outcome of this case . . . warrant[s] the exercise of federal judicial power."[151]

That is, the State of Massachusetts owned "a substantial portion of the state's coastal property,"[152] which, at the time of the litigation, had already suffered concrete, particularized harm. "According to petitioners' unchallenged affidavits, global sea levels rose somewhere between 10 and 20 centimeters [3.9–7.9 inches] over the 20th century as a result of global warming [and] have already begun to swallow Massachusetts' coastal land."[153]

A persuasive argument for private litigants seeking to rely on the *Massachusetts* Court's approach to standing therefore emerges: even though the Court's conclusion that Massachusetts possessed standing in part as parens patriae, the state's status as a landowner who had suffered injury to real property also played a large role in the Court's standing determination.[154]

The discussion thus far has focused on the plaintiffs' actual, present damages. However, the Court's willingness to recognize future harms as a basis for standing permeates the decision. The analysis for each form of damages followed the same pattern: first a

148 *Id.* at 518.

149 *Id.* at 518–19 (citing Georgia v. Tenn. Copper Co., 206 U.S. 230, 237 (1907) (describing Georgia's interest in bringing suit to prevent air pollution originating outside its borders)).

150 *Id.* at 522–23.

151 *Id.* at 519.

152 *Id.* at 522 (citing affidavit of expert witness for Massachusetts).

153 *Id.* at 522 (citing petitioners' affidavits) (conversion to inches added).

154 *Id.* at 526.

consideration of present-day manifestations of harm, then an evaluation of the same harm as it increases through the coming decades of the twenty-first century.

Before reaching the harms specific to the state of Massachusetts, the Court considered present harms on a global level as they extend into the future.[155] The Court first summarized the "serious and well recognized" harms associated with climate change that have already occurred in the course of the twentieth century: the global retreat of mountain glaciers, reduction in snow-cover extent, rivers and lakes melting earlier in the spring, and rise in sea levels.[156] The Court noted that soil compaction, recurrent storms, and sea level rises already destroy twenty to thirty square miles of wetlands in Louisiana every year.[157]

Once the Court established the climate change-related harm that had already occurred, the Court accepted the "strong consensus" of "qualified scientific experts" that the damage to date "only hints at the environmental damage yet to come."[158] The Court cited studies predicting a precipitate rise in sea levels, severe and irreversible damage to ecosystems, significantly reduced water storage in snowpack with serious economic consequences, increased spread of disease, and more ferocious hurricanes from increased water temperatures by the end of the twenty-first century.[159] The Court characterized these global harms—both to date and projected decades into the future—as "widely shared" risks.[160]

After the Court proceeded to discuss the damage to Massachusetts as a landowner to date, the Court relied on expert affidavits to conclude that "[t]he severity of that injury [to Massachusetts as a landowner] will only increase over the course of the next century."[161] Periodic storm surges and flooding events could destroy all or part of fifty-three coastal parks, beaches, reservations, wildlife sanctuaries, and the infrastructure associated with each, the Court observed.[162]

155 *Id.* at 521–23.

156 *Id.* at 521.

157 *Id.* at 522 n.18.

158 *Id.* at 521.

159 *Id.* at 521–22 (citing to the Declaration of climate scientist Michael MacCracken) (describing end of century conditions—sea level, ecosystem damage, water storage decrease, and hurricanes).

160 *Id.* at 522.

161 *Id.* at 522–23.

162 *Id.*

One official predicted the "loss of roughly 14 acres of land per miles of coastline by 2100."[163] Further, state officials predicted that the rise in sea level in the twenty-first century will transform a 10-year flood into the equivalent of a 100-year flood and a 100-year flood into a 500-year flood.[164] The Court noted that remediation costs alone could cost hundreds of millions of dollars.[165]

The manner in which the Court related future damages to the present determined the way it assessed whether Massachusetts had suffered both "actual" and "imminent" harm for purposes of standing.[166] If the Court could root specific climate-caused environmental damages in the future to present events, and if a "strong consensus" of "qualified scientific experts" predicted the same types of damages would grow through the twenty-first century as global warming increased, future harms became "imminent."[167]

For an environmental plaintiff in a state that has adopted federal or similar standing requirements, *Massachusetts* provides tremendous guidance. First, because of the strong scientific consensus regarding the environmental damage that climate change causes, *Massachusetts* provides strong precedent for state courts hearing citizen suits to acknowledge the connection between global occurrences and local damages without identifying an immediate, local source of the harms.

Second, the *Massachusetts* Court approached the "actual or imminent harm" element of standing in a manner that allowed it to consider long-term prospective harm.[168] The Court first considered an extant harm: the loss of coastline due to increased sea level.[169] The Court then treated this current manifestation of climate change as a harbinger of harms that experts project for the coming decades.[170] The Court considered expert evidence in this regard that extended until the end of the twenty-first century.[171] The term "imminent" in the federal standard received an expanded meaning because the nature of the harm required it.

163 *Id.* at 523 n.20.
164 *Id.*
165 *Id.* at 523.
166 *Id.* at 519.
167 *Id.* at 521.
168 *Id.* at 521–23.
169 *Id.*
170 *Id.*
171 *Id.*

States take different approaches to standing with regard to environmental citizen suits, suits based solely on the public trust, or suits in nuisance. If a litigant found himself in a jurisdiction that had adopted stringent federal standards, he might find it possible to approach standing in a manner similar to that of the petitioners in *Massachusetts*. This is so in part because many harms associated with climate change have already manifested themselves and will grow in the future, a grim reality that formed the basis for "actual and imminent harm" in the *Massachusetts* decision.

Massachusetts' approach to standing has clear implications for climate change—related cases involving different facts. In a case challenging a western state's decision to divert water from a stream, a community dependent on the river might follow the pattern *Massachusetts* established to argue "actual or imminent harm." First, provide evidence that climate change has already caused drought and decreased snow pack throughout the western states: authorities indicate that snowpack is now shrinking as much as twenty-five percent in the Cascades of the Northwest and fifteen percent in the snowfields of the Rocky Mountains, but arriving in the lowlands as much as a month earlier than usual.[172] Second, present evidence specific to the disputed river showing decreased flow resulting from decreased snowpack and further loss in the foreseeable future. In standing terms, this shows actual, concrete harm specific to the natural resource.[173] Third, offer evidence that drought, decreased snowpack, and alteration of river flows are all predicted for the western United States in the coming decades.[174] The *Massachusetts* decision would recognize this evidence as showing future harms, but "imminent" for purposes of standing because these harms have already manifested themselves.

All three forms of evidence described would help establish "actual and imminent harm." In addition to the support such evidence would lend to standing, showing prospective harm could also influence the extent to which the court's remedy takes into account future generations.

172 Chip Ward, *Why Red-Colored Snow on the Rockies Is a Major Warning Sign That the West is Drying Up*, ALTERNET (Sept. 16, 2009), http://www.alternet.org/water/142607//why_red_colored_snow_is_a_major_warning_sign_that_the_west_is_drying_up_/?page=entire.

173 U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, *supra* note 19, at 27.

174 *Id.* at 41, 129, 135, 139.

Finally, *Massachusetts* answered the question of redressability in the context of climate change: whether a court-ordered remedy must reduce some minimum quantity of greenhouse gases—or some minimum of climate-caused damages—before it will serve to redress the plaintiff's injury.[175] The EPA asserted that it could have no statutory duty to engage in rulemaking with respect to greenhouse gases because a rule limiting greenhouse gas emissions from mobile sources in one country would have no appreciable impact on climate change globally, especially given burgeoning emissions from other countries such as China and India.[176] The Court rejected this argument, concluding that the reductions that would result from American restrictions on mobile source emissions required the EPA to act:

> Because of the enormity of the potential consequences associated with man-made climate change, the fact that the effectiveness of a remedy might be delayed during the (relatively short) time it takes for a new motor-vehicle fleet to replace an older one is essentially irrelevant. Nor is it dispositive that developing countries such as China and India are poised to increase greenhouse gas emissions substantially over the next century: A reduction in domestic emissions would slow the pace of global emissions increases, no matter what happens elsewhere.[177]

The Court's reasoning here really contains two elements. First, the Court relied on the traditional principle that a genuine increment of benefit can be sufficient to establish redressability.[178] And second, the Court referred to the enormity of the "potential consequences associated with man-made climate change…."[179] This is a duty-based argument, which this Article refers to as a deontological basis for combating climate change. The enormity (in its traditional meaning of "huge evil") of what we have done compels us to reduce the harms of climate change by whatever increment we can. The willingness of the Court to accept incremental reductions of greenhouse gases as proof of redressability, and to premise this conclusion in part on a moral duty to act, proves valuable to plaintiffs in other legal contexts who seek to reduce greenhouse gases or their effects.

