

HOW LOCAL COURTS ADDRESS GLOBAL PROBLEMS: THE CASE OF CLIMATE CHANGE

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INTRODUCTION

Climate change is a global problem without a global legal solution. Greenhouse gases (“GHGs”) accumulate in the atmosphere. The atmosphere encompasses the globe, so it is nearly impossible to trace GHG emissions to their sources or to determine which sources cause a particular harm. Moreover, it is difficult to allocate liability because the damage occurs beyond the boundaries of any individual court’s jurisdiction. There is no global institution to provide oversight, and traditional international law methods, such as treaties, have produced unsatisfactory results. As a result, injured parties increasingly turn to local courts. Local courts, however, are limited by the scope of their judicial boundaries and must use existing doctrine to address climate change. For example, courts cannot adjudicate claims unless plaintiffs have standing to bring a case. In the United States, this means that plaintiffs have to prove injury, causation, and redressability. Typically, local doctrines, including standing, were designed to ensure that localized issues are ripe for adjudication in a particular court, so they are not always adequate for or adaptable to global problems like climate change. Nevertheless, courts must apply existing statutes, principles, and doctrines to climate change claims.

As might be expected, courts struggle to apply standing doctrine to this global problem. First, even if there is a colloquial injury,¹ judges disagree on how to assess that injury given its global nature. Second, given the difficult, if not impossible, task of linking particular injuries to particular emissions and the need for judicially manageable standards by which to assess that link, plaintiffs struggle to establish causation. Third, courts must be able to provide redress, but, in the context of climate change, their power is limited to judicial review and statutory interpretation. Since courts are not appropriate forums for setting emission standards, they provide redress by requiring agencies to take action or by holding agency decisions void.

An analysis of how courts apply each element of local standing doctrine in the context of climate change demonstrates how local courts address global problems. In many cases, the local doctrines cannot

1. i.e., an injury in a practical rather than a legal sense.

accommodate global problems, and, as a result, potential cases are barred from judicial review. Yet, in other cases, local courts can adapt the doctrinal requirements to address global problems, accommodating certain claims and certain actors. When such adaptation is possible, a local court can become part of the global solution.

Assessing the doctrinal bounds of local courts when it comes to global problems like climate change also raises larger questions on the functionality, legitimacy, and capacity of local courts. Existing doctrines should ensure that, when courts address global problems, they are functionally appropriate, legitimate, and capable of adjudicating those global problems and becoming part of the solution.

Part I will explore the depths of climate change and what makes it a global problem. Part II will use the doctrine of standing to determine the circumstances under which local courts can address climate change. In this analysis, isolating the components of standing—*injury, causation, and redressability*—demonstrates the unique ways in which climate change complicates standing and reveals how courts evaluate particular claims. Part III will address whether local courts can and ought to participate in solving a global problem like climate change. In this way, standing doctrine will illuminate if, when, and how local courts address global problems and participate in the global solution.

I. CLIMATE CHANGE AS A GLOBAL PROBLEM

A. How is Climate Change a Global Problem?

The climate change discussion centers on GHGs, which trap heat in the atmosphere and regulate the global climate.² While GHGs exist naturally, human activities are adding increasing amounts of GHGs to the atmosphere—carbon dioxide in particular—by burning fossil fuels³ and clearing forests.⁴ Once in the atmosphere, GHGs work “like a blanket”: the more GHGs, the thicker the blanket, and the warmer the planet.⁵ Consequently, an increase in GHG emissions leads to an increase in global temperature. This increase significantly alters the global climate, often causing extreme and unpredictable weather.⁶ The source of the problematic emissions is not singular, it is impossible to disaggregate

2. *Causes of Climate Change*, WORLD WILDLIFE FUND, <http://worldwildlife.org/threats/climate-change> (last visited Dec. 25, 2012).

3. Such fossil fuels include coal, oil, and natural gas.

4. *Causes of Climate Change*, *supra* note 2.

5. *Id.*

6. *Id.*

emissions because climate change only occurs after GHGs accumulate in the atmosphere, and the harmful effects of climate change are felt worldwide. Consequently, climate change is a global problem and any solution must also be global.