175 *Massachusetts*, 549 U.S. at 525–26.

176 *Id.* at 523–26.

177 *Id.* at 525–26 (citations omitted).

178 *Id.* at 525.

179 *Id.*

In the absence of specific EPA rules extending carbon dioxide regulation to stationary sources, the *Massachusetts* decision alone has not yet resulted in successful state-level challenges to the permitting of stationary carbon dioxide sources. In *Longleaf Energy Associates* (Longleaf) *v. Friends of the Chattahoochee, Inc.* (Friends), Longleaf, an electric utility, sought a preconstruction permit for a coal-fired electric power plant.[180] The challenged permit contained no restrictions on carbon dioxide.[181] In opposing the permit, Friends cited the Supreme Court's holding in *Massachusetts* that carbon dioxide was an air pollutant subject to regulation under the CAA.[182] Friends concluded from this holding that the permit should have contained emissions limitations on carbon dioxide as part of New Source Review.[183] After Georgia's environmental protection agency approved the permit, Friends sought review from an administrative law judge, who affirmed the agency's decision.[184] After the lower court reversed the administrative law judge's decision, the Georgia Court of Appeals reinstated it, concluding that *Massachusetts* did not require stationary source carbon dioxide standards and that the EPA had not created them:

> This ruling was not required by the CAA or the decision in *Massachusetts v. EPA*, and would impose a regulatory burden on Georgia never imposed elsewhere. It would compel the EPD to limit CO_2 emissions in air quality permits, even though no CAA provision or Georgia statute or regulation actually controls or limits CO_2 emissions, and even though (to this Court's knowledge) no federal or state court has ever previously ordered controls or limits on CO_2 emissions pursuant to the CAA. It would preempt ongoing Congressional and EPA efforts to formulate a CO_2 emissions policy for all the states, and require the EPD to invent in a vacuum CO_2 emission controls for permits. If accepted, it would engulf a wide range of potential CO_2 emitters in Georgia—and Georgia alone—in a flood of litigation over permits, and impose far-reaching economic hardship on the State.[185]

As already discussed, the EPA has now considered stationary source regulations for carbon dioxide and begun to promulgate such rules. But standards specific enough to satisfy the *Longleaf* court do

180 681 S.E.2d 203 (Ga. Ct. App. 2009).

181 *Id.* at 205.

182 *Id.* at 207.

183 *Id.*

184 *Id.* at 206.

185 *Id.* at 207 (citations omitted).

not and will not exist for a number of years. *Longleaf* illustrates the restrictions that face citizens' groups who challenge carbon dioxide emissions from stationary sources through existing air quality statutes and regulations: if neither the federal CAA nor state air quality statutes require permits to contain greenhouse gas restrictions, it seems unlikely that contesting a permit will succeed. Legal approaches that do not rely on rules that define emissions limitations, such as those considered in subsequent sections of this Article, prove necessary to obtain relief.

In Texas, a prominent citizens organization challenged the state environmental agency's failure to recognize carbon dioxide as an air pollutant as defined in the state's own air quality rules.[186] The plaintiff contests the issuance of several permits to construct several new coal-fired electric plants on this basis, and also seeks a declaratory judgment that public interest witnesses have standing to testify at public hearings on such permits.[187] The Texas suit differs in certain respects from the claims at issue in *Longleaf*; its outcome remains uncertain.[188]

A recent and striking decision—*Connecticut v. American Electric Power Co.*[189]—elaborates on the approach the Supreme Court took to standing in the *Massachusetts* decision, but does so in the context of a public nuisance claim against coal-fired electric plants.

2. Connecticut v. American Electric Power Company

In *Connecticut*, the United States Court of Appeals for the Second Circuit followed the Supreme Court's approach to standing when given facts peculiar to climate change. The court also provided a more in-depth legal justification for finding standing.[190] *Connecticut* receives extended treatment here because it speaks to so many issues pertinent to citizen-initiated greenhouse gas litigation.

But *Connecticut* did more than confirm and deepen the Supreme Court's standing approach to suits involving climate change. By applying the Supreme Court's reasoning in an administrative issue under the CAA to a tort suit for public nuisance, the court of appeals

186 Plaintiff's Original Petition and Request for Disclosure, Public Citizen, Inc. v. Tex. Comm'n on Envtl Quality, No. 1-GN-09-002426 (Tex. Dist. Ct. Oct. 6, 2009).

187 *Id.*

188 *Id.*

189 582 F.3d 309 (2d Cir. 2009).

190 *Id.* at 332–49.

changed the legal landscape for those seeking legal remedies to reduce greenhouse gas emissions.[191] This section of the Article considers *Connecticut* in some detail because it addresses a number of issues pertinent to citizens litigating to combat climate change.

Obviously, *Connecticut* arose under federal rather than state public nuisance law, which requires an interstate dispute and the need for a single legal decision to impose a consistent standard for multistate parties.[192] Nevertheless, *Connecticut* is striking because it provides guidance for plaintiffs with or without an interstate dispute, especially since most states apply the same or similar public nuisance standards as the federal courts derive from the Restatement (Second) of Torts.[193] This section will primarily analyze the *Connecticut* court's consideration of existing federal statutes to determine if existing statutory remedies displace public nuisance claims, its standing analysis based on *Massachusetts*, and its evaluation as to whether private parties had stated a claim in public nuisance upon which relief could be granted. What emerges from this discussion is clear: at this stage in our country's history, at least, no statutory remedy poses an obstacle to a common law claim for equitable relief where environmental damages result from climate change. *Connecticut* helps articulate the basis for a private suit in state common law nuisance.

a. Nature of the Case

In *Connecticut*, Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin (states) joined with New York City and three private trusts that owned lands managed as nature preserves open to the public.[194] These plaintiffs sued six electric power corporations, whose fossil-fuel fired plants in twenty states collectively emitted twenty-five percent of the carbon dioxide from the nation's electric power sector and ten percent of the overall carbon dioxide emitted each year by the United States.[195] These plants generated 2.5% of the world's greenhouse gases.[196] The plaintiffs urged that these emissions constituted a public nuisance under federal law, defined by the Restatement (Second) of Torts § 821(B) as "an

191 *Id.* at 331.
192 *Id.* at 352–59.
193 *Id.* at 351.
194 *Id.* at 316.
195 *Id.*
196 *Id.* at 347.

unreasonable interference with a right common to the general public."[197]

b. Justiciability, Briefly

The court of appeals rejected the lower court's conclusion that it lacked subject matter jurisdiction and that the plaintiffs had failed to state a claim upon which relief could be granted.[198] The district court had concluded the claims were nonjusticiable under *Baker v. Carr*.[199] The district court believed that considering the plaintiffs' claim would drag the district court into *Baker's* political thicket based on two factors that case articulated. First, the case could not be decided without an initial policy decision from the executive or legislative branch of government as to the balance between environmental, economic, and national security issues.[200] Second, the district court also concluded that ascertaining the appropriate caps on the defendants' carbon dioxide would require legislative consideration.[201] A case that raised such policy issues could not be resolved by "judicial fiat."[202]

The Second Circuit analyzed the case under each of the six considerations outlined in *Baker*, and concluded that neither the district court nor the defendants had articulated political question considerations that would preclude review.[203] *Baker* cautioned first and foremost that the judiciary should refrain from cases where the text of the Constitution evinced a clear commitment of the issue to another branch of government,[204] which the court of appeals did not find on the climate change issue.[205]

The court of appeals also rejected the defendants' assertion that fashioning a judicial remedy would involve "complex, inter-related and far-reaching policy questions" as to the causes and most appropriate response to national and global climate change.[206] The court of appeals observed that reducing emissions from power plants

197 *Id.* at 351.
198 *Id.* at 332.
199 *Id.* at 319 (citing Baker v. Carr, 369 U.S. 186, 210 (1962)).
200 *Id.* at 319–20.
201 *Id.* at 320.
202 *Id.*
203 *Id.* at 321–32.
204 *Id.* at 321–22.
205 *Id.* at 325.
206 *Id.*

in six states did not require the formulation of an entire policy to address climate change.[207] Further, Supreme Court decisions did not prohibit courts from considering issues that touched upon foreign policy but did not interfere with it; Congress and the Executive branch had both concurred that greenhouse gas emissions should be reduced, so interference with those branches was unlikely.[208] Additionally, American climate change policy lacked a clear objective, which made it difficult to ascertain with what policy a legal decision would interfere.[209]

As to the argument that climate change is a legislative issue because courts lack the institutional competence to resolve such cases, the Second Circuit discussed precedent reaching back a hundred years in which federal courts interpreted complex data in multistate public nuisance cases involving all forms of pollution.[210] The court of appeals concluded that courts were not only competent to resolve such disputes but uniquely qualified to do so.[211]

The *Connecticut* court's discussion of justiciability bears relevance to the future of climate change policy and litigation. Obviously, because the U.S. Supreme Court will review this decision, the success of *Connecticut*'s justiciability analysis will determine whether the aspects of the opinion involving private litigants will survive. Further, both *Massachusetts* and *Connecticut* have done much to further the country's regulation of climate change and indicate that the judiciary should continue to play a role in this process.

c. Standing of States and Private Trusts

The *Connecticut* court carefully analyzed the different standing requirements imposed on states, cities, and private parties to bring a public nuisance claim to reduce greenhouse gas emissions.[212] In doing so, the *Connecticut* court approached the factual allegations unique to climate change suits in the way the Supreme Court did in *Massachusetts*. Beyond that, *Connecticut* elaborated on the legal reasoning that supported its standing analysis.[213] This section will

207 *Id.*
208 *Id.* at 330–31.
209 *Id.* at 331.
210 *Id.* at 334–35.
211 *Id.* at 323–31.
212 *Id.* at 332–38.
213 *Id.*

explain *Connecticut*'s conclusions with regard to each of three categories of plaintiffs, but will focus especially on the private parties.

With regard to the states in the lawsuit, the *Connecticut* court first alluded to the discussion in *Massachusetts*, both of parens patriae and a state's proprietary standing as a landowner.[214] *Connecticut* determined that the states had established parens patriae standing by asserting their quasi-sovereign interests in protecting the citizens of their respective states from the injuries resulting from increased carbon dioxide concentrations in the atmosphere that will eventually affect the entire populations of each state.[215]

The states further asserted standing on the basis that they each owned substantial amounts of real property that would suffer harm from increased carbon dioxide concentrations in the atmosphere, as in *Massachusetts*.[216] The private land trusts also asserted standing on the basis of their status as real property owners,[217] an issue to be discussed *infra*.

(i) Standing Requirement of Harm

Consistent with *Lujan v. Defenders of Wildlife*,[218] *Connecticut* emphasized that actual or imminent injury could not amount to speculation, conjecture, or hypothesis.[219] Such injury must be impending, immediate, and not "remote or speculative."[220] The court of appeals' discussion reflected the fact that the plaintiffs sought injunctive relief and therefore contemplated the prevention of future injury.[221]

In assessing imminent injury, the *Connecticut* court faced the same dilemma that confronted the *Massachusetts* court: whether, based on scientific evidence that global warming will seriously damage the natural and human environments, a plaintiff can argue that damages projected to occur throughout the twenty-first century are

214 *Id.* at 335–49.
215 *Id.* at 335–38.
216 *Id.* at 336–49.
217 *Id.* at 339.
218 504 U.S. 555 (1992).
219 *Connecticut*, 582 F.3d at 340–44.
220 *Id.* at 341 (citing ASARCO Inc. v. Kadish, 490 U.S. 605, 615 (1989)).
221 *Id.* at 348.

"imminent."[222] A second question is whether the damage is more imminent if it has already begun to manifest itself.[223]

As already discussed, the *Massachusetts* Court concluded that damages predicted to occur decades in the future could be considered as "actual or imminent" harm now.[224] The *Connecticut* court agreed.[225] With regard to current injury, the states cited the following:

> [I]ncrease in carbon dioxide levels that has already caused the temperature to rise and change their climates; devastating future injury to their property from the continuing, incremental increases in temperature projected over the next 10 to 100 years; and increased risk of harm from global warming, including an abrupt and catastrophic change in climate when a "tipping point of radiative forcing is reached."[226]

As one example of current injury, the states cited the steady decrease in California snowpack, a process already begun, that causes flooding and decreases the water supply of Californians.[227] The states then projected on the basis of scientific opinion that this harm would increase in the coming decades.[228] With respect to this current harm projected to grow worse in the future, the *Connecticut* court explicitly acknowledged the approach to actual or imminent harm the Supreme Court took:

> In *Massachusetts*, the State alleged that coastal erosion caused by global warming constituted a current injury to its property. The Court held that this erosion sufficed as an allegation of "particularized injury in [Massachusetts'] capacity as a landowner," and served as a harbinger of injuries to come: "The severity of that injury will only increase over the course of the next century."[229] Similarly, the destruction of California property wrought by the flooding associated with the earlier-melting snowpack qualifies as a current injury-in-fact for Article III purposes.[230]

Connecticut then exceeded the *Massachusetts* Court's approach when it accepted future harms as a basis for standing *without* rooting them

222 *Id.* at 342.

223 *Id.* at 344.

224 *Id.* at 342.

225 *Id.*

226 *Id.* at 341.

227 *Id.* at 341–42.

228 *Id.* at 341.

229 *Id.* (citing Massachusetts v. EPA, 549 U.S. 497, 522 (2007)).

230 *Id.*

in current harms.[231] The states alleged a broad array of future damages from climate change that would occur within the next ten to one hundred years.[232] First, the coastal states would suffer extensive harm from the rise in sea level, both to urban areas and wildlife habitat:

> The bulk of the States' allegations concern future injury. For example, those Plaintiff States with ocean coastlines, including New York City, charge that a rise in sea level induced by global warming will cause more frequent and severe flooding, harm coastal infrastructure including airports, subway stations, tunnels, tunnel vent shafts, storm sewers, wastewater treatment plants, and bridges, and cause hundreds of billions of dollars of damage. In addition, they assert that some low-lying public property would be permanently inundated unless protective structures are built, with the cost falling heavily on those coastal Plaintiffs. Further, a rise in sea level would salinize marshes and tidelands, destroy habitat for commercial and game species, migratory birds, and other wildlife; accelerate beach erosion; and cause saltwater intrusion into groundwater aquifers.[233]

Plaintiff states located along the Great Lakes would suffer from the opposite problem, lower water levels:

> Global warming threatens Plaintiff States bordering the Great Lakes with substantial injury by lowering the water levels of the Great Lakes, which would disrupt hydropower production. Warmer temperatures would threaten agriculture in Iowa and Wisconsin and increase the frequency and duration of summer heat waves with concomitant crop risk. Global warming will also disrupt ecosystems by negatively affecting State-owned hardwood forests and fish habitats, and substantially increase the damage in California due to wildfires.[234]

The land trusts also alleged future harms, including the permanent inundation of low-lying properties, the salinization of marshes, and destruction of other habitats, including for birds.[235] Climate change would also seriously harm their ability to preserve ecologically significant and sensitive land for scientific and educational purposes as well as for human enjoyment.[236]

Conspicuously, neither the states nor the trusts rooted these future harms in already-manifested harms. When the defendants objected

231 *Id.*

232 *Id.* at 317.

233 *Id.* at 342.

234 *Id.*

235 *Id.*

236 *Id.*

that these future harms lacked temporal proximity to the alleged nuisance and failed the "imminent" harm standing requirement, the Second Circuit observed that *Lujan* required temporal proximity to increase the probability that the future harm would actually occur. [237] The court of appeals accepted Connecticut's assertion that the future harms were "'certain to occur because of the consequences, based on the laws of physics and chemistry, of the documented increased carbon dioxide in the atmosphere.' There is no probability involved."[238]

The *Connecticut* court accepted both the current and future harms the states and trusts alleged to establish the first prong of standing, injury in fact.[239]

(ii) Standing Requirement of Causation

The *Connecticut* court concluded that the plaintiffs' injuries were fairly traceable to the defendants because their emissions contributed to global warming, citing decisions that required only that one trace the defendant's conduct to the plaintiff's harm.[240] The court of appeals also cited authority for the proposition that a facility's emissions are fairly attributable if they contribute to the harm plaintiffs suffer.[241] Further, the *Connecticut* court cited *Public Interest Research Group of New Jersey v. Powell Duffryn Terminals*,[242] in which the Third Circuit Court of Appeals held that showing plaintiff's injuries to be fairly traceable to the defendant's conduct does not mean that plaintiffs must show, to a scientific certainty, that the defendant's effluent, and defendant's effluent alone, caused the precise harm suffered by the plaintiffs.[243]

Finally, for purposes of causation in its standing analysis, the *Connecticut* court rejected the argument that, because the defendants collectively emitted 2.5% of the world's carbon dioxide, they played a de minimis role in the injury plaintiffs suffered. The *Connecticut*

237 *Id.* at 342–43.

238 *Id.* at 344.