One such solution seems to be lowering and regulating GHG emissions. But without a single governing institution with the authority to implement such limits on total global GHGs, the problem evades a simple legal solution. The atmosphere is a global commons: an indivisible and finite resource shared by all but not regulated by one omnipotent institution.⁷ While seeking to maximize their own gain, individuals and organizations emit increasing amounts of GHGs. For example, individuals drive cars to accomplish daily activities and coal-mining companies mine, transport, and use coal before refining it and selling it to customers for profit. These emission-causing activities have utility for each individual or organization. For each individual, there is a high positive component: the benefit of or profit from those activities. But there is also a small negative component: contribution of GHGs to the atmosphere. When adding the component utilities of GHG emissions, the net result for each discrete emitter is positive because, individually, the positive component outweighs the negative component. Accordingly, each individual has the incentive to continue to emit GHGs leading to misuse and overuse of the commons. Cumulatively, increased GHG emissions cause climate change, which results in climate change-related injuries. In this situation, the freedom of the commons, or the lack of global GHG emission standards and limits, leads to ruin. And, “[t]herein is the tragedy.”⁸ The destructive effects of increased GHG concentration in the atmosphere render climate change a global tragedy of the commons.

Moreover, climate change is a global problem because it is neither international nor domestic; it concerns the world as a whole.⁹ Given that

7. See, e.g., Marvin S. Soroos, *Preserving the Atmosphere as a Global Commons*, ENVTL. CHANGE & SECURITY PROJECT REP., Summer 2000, at 149, 149–50, available at www.wilsoncenter.org/sites/default/files/Report6-9.pdf (discussing the atmosphere as a global commons and the lack of overarching law to regulate GHG impact on the atmosphere); see also Daniel W. Bromley & Jeffrey A. Cochrane, *Understanding the Global Commons* (Envtl. and Nat. Resources Training Project (EPAT/MUCIA), Working Paper No. 13, 1994), available at www.aae.wisc.edu/pubs/misc/docs/em13.pdf (noting that the atmosphere is part of the global commons).

8. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968), available at <http://www.sciencemag.org/site/feature/misc/webfeat/sotp/pdfs/162-3859-1243.pdf>.

9. See Ralf Michaels, *US Courts as World Courts* 14 (Duke Univ. Sch. of Law, Working Paper, 2012) (“[W]orld events are events that concern the world as a whole; they are therefore more than just international events.”).

the 195 parties¹⁰ to the United Nations Framework Convention on Climate Change¹¹ “[a]cknowledg[e] that change in the Earth’s climate and its adverse effects are a common concern of humankind,”¹² there seems to be a consensus that the problem is global. Attempting to categorize climate change cases as either local or international, in which case the appropriate actors would be, respectively, local or international, is futile because “neither ‘domestic’ nor ‘international’ conveys fully the multiscale character of [climate change].”¹³ More importantly, this global problem “transcends the relations between states and focuses also on non-governmental actors and individuals,”¹⁴ inviting non-traditional actors to participate in addressing the problem. The problem’s transcendence of national boundaries and traditional international actors raises concerns about how, where, and when to bring climate change claims. As an inherently global problem, climate change defies solutions by local laws, international laws, or conflict of laws frameworks.

Thus, climate change is a global problem not only because everyone is a culprit but also because there is no institution to regulate GHG emissions, allocate responsibility, and hold violators liable. A global agency or global court with the explicit authority to implement a holistic solution does not exist. Local actions to minimize destruction of finite resources by regulating and limiting GHG emissions are helpful in theory, but individual actions must always fail because one actor limiting GHGs does not necessarily result in a net decrease in GHG emissions. Other actors may continue to emit GHGs at harmful levels, thereby negating the mitigation efforts of others. Furthermore, a single local actor does not have a significant effect on a global problem because it is necessary to cumulatively lower GHG emissions below a global threshold. To avert the tragedy, solutions cannot merely be local; they must be global.

B. Non-existence of a Global Solution by Traditional International Actors

Unfortunately, thus far, coordinated international efforts by traditional international actors have proven ineffective. States, the most traditional

10. *First Steps to a Safer Future: Introducing the United Nations Framework Convention on Climate Change*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/essential_background/convention/items/6036.php (last visited Dec. 25, 2012).