239 *Id.*

240 *Id.* at 345 (citing Nader v. Democratic Nat'l Comm., 555 F. Supp. 2d 137, 150 (D.D.C. 2008)).

241 *Id.* (citing Nw. Envtl. Def. Ctr. v. Owens Corning Corp., 434 F. Supp. 2d 957, 967 (D. Or. 2006)).

242 *Id.* at 346 (citing Pub. Interest Research Grp. of N.J., Inc. v. Powell Duffryn Terminals, Inc., 913 F.2d 64 (3d Cir. 1990)).

243 *Pub. Interest Research Grp.*, 913 F.2d at 73.

court concluded that the harm defendants inflicted was best left to "the rigors of evidentiary proof at a future stage of the proceedings…."[244] The court of appeals also observed that "[t]ellingly, in *Massachusetts*' discussion of causation, the Court rejected EPA's argument that 'its decision not to regulate greenhouse gas emissions from new motor vehicles contributes so insignificantly to petitioners' injuries that the agency cannot be haled into federal court to answer for them.'"[245]

The court of appeals accepted plaintiffs' argument that their harm was fairly attributable to defendants' actions that had exacerbated the problem incrementally.[246]

(iii) Standing Requirement of Redressability

The defendants relied on two primary arguments: First, that the emitters who caused the alleged harm greatly exceeded those named as defendants.[247] Second, the defendants urged that whatever negligible increment of reduction in greenhouse gases that would result from the case would not provide the plaintiffs with relief, an argument familiar from *Massachusetts*.[248] The *Connecticut* court rejected both.[249]

Defendants first argued that federal law prevented redress where independent parties not named in the suit bore responsibility for the injury; in this case, a multitude of emitters.[250] In rejecting that proposition, the court of appeals noted that the case upon which defendants relied involved tax incentives for hospitals that provided emergency care to indigents.[251] In that case some of the plaintiffs had not sued the hospitals that had actually denied them care, so it was impossible to know which plaintiffs had suffered injuries requiring redress.[252] No such dilemma existed in the *Connecticut* case.

Second, defendants urged that the relief plaintiffs sought would offer no relief to them.[253] Plaintiffs argued that caps should be

244 *Connecticut*, 582 F.3d at 347.

245 *Id.* (citing Massachusetts v. EPA, 549 U.S. 497, 523 (2007)).

246 *Id.* at 345.

247 *Id.*

248 *Id.*

249 *Id.*

250 *Id.* at 348 (citing Simon v. E. Ky. Welfare Rights Org., 426 U.S. 26, 41–42 (1976)).

251 *Id.*

252 *Id.*

253 *Id.*

imposed on major emitters of carbon dioxide, such as defendants, and those caps should be reduced by a specified percentage each year for at least a decade in order to reduce the risk of the harms plaintiffs alleged.[254] Defendants responded that global warming would continue regardless of reductions in emissions that defendants might achieve.[255]

The *Connecticut* court rejected this argument, noting that the Court in *Massachusetts* had found that slowing or reducing global warming by some increment constituted redress.[256] Massachusetts had redressability for purposes of standing, and Connecticut had relied on its holding.[257] As in *Massachusetts*, *Connecticut* concluded that an incremental reduction in greenhouse gases as a result of judicial intervention was enough to establish redressability.[258]

d. Federal Common Law Nuisance: Stating a Claim

The *Connecticut* court next considered whether the states, local government, and private land trusts had stated claims in federal nuisance law.[259] With respect to the states, cases relied upon by the court of appeals largely involved claims involving water pollution or other nuisances in which the actions of one state harmed the citizens of another.[260] Under such circumstances there is an "overriding federal interest in the need for a uniform rule of decision or where the controversy touches [upon] basic interests of federalism . . . ."[261] The court assessed whether the states, acting in their parens patriae and proprietary roles, satisfied the elements of federal common law nuisance in their attempt to sue polluters in other states.[262] As discussed below, the *Connecticut* court not only concluded that the states had stated a claim, but also that the local government and private land trusts had done so as well.[263] Because this Article focuses

254 *Id.* at 347–48.

255 *Id.* at 348.

256 *Id.*

257 *Id.* at 348–49.

258 *Id.* at 348.

259 *Id.* at 352.

260 *Id.* at 364–65.

261 *Id.* at 359 (citing Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398, 421–27 (1964)).

262 *Id.* at 353.

263 *Id.* at 366.

on private parties, the court of appeals' analysis of the private land trusts will receive special focus.

The *Connecticut* court relied heavily on concepts drawn from the Restatement (Second) of Torts as the accepted authority on public nuisance.[264] In particular, the *Connecticut* court relied on § 821B(1), which defines a public nuisance as an "unreasonable interference" with a "right common to the general public."[265] Section 821B(2) explains further:

> Circumstances that may sustain a holding that an interference with a public right is unreasonable [may] include the following:
>
> (a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or
>
> (b) whether the conduct is proscribed by statute, ordinance or administrative regulation, or
>
> (c) whether the conduct is of a continuing nature or has produced a permanent and long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.[266]

The court of appeals concluded that the plaintiffs had articulated a public nuisance under these principles coupled with the federal common law principles just discussed.[267] In its discussion, the court of appeals noted that public nuisance theory does not require a plaintiff to show an immediate harm, in part because nuisance contemplates equitable relief that becomes effective before the harm occurs.[268]

Of specific interest to this Article is the court's application of the Restatement's nuisance principles to the private land trust plaintiffs. Section 821C of the Restatement (Second) of Torts articulates requirements for private parties who seek to bring public nuisance claims:

> (1) In order to recover damages in an individual action for public nuisance, one must have suffered harm of a kind different from that suffered by other members of the public exercising the right common to the general public that was the subject of the interference.

264 *Id.* at 352.

265 *Id.*

266 *Id.* (citing RESTATEMENT (SECOND) OF TORTS § 821B (1979)).

267 *Id.*

268 *Id.* at 357.

> (2) In order to maintain a proceeding to enjoin to abate a public nuisance, one must
>
> > (a) have the right to recover damages, as indicated in Subsection (1), or
> >
> > (b) have authority as a public official or public agency to represent the state or a political subdivision in the matter, or
> >
> > (c) have standing to sue as a representative of the general public, as a citizen in a citizen's action or as a member of a class in a class action.[269]

The court of appeals emphasized the necessity of distinguishing a private citizen who suffered a "harm of a different kind from that suffered by other persons exercising the same public right" from the multitude who also suffered harm.[270] Failing to do so would flood defendants with lawsuits for the same nuisance.

The court of appeals also noted, however, that ascertaining whether a plaintiff's damages differ qualitatively from other citizens who have suffered harm is relevant, citing comment c to § 821C of the Restatement, which observes that "[d]ifference in degree of interference cannot, however, be entirely disregarded in determining whether there has been difference in kind."[271] The Restatement comment used the example of community members who all use the same road; a person who uses the road a dozen times a day will have a special reason for doing so that will distinguish him from other community members who use the road once a day.[272] Although it is the same use, the difference in degree does distinguish the frequent driver as uniquely harmed.[273]

The court of appeals accepted the land trusts' articulation of a public right:

> The Trusts assert that the public rights at issue in this case are "the rights to use, enjoy, and preserve the aesthetic and ecological values of the natural world." Their complaint provides specific examples of how the ecological value of the properties they own will be diminished or destroyed by global warming, and alleges that they suffer "special injuries, different in degree and kind from injuries to the general public."[274]

269 *Id.* at 366 (citing RESTATEMENT (SECOND) OF TORTS § 821C (1979)).

270 *Id.* at 367.

271 *Id.* at 368 (citing RESTATEMENT (SECOND) OF TORTS § 821C cmt. c (1979)).

272 *Id.*

273 *Id.*

274 *Id.* at 367.

In assessing whether the land trusts articulated a public nuisance, the court of appeals returned to § 821B(1) to assess whether the trusts had alleged that the coal-fired electric plants had unreasonably interfered with a public right, as already outlined in the Restatement (Second) of Torts. The court of appeals accepted the land trust's reasoning that the coal-fired electric plants substantially and unreasonably interfered with public rights: "[t]he Trusts have asserted that Defendants' carbon dioxide emissions, 'by contributing to global warming, constitute a substantial and unreasonable interference with public rights including, *inter alia*, the rights to use, enjoy, and preserve the aesthetic and ecological values of the natural world.'" [275]

The court then accepted the trusts' second basis for alleging substantial interference:

> The Trusts have also asserted that "Defendants know or should know that their emissions of carbon dioxide contribute to global warming, to the general public injuries such warming will cause, and to plaintiffs' special injuries," and that "Defendants and their predecessors in interest have emitted large amounts of carbon dioxide from the combustion of fossil fuels for at least many decades." These statements are sufficient to allege that Defendants' conduct was "of a continuing nature," as well as that it has already produced a "permanent or long-lasting effect…."[276]

D. Massachusetts *and* Connecticut*: Guidance for State Court Citizen Litigation*

The *Connecticut* case incorporated Massachusetts' approach to evaluating factual allegations of harm to establish standing from *Massachusetts*, but also accepted predictions of damages strictly in the future.[277] In the subsequent discussion of state legal theories, one should remember that state requirements for standing often differ from the federal requirements because they evolved under different constitutions.

But *Connecticut* developed legal approaches to climate change much further. First, the court of appeals acknowledged a non-statutory claim against stationary sources because no federal statutory remedy yet displaced the common law.[278] In addition, although precedent existed for public nuisance claims by private parties against

275 *Id.* at 370.

276 *Id.*

277 *Id.* at 343–44.

278 *Id.* at 379.

traditional air polluters, applying such precedent to greenhouse gas emissions created a wholly different legal context for private parties litigating to reduce greenhouses gases.[279] *Connecticut* also suggests the possibility of litigating under state environmental statutes to oppose a broad range of environmental harms without the restrictions imposed by the Federal Clean Air Act.[280] One important example of this: the public nuisance plaintiff does not sue by demonstrating exceedances of permitted emissions levels. Instead, the plaintiff seeks to establish that the facility emits a significant quantity of carbon dioxide that contributes by some increment to climate change, and the court can accept that increment as contributing to public nuisance without a quantity defined by statute.

This Article has considered the *Connecticut* case in detail. However, the powerful effect of *Massachusetts* has resulted in other decisions that resemble *Connecticut*: private tort claims for the damages that greenhouse emissions cause. In *Comer v. Murphy Oil USA*, for example, the Fifth Circuit Court of Appeals recently held that landowners on the Gulf Coast had stated justiciable claims for nuisance, trespass, and negligence against oil and energy companies.[281]

Looking to *Massachusetts* and *Connecticut* as guidance on how to approach the issues unique to climate change, at least three state theories present themselves as possible approaches: the public trust doctrine, statutory environmental claims closely tied to the public trust doctrine, and public nuisance.

III
THESE FEDERAL DECISIONS FRAME CLIMATE CHANGE ISSUES FOR CITIZENS' STATE–LAW CLAIMS

A. Public Nuisance

For state public nuisance cases, which do not involve parties in several states and the need for a federal court to render a decision that all the states will recognize, state public nuisance law clearly offers promise for citizen suits to challenge carbon dioxide emissions or decisions that exacerbate them.

279 *Id.* at 368.

280 *See id.* at 392.

281 585 F.3d 855, 870 (5th Cir. 2009).

First, the *Connecticut* decision provides tremendous authority for the proposition that a private party may bring a public nuisance claim for carbon dioxide emissions under the standards articulated in the Restatement (Second) of Torts. The discussion from the Restatement as to whether a would-be plaintiff suffered qualitatively different injuries than others who endured the nuisance is useful: if the nuisance destroys natural resources upon which the plaintiff relies, this can help to establish standing.[282] For example, the Restatement (Second) of Torts § 821C describes a private plaintiff who has suffered damages qualitatively different than others who suffered the same nuisance: "11. A pollutes public waters, killing all of the fish. B, who has been operating a commercial fishery in these waters, suffers pecuniary loss as a result. B can recover for the public nuisance."[283]

The Restatement comment also suggests that individuals who suffer a severe degree of the harm—a community hit harder by a storm or a drought than others—can establish standing on that basis.[284] The Biloxi-Chitimacha tribe of Terrebonne Parish of southeastern Louisiana mentioned earlier would serve as an example. Although many Louisiana residents suffered the same floods that the tribe did, its members could allege that yearly floods destroying the entire community constitute a greater harm by degree that justifies standing.

Second, the *Connecticut* decision—especially its discussion of standing and the private land trusts—offers by far the best guidance for a state-level public nuisance suit, since a majority of states apply the same Restatement principles as the federal courts.[285] This relative uniformity gives public nuisance an advantage in terms of predictability that public trust doctrines and state environmental citizen suits do not. Many states have accepted public nuisance claims involving air pollutants not explicitly regulated by statute.[286] Further, state courts have concluded that public nuisance suits control over administrative claims even where state air quality statutes provide no

282 *Connecticut*, 582 F.3d at 367–68.

283 RESTATEMENT (SECOND) OF TORTS § 821C cmt. h, illus. 11 (1979).

284 *Id.* at cmt. c.

285 *See Connecticut*, 582 F.3d at 327–28 (noting that the Restatement usually describes general trends in state law).

286 *See, e.g.*, Maynard v. King Cnty., No. 62833-0-I, 2009 WL 2365707, at *5 (Aug. 3, 2009) (finding noxious fumes from automobile body shop to constitute a public nuisance); Birke v. Oakwood Worldwide, 87 Cal. Rptr. 3d 602, 610 (2009) (enjoining the production of outdoor smoke because it was a public nuisance).

specific guidelines and clearly regulate the pollutant in question.[287] No displacement or preemption exists, so the common law remedy is valid. It is unlikely that state regulatory agencies have adopted greenhouse gas standards other than overall emissions caps. If no such standards exist, *Connecticut* supports the viability of public nuisance claims against other private parties or municipalities emitting carbon dioxide.[288]

Third, the fact that public nuisance focuses on prospective relief to avert the nuisance also suggests that a court evaluating such a claim would have a basis for issuing injunctive relief to mitigate future climate-related harms. A private plaintiff who takes the approach to imminent and future harm outlined in *Massachusetts* and *Connecticut* will benefit from the prospective approach that public nuisance takes.

Finally, precedent already exists for successful claims against carbon dioxide emitters under public nuisance. *Connecticut* is a landmark case for the proposition that public nuisance principles apply to present and future damages that greenhouse-gas-induced warming causes. Yet *Connecticut* only goes so far as to establish that plaintiffs in such cases can have standing and state a claim. In *North Carolina ex rel. Cooper v. Tennessee Valley Authority*, a federal district court found a carbon dioxide emitter liable under public nuisance.[289] For private plaintiffs, public nuisance may offer a realistic approach to challenging actions that exacerbate climate change.

B. Public Nuisance, the Public Trust Doctrine, and Environmental Citizen Suits: A Close Relationship

The public trust doctrine, a concept arising out of property law, and public nuisance, a tort-based principle, share a close relationship in the protection of natural resources. One who pollutes a public trust resource violates the public trust, as does the state for failing to prevent the pollution, but the polluter also creates a public nuisance by substantially interfering with a public right. Example 11 from section 821C of the Restatement (Second) of Torts, *supra*, provides

287 *See, e.g.*, Flo-Sun, Inc. v. Kirk, 783 So. 2d 1029, 1035–36 (Fla. 2001) (applying the rules of public nuisance, rather than a claim under the Florida Air and Water Pollution Control Act, to pollutants from sugar cane operation).

288 *See Connecticut*, 582 F.3d at 368–69.

289 593 F. Supp. 2d 812 (W.D.N.C. Jan. 3, 2009), *rev'd*, No. 09-1623, 2010 WL 2891572 (4th Cir. July 26, 2010).

one example: if the fish population killed by the public nuisance dwelled in waters protected by the public trust, the public trust doctrine itself could establish the existence of a public right for a public nuisance claim.[290] This interrelationship between the two doctrines proves relevant in the subsequent discussions of common law remedies for the harms of climate change.

Suits in which private citizens sue in public nuisance to protect public trust resources—in Wisconsin, for example—demonstrate the close relationship between the doctrines.[291] The ability to protect a public trust resource by relying on public nuisance means that the plaintiff is not confined to challenging state actions that compromise the public trust in some way. Emissions external to public trust resources can be challenged in ways that the public trust doctrine alone, in most jurisdictions, cannot reach.

Joseph Sax observed that, aside from the public trust doctrine, "[p]ublic nuisance law is the only likely doctrinal competitor" for a legal remedy enabling citizens to protect publicly held natural resources. That approach, however, is encrusted with the rule that permits lawsuits to be initiated only by the state attorney general, and not by private citizens."[292]

In drafting the Michigan Environmental Policy Act (MEPA), Sax drew on public trust and public nuisance principles to create an environmental statutory tort.[293] Given the clear tendency to expand the participation of private parties in public nuisance litigation, Sax's reticence regarding the doctrine should diminish. Sax was influential in the states that drafted environmental citizen statutes. The tort-like provisions in those state statutes, as well as in the Michigan statute Sax helped to draft, echo public nuisance principles. As Alexandra B. Klass observes about the Michigan statute, which many other states used as a model for similar legislation: "MEPA empowers the judiciary to create a common law of environmental quality that goes beyond existing state statutes or regulatory requirements in a manner

290 RESTATEMENT (SECOND) OF TORTS § 821C cmt. h, illus. 11 (1979).

291 Gillen v. City of Neenah, 580 N.W.2d 628, 633–34 (Wis. 1998) (holding that a citizen asserting a violation of statutory public nuisance and public trust doctrine may directly sue a private party citizen who is inadequately regulated by state natural resources agency).

292 Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 485 n.45 (1970).

293 *See id.*

similar to that developed under the common law of nuisance or other torts."[294]

This Article considers the interaction between the public trust doctrine, public nuisance principles, and state environmental citizen suits in the context of citizens who seek to respond to climate change. Such claims can draw on the previously discussed federal *Connecticut* decision for guidance.

IV
THE PUBLIC TRUST DOCTRINE

A. The Public Trust Doctrine: Relevance to Climate Change Litigation

The public trust doctrine bears direct relevance to the ethical implications of climate change for individual citizens and the existence of a moral duty to challenge a public or private entity that exacerbates climate change. Many effects that the United States has already begun to experience—coastal erosion, wetlands destruction, flooding, and drought—damage aquatic resources the public trust protects.

The plethora of articles and scholarly texts that address the public trust doctrine renders one more account superfluous. An oversimplified version is adequate: that the state holds in trust for its citizens certain natural resources, including some wildlife, submerged lands, navigable streams, the oceans, and their shores.[295] Further, the state bears responsibility to maintain such natural resources for human uses such as navigation, fishing, or recreation.[296] As each state came into existence it assumed the responsibility from the federal government to protect public trust resources. Each of the fifty states and the federal government interpret the nature and scope of the public trust differently and change their interpretations over time.[297]

294 Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 NOTRE DAME L. REV. 699, 724 (2006); MICH. COMP. LAWS §§ 324.701–705 (2007).

295 J. INST. 2.1.1.

296 *See* Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387 (1892).

297 *See generally* Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrine: Classification of States, Property Rights, and State Summaries*, 16 PENN ST. ENVTL. L. REV. 1, 17–37, app. (2007) (discussing protected uses in states such as California and Hawaii with specific ecological protections). Looking at Craig's treatment of the eastern and western states, she does not characterize certain states as possessing an "ecological" public trust doctrine despite duties imposed on those states to maintain the

States such as California and Hawaii have extended their public trust doctrines to offer the broadest protections to natural resources.[298] The public trust doctrine imposes both a legal and ethical duty on the state to protect such natural resources and human uses of them. Harm to public trust resources could result from a number of public or private actions; for example, a state's decision to lease or sell public trust lands or to allow private parties to damage such lands.[299]

The *Massachusetts* and *Connecticut* decisions could strengthen a public trust case based on damage from increased greenhouse gas concentrations. The public land trust plaintiffs in *Connecticut* argued that present and future harms to their lands would impair their biological diversity as well as nature education on the grounds.[300] These damages correspond to the public trust focus on natural resources as well as uses.[301] Further, the land trust plaintiffs in *Connecticut* argued that the court should consider such damages to land and human resources in the future to establish standing and the elements to state a claim now.[302] Given that the public trust doctrine focuses on the current protection of natural resources and uses for posterity, the *Connecticut* decision should strengthen the argument that damages to public trust resources in the future should support a claim in the present.

If one analyzes the potential of a state's public trust doctrine to help citizens mitigate or adapt to climate change, a few characteristics stand out.

1. The State Says What Constitutes the Public Trust

First, given the tremendous range of interpretations the states have given to the public trust, the doctrine could form the basis of a challenge to damaging practices in one state but not another.[303] Just one example illustrates this problem. The State of Texas restricts litigation to protect the public trust to the state; essentially no standing

ecological integrity of public trust resources. *See id.* at 112 (noting that under the Wisconsin public trust doctrine the state has the duty to "promot[e] healthful water conditions conducive to protecting aquatic life and fish").

298 *Id.* at 29–33.

299 *Ill. Cent. R.R. Co.*, 146 U.S. at 387.

300 Connecticut v. Am. Elec. Power Co., 582 F.3d 309, 341–42 (2d Cir. 2009).

301 *Id.*

302 *Id.*

303 Craig, *supra* note 297, at 2–3.

for individual citizens exists.[304] The State of Hawaii not only grants standing to citizens to protect the public trust but includes all natural resources in the state and the ability to challenge water quality permits the state issues under a delegated program.[305] Whether the public trust doctrine can provide a remedy for citizens opposing climate change is definitely a question of geography and jurisdiction.

2. Public Trust Resources Need Protection from Remote Pollutants

Second, in order to play a mitigating role, a state's public trust doctrine would likely need to consider damage to public trust resources that result from pollutants originating *outside* public trust land or water. A few examples illustrate why such an approach would play a vital role.

A preliminary example can be seen in the relationship between a public nuisance claim and the public trust. A prima facie public nuisance claim requires unreasonable interference with a public right. The commonly held right in public trust resources could constitute the public right to challenge greenhouse gas pollution from remote sources, as in the federal *Connecticut* decision.

The question arises whether the states' diverse iterations of the public trust doctrine, standing alone, could state a claim for damages caused by remote sources that increase greenhouse gas concentrations. Traditionally, a state decision to alienate or damage public trust resources can form the basis for a claim. These decisions concern the public trust resources themselves, and not state decisions to permit a source of emissions remote from the navigable stream or coastline. The federal *Connecticut* decision, however, instructs that state permitting decisions concerning remote sources should not escape public trust scrutiny. Such emissions contribute to drought, species loss from drought, and loss of snowpack that affects rivers. In a sense, California's protection of tributaries that fed Mono Lake, and which did not enjoy public trust protection prior to the *Mono Lake* decision, illustrates the same point.[306] The natural resources that feed or damage the public trust should be considered, given that state environmental statutes do not yet include greenhouse gases, much less damage to public trust resources that result from them.

304 Lorino v. Crawford Packing Co., 175 S.W.2d 410, 413–14 (Tex. 1943).

305 HAW. CONST. art. XI, § 9.

306 *See generally* Nat'l Audubon Soc'y v. Superior Court of Alpine Cnty., 658 P.2d 709 (Cal. 1983).

Some states have included the air itself as one of the resources protected by the public trust doctrine. Hawaii, New Mexico, Oregon, and South Dakota have all declared air as a public trust resource subject to its protection.[307] Professor Gerald Torres has argued persuasively that public trust principles should apply to the air as a resource.[308] Wider acknowledgment of the air as a public trust resource could give rise to litigation limiting greenhouse gas emissions as damage to a commonly held resource.

3. The Public Trust Should Provide Protection Independent from State or Federal Administrative Standards

In a famous 1983 decision—*National Audubon Society v. Superior Court* (the *Mono Lake* case)—the California Supreme Court expanded the state's public trust doctrine to include water rights and ecology.[309] That decision recognized two distinct public trust doctrines: the government's common law duty to "take the public trust into account in the planning and allocation of water resources" and with regard to fish and wildlife as public trust resources.[310] The different approach California has taken to these two different public trust doctrines illustrates the need for a doctrine independent of state or federal statutory standards. While this example speaks to adaptation more than mitigation, it points out the need for an independent public trust doctrine for mitigation and adaptation alike.

In *Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection*,[311] the California Supreme Court explained that these two public trust doctrines differed in scope. With respect to fish and wildlife, "[the courts] will look to the statutes protecting wildlife to determine if DFG or another government agency has breached its duties in this regard."[312] California courts interpret the public trust protecting fish and wildlife as coextensive with the duties the statute imposed on the appropriate agencies.[313] Citizens have the right to bring public trust challenges with regard to

307 Robin Kundis Craig, *A Comparative Guide to the Western States' Public Trust Doctrine: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 ECOLOGY L.Q. 53, 119, 148, 162, 171 (2010).

308 Gerald Torres, *Who Owns the Sky?*, 18 PACE ENVTL. L. REV. 227 (2001).

309 658 P.2d at 709 (Cal. 1983).

310 *Id.* at 728.

311 187 P.3d 888 (Cal. 2008).

312 *Id.* at 926.

313 *Id.*

wildlife, provided they sue the agency charged with the statutory duty.[314] If state law or regulation fails to account for damage to fish or wildlife from climate change, no real remedy exists.

By contrast, the *National Audubon Society* decision recognized an agency's statutory duty to allocate water rights, but that this statutory duty did not

> render the judicially fashioned public trust doctrine superfluous. Aside from the possibility that statutory protections can be repealed, the noncodified public trust doctrine remains important both to confirm the state's sovereign supervision and to require consideration of public trust uses [involving water] in cases filed directly in the courts without prior proceedings . . . .[315]

National Audubon Society v. Superior Court concluded that the public trust doctrine formed an independent basis for challenging the diversion of public trust surface waters and even tributaries that fed those streams.[316] In this context the *National Audubon Society* decision—and a similar holding in North Dakota[317]—suggest that the public trust doctrine can form an indispensable basis for challenging unwise water allocation decisions in a time of drastic shortage independent of the state's prior appropriation rules. Claims citizens can bring to challenge the state's allocation of natural resources are valuable in adapting to or mitigating climate change. California's water public trust law can provide a tremendous mechanism to balance appropriative and ecological priorities when prolonged drought will create conflict.

4. Barring Mitigation, the Public Trust Can Play an Adaptive Role

Fourth, even if the public trust doctrine fails to play a mitigating role in a specific situation, the doctrine may be invaluable in developing adaptations to the harm that climate change has already created. In *Avenal v. State*, the Louisiana Supreme Court dramatically demonstrated the way a court can conclude that the protection of public trust resources outweighs the assertion of private property rights.[318] In *Avenal*, the Louisiana Department of Wildlife and

314 *Id.*

315 Nat'l Audubon Soc'y v. Superior Court of Alpine Cnty., 658 P.2d 709, 728 n.27 (Cal. 1983).

316 *Id.* at 728.

317 *See* United Plainsmen Ass'n v. N.D. State Water Conservation Comm'n, 247 N.W.2d 457 (N.D. 1976).

318 886 So. 2d 1085 (La. 2004).

Fisheries (Louisiana Wildlife) wrote "hold harmless" clauses into oyster leases to avoid claims for damaged oyster beds in areas where the state was attempting coastal restoration.[319] Louisiana Wildlife also gave lessors the option of relocating their operations to another area that the coastal restoration would not affect.[320] Some of those who did not relocate sued Louisiana Wildlife in 1994, alleging that the state had taken property without compensation when the coastal restoration projects increased the salt content in the water and destroyed their oyster beds.[321] The trial court awarded the lessors more than one billion dollars in damages for the lost oyster beds, and the court of appeals affirmed the decision.[322]

The Louisiana Supreme Court reversed, affirming the validity of the "hold harmless" clauses in the leases, and that the statute of limitations ("prescription" in Louisiana) barred some of the lessors' claims.[323] Without question, the court's decision had a plausible legal basis. Nevertheless, to reverse a billion-plus dollar verdict against a major industry in the state was a serious decision. In explaining its decision the court declared:

> The risks involved are not just environmental, but involve the health, safety, and welfare of our people, as coastal erosion removes an important barrier between large populations and ever-threatening hurricanes and storms. Left unchecked, it will result in the loss of the very land on which Louisianans reside and work, not to mention the loss of businesses that rely on the coastal region as a transportation infrastructure vital to the region's industry and commerce. The State simply cannot allow coastal erosion to continue; the redistribution of existing productive oyster beds to other areas must be tolerated under the public trust doctrine in furtherance of this goal.[324]

For the sake of argument, one should assume that the plaintiffs in *Avenal* were citizens who challenged a decision by Louisiana Wildlife to discontinue coastal restoration in order to accommodate oyster beds whose leases were legally defective. If a similar decision had been reached given this reversal of parties, the court's rationale for allowing the restoration projects would exemplify Sax's concept of identifiable, enforceable rights: as against a legally questionable

319 *Id.* at 1090.

320 *Id.*

321 *Id.* at 1091–92.

322 *Id.* at 1094.

323 *Id.* at 1097–104.

324 *Id.* at 1101–02.

property right in oyster leases, the hypothetical citizens successfully asserted their right under the public trust to prevent the state from allowing the lessors' commercial activity to damage a common pool resource.

Strikingly, the *Avenal* decision involved threats that climate change poses to public trust resources: coastal erosion and loss of wetlands, and the resulting damage from these occurrences.[325] The *Avenal* court recognized the need to continue restoration in light of climate-induced damages.[326]

Current concentrations of greenhouse gases will require adaptive strategies even if the United States and the world community succeed in achieving major reductions.[327] As a result, decisions such as *Avenal* that make adaptation possible are important. Other traditional public trust resource protections also have the potential to serve adaptive purposes. For example, prevention of physical damage to the bed and banks of navigable streams[328] or simply the protection of the water supply could serve adaptive purposes. The wide range of protected public trust uses also increases the potential to bring litigation that serves an adaptive function: the loss of fishing, boating, or other recreational uses could influence the decisions states make with regard to resource allocation.

As discussed previously, general environmental provisions in state constitutions have provided state legislatures with a basis for enacting freestanding citizen suit provisions. Such statutes enable citizens to challenge a broader range of government or private actions that harm natural resources than those the public trust doctrine protects. These statutes are sometimes referred to as protecting the public trust, but they actually draw on legal theories other than the public trust doctrine, such as public nuisance.

B. Environmental Citizen Statutes: Effective if Independent from Other Environmental Regulations and Inclusive of Defendants Other than the State

Approximately fifteen states have incorporated public trust principles into their constitutions or statutes to create environmental

325 *See generally id.* (discussing costal erosion and loss of wetlands).

326 *Id.* at 1107–08 n.28.

327 MANN & KUMP, *supra* note 27, at 155.

328 State v. Pub. Serv. Comm'n, 81 N.W.2d 71, 74 (Wis. 1957) (involving physical damage to lake beds and banks of navigable streams).

causes of action for their citizens.[329] Such environmental citizen statutes radically expand the natural resources subject to protection beyond those traditionally protected by the public trust. As with the public trust doctrine, however, some states have limited the scope of their statutes to protect against actions that violate state or federal environmental standards. The Louisiana statute, for example, equates "public trust" resources with "natural resources," radically expanding the potential protections the statute can provide.[330] At the same time, Louisiana's statute limits citizen suits to violations of state environmental laws, which eliminates suits based on damage caused by greenhouse gases.[331]

A number of states—New Jersey, North Dakota, Florida, Iowa, and Nevada, for example—go the way of Louisiana on this issue, restricting the plaintiff to suits for violations of statutes, rules, or regulations.[332] Although these statutes often provide for a wide range of state and local governments—and sometimes private individuals or entities—as defendants, they will be unlikely to provide relief unless their environmental statutes can be construed to regulate greenhouse gases.

Other environmental citizen statutes, however, apparently enable citizens to sue for environmental harms exceeding the scope of state or federal law.[333] These statutes focus on damage to natural resources rather than statutory violations as the basis for bringing suit. Michigan's environmental citizen suit provision, similar to those of Minnesota, South Dakota, Connecticut, and Indiana, enables "any person" to bring suit for the "protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction."[334] A "person" under the Michigan statute can be an "individual, partnership, corporation, association, governmental entity, or other legal entity."[335] Minnesota

329 George et al., *supra* note 115, at 14.

330 LA. REV. STAT. ANN. § 56:640.3 (2010).

331 *Id.* § 30:2026(A)(1).

332 Nevada and New Jersey appear to have modeled their environmental citizen lawsuits on Michigan's, but both require an imminent or actual statutory violation to establish standing. NEV. REV. STAT. §§ 41.540–.570 (2009); N.J. STAT. ANN. §§ 2A:35A-1 to -14 (West 2010).

333 George et al., *supra* note 115, at 30–31, 33, 35 (listing the statutes for Connecticut, Indiana, Michigan, Minnesota, and South Dakota).

334 *Id.*

335 MICH. COMP. LAWS § 324.301 (2007).

defines the statutory right almost identically, but adds that the protected resources include those "publicly or privately owned."[336] Some states have included language indicating that the person who sues under statute acts on behalf of the state or in the place of the state,[337] somewhat analogous to a *qui tam* action.

Without question, state environmental laws provide guidance in citizen suits. The environmental citizen statutes themselves, though, should not restrict plaintiffs to the standards defined elsewhere in the states' laws. One might characterize such citizen suits as statutorily created environmental torts. Under provisions such as those in Michigan, Minnesota, South Dakota, New Jersey, and Indiana, the entity protected from tortious conduct consists of natural resources, defined in the broadest possible terms, and the tort consists of any act that "pollutes, impairs, or destroys" the natural resources of the state. The tort created in states such as Louisiana adds a fourth element: the tort must be committed in violation of a state environmental statute. As with public nuisance, the tort at issue in the *Connecticut* decision, eliminating the statutory violation as a requirement allows the plaintiff to focus on the harm to natural resources to establish damages without showing statutory noncompliance. Citizen statutes such as these could provide ground for challenging individuals, businesses, and local or state governments who exacerbate climate change.

At least two jurisdictions—likely more among those with broad definitions of natural resources—explicitly evaluate alleged violations of state citizen suits for harm that state environmental regulations do not prohibit. The first is Connecticut, where the Connecticut Environmental Protection Act (CEPA), the environmental citizen statute, protects a broad range of natural resources: "The Attorney General [or] any person . . . may maintain an action in the superior court for the judicial district wherein the defendant is located . . . for the protection of the public trust in the air, water and other natural resources of the state from unreasonable pollution, impairment or destruction . . . ."[338]

The statute provides for an extremely broad range of citizen plaintiffs and defendants. Connecticut courts have concluded that

336 MINN. STAT. §§ 116B.01–.13 (2005).

337 *See, e.g.*, Craig, *supra* note 297, at 68 (discussing Wisconsin state constitution in State v. City of Oak Creek, 605 N.W.2d 526, 541 (Wis. 2000)).

338 CONN. GEN. STAT. § 22a-16 (2009).

allegations state a claim under CEPA if they show "a colorable claim of conduct resulting in [unreasonable] harm to one or more of the natural resources of [Connecticut]."[339]

The question is how one shows harm. In *Mateo v. Mann*, the plaintiff brought suit under CEPA to stop a neighbor from pumping effluent into the plaintiff's wetlands, thereby increasing phosphorous concentrations to a level that endangered the wetlands' survival.[340] The defendant sought to dismiss the case on the basis that no federal or state standards existed to demonstrate that the effluent had damaged the wetlands.[341] The court rejected the claim that no claim under CEPA in the absence of a previous administrative proceeding or standard and concluded that a plaintiff could establish a claim under CEPA by alleging facts satisfying the elements outlined in the statute, commenting that:

> [I]t would be anomalous to conclude that the legislature has, as a general matter, enacted in an environmental regulatory scheme that runs on two different tracks with respect to the same conduct: one that requires compliance with *specific* criteria promulgated by a regulatory agency … and a second that lodges in a court the determination of whether the same conduct comes within the very general standard of reasonableness….[342]

The evidence the plaintiff produced directly to the court as fact finder clearly provided sufficient evidence in the absence of an agency-determined standard.

Similarly, under the Michigan Environmental Protection Act (MEPA), Michigan courts have consistently held that, in establishing that a defendant's behavior "has or is likely to pollute, impair, or destroy the air, water, or other natural resources," a trial court can either produce detailed fact findings based on testimony *or* rely on evidence that the defendant has violated an applicable environmental control statute.[343] The ability to prove damages in court without first demonstrating the violation of a statute and exhausting administrative remedies makes such a statute invaluable in the climate change

339 AFCO CT, L.L.C. v. Drake Petroleum Co., No. LLICV085003456S, 2008 WL 4307613, at *2 (Conn. Super. Ct. Sept. 2, 2008) (citing Fort Trumbull Conservancy, L.L.C. v. City of New London, 265 Conn. 423, 432 (2003)) (first alteration added).

340 No. CV085022203, 2009 WL 1142581 (Conn. Super. Ct. Apr. 1, 2009).

341 *Id.* at *1.

342 *Id.*

343 Anglers of the Ausable, Inc. v. Dep't of Envtl. Quality, 770 N.W.2d 359, 377 (Mich. Ct. App. 2009) (citing Nemeth v. Abonmarche Dev., Inc., 576 N.W.2d 641, 648 (Mich. 1998)).

context, where state standards for greenhouse gases likely do not exist.

A final note on environmental citizen suits: one should note that Michigan's environmental protection statute allows any person to sue a public or private entity to protect air, water, or other natural resources.[344] The Michigan Supreme Court nevertheless applied federal standing requirements to a MEPA suit despite the absence of such standards developed from the Michigan constitution.[345] Standing represents another barrier to citizen suits to combat climate change.

V
CONCLUSION

In June 2009, the United States Global Change Research Program issued *Global Climate Change: Impacts in the United States*.[346] This study assesses American and international climate change studies and offers possible outcomes for the United States in the coming decades. The study's authors compare challenges that climate change poses with other environmental changes in human history.[347] They conclude that the severity and speed of problems that climate change will cause bring into question whether human beings will adapt quickly enough to survive as a species.[348] That comparing climate change–related challenges to earlier crises in human history could lead the authors to ask this question brings into sharp focus the unprecedented challenges our time faces. An unprecedented period in history compels an unprecedented moral duty as a citizen to do whatever possible to avert damaging consequences.

Whether religious or secular, people have comprehended the moral dimension of such a widespread environmental crisis, citing the duty to preserve the complexity and beauty of nature, to acknowledge one's role in contributing to the crisis, and to lessen the suffering of those in developing countries who will face hardship and death far greater than in developed countries.

344 *Id.* at 378.

345 Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc., 709 N.W.2d 174, 210–11 (Mich. Ct. App. 2005), *aff'd in part, rev'd in part*, 737 N.W.2d 447 (Mich. 2007).

346 U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, *supra* note 19.

347 *Id.* at 26.

348 *Id.*

As this sense of moral duty to nature and other human beings becomes better defined, one asks whether a moral duty exists to take concrete action. On an individual, day-to-day level, a number of the measures one can take to reduce greenhouse gas emissions are so familiar that they become trivialized. Under a so-called consequentialist view, the likely good that an act will actually produce determines whether a moral duty exists to do it. In this view, the failure to cultivate individual habits that mitigate greenhouse gas accumulation entails no moral violation, since the benefit of each individual's actions is infinitesimal. By contrast, the so-called deontological view looks at the morality of individual actions based on preexisting duties: in light of my status as an inhabitant of the single country most damaging to the environment in terms of climate change, in light of my responsibility to protect the beauty and complexity of the environment, in light of my obligation to alleviate suffering, I decide whether a moral duty exists to cultivate individual habits.

The issue of moral duty does not stop with individual practices. Moral philosophers have argued that small groups of people can bear responsibility for failing to respond to harmful acts they witness. Professor Virginia Held uses the analogy of an assault on a subway that a group of passengers witness.[349] When a neighborhood organization, a citizens' group, or other small group witnesses the decline of natural resources around them, they arguably bear a similar responsibility to take action. Among these alternatives should be litigation to mitigate or adapt to climate change. One would normally balk at the idea that litigation could constitute a citizen's affirmative duty. But normal assumptions do not apply in a time when such widespread and disastrous harbingers confront us. Though overly familiar, the examples of citizens fighting for the privilege to sit on juries for weeks at time, or millions of people growing gardens to support a war effort, provide a more accurate measure of the moral requirements imposed on people in a time like this.

With respect to climate change, the immediate question becomes whether Americans face a right without a remedy. The EPA has only begun to propose rules that would eventually lead to greenhouse gas regulation and possible citizen suits under the Clean Air Act. Legislation containing provisions to limit greenhouse gases may actually frustrate citizen participation if it contains no citizen suit

349 HELD, *supra* note 4, at 97.

provision or restricts remedies available under the Clean Air Act. Because climate change is a grave issue that grows more serious with the passage of time, these delays at the federal level are especially harmful.

Therefore, state court remedies become more important. The United States Supreme Court and the United States Court of Appeals for the Second Circuit provide crucial guidance on how one may establish standing, demonstrate harms, and respond to the fundamental problems that would arise in a suit alleging damage from greenhouse gas accumulation. *Massachusetts* and *Connecticut* suggest three among many possible theories that state court plaintiffs could pursue to combat climate change: public nuisance, the public trust doctrine, and environmental citizen suits.

Public trust doctrines and state environmental citizen suit statutes provide citizens with the opportunity to engage in some mitigation of greenhouse gases if state law allows legal challenges for harm to the environment outside the limitations posed by state environmental statutes. The protection of public trust lands can serve to stop damaging practices that exacerbate climate change. Damage to public trust lands could also establish the "violation of a public right" in a public nuisance claim. Assuming the federal *Connecticut* decision remains good law, public nuisance could provide citizens with an excellent basis for challenging greenhouse gas emissions from facilities such as coal-fired electric plants.

In the end, citizen involvement in litigation to mitigate or adapt to climate change must take the deontological view: the moral necessity of opposing the impending cancellation of a mass transit project, or trying to get unnecessary incinerators closed, or even opposing a coal-fired electric plant does not depend on the quantity of carbon dioxide reduced, but on preexisting moral duties of individuals and loosely organized small citizens' groups in which individuals share responsibility for protecting the environment in their own communities.

We have long since entered a period of consequences.