11. See *infra* Part I.B for a further discussion of this treaty.

12. United Nations Framework Convention on Climate Change pmbl., *done* May 9, 1992, 1771 U.N.T.S. 107.

13. Hari M. Osofsky, *The Intersection of Scale, Science, and Law in Massachusetts v. EPA*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES* 129, 141 (William C. G. Burns & Hari M. Osofsky eds., 2009).

14. Michaels, *supra* note 9, at 11.

international actors, have used conventional treaties to coordinate international efforts.¹⁵ The first of these treaties was the United Nations Framework Convention on Climate Change (“UNFCCC”). The UNFCCC entered into force in 1994 and, with 195 parties, currently has near-universal membership.¹⁶ The treaty begins by invoking the concern that “human activities have been substantially increasing the atmospheric concentrations of greenhouse gases, that these increases enhance the natural greenhouse effect, and that this will result on average in an additional warming of the Earth’s surface and atmosphere and may adversely affect natural ecosystems and humankind.”¹⁷ In response to this concern, the UNFCCC puts forth a global objective to mitigate climate change: “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”¹⁸ In its attempt to implement a coordinated solution, the treaty sets out commitments to reduce emission levels and establishes principles member nations ought to implement in their domestic policy.¹⁹

While the treaty is binding, its use of verbs like “promote” and “cooperate” lends it a more symbolic character.²⁰ For example, developed nations commit to “adopt national policies and take corresponding measures on the mitigation of climate change, by limiting . . . anthropogenic emissions of greenhouse gases and protecting and enhancing [their] greenhouse gas sinks and reservoirs.”²¹ Committing to policies and taking measures to limit emissions does not necessarily mean that GHG emissions will drop below the threshold needed to mitigate climate change. Likewise, the parties’ pledge to “[t]ake climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions”²² does not mean taking climate change into account will be a primary concern. Additionally, the caveat “to the extent feasible” is highly principled but does not establish clear regulations:

15. See *Background on the UNFCCC: The International Response to Climate Change*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/essential_background/items/6031.php (last visited Dec. 25, 2012) (discussing the timeline of coordinated international efforts).

16. *First Steps to a Safer Future: Introducing The United Nations Framework Convention on Climate Change*, *supra* note 10.

17. United Nations Framework Convention on Climate Change, *supra* note 12.

18. *Id.* art. 2.

19. *Id.* art. 4.

20. See, e.g., *id.* (obligating all parties to “promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs.”).

21. *Id.* art. 4, ¶ 2(a).

22. *Id.* art. 4, ¶ 1(f).

the level of consideration is left to the judgment of each nation and the chosen standard could be utilized to favor economic incentives in place of environmental ones. As a result, this wording grants countries a great deal of liberty to address climate change to the extent they see fit.

The initial emission reduction provisions of the UNFCCC proved inadequate, and in 1997, the parties negotiated the Kyoto Protocol to the United Nations Framework Convention on Climate Change. The Kyoto Protocol entered into force in 2005 and currently has 191 parties.²³ Most significantly, the Kyoto Protocol uses more exigent language. For instance, Article 3 states:

The Parties included in Annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012.²⁴

In principle, the move towards more stringent commitments is a positive step because it suggests tighter regulation, which will hopefully mitigate climate change. Moreover, the use of subsequent protocols, such as the Kyoto Protocol, rather than the negotiation of a new treaty, is theoretically useful in addressing collective action problems.²⁵ Such protocols allow the principles of the original treaty to stand firm while details, such as emission standards and obligations, can be implemented based on the progress made under existing protocols.

Although such treaty regimes are designed to address collective action problems,²⁶ this mechanism has not yet proved effective. Evidence

23. *Making Those First Steps Count: An Introduction to the Kyoto Protocol*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/essential_background/kyoto_protocol/items/6034.php (last visited Dec. 25, 2012); *Status of Ratification of the Kyoto Protocol*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php (last visited Jan. 31, 2013).

24. Kyoto Protocol to United Nations Framework Convention on Climate Change art. 3, ¶ 1, *adopted* Dec. 11, 1997, 2303 U.N.T.S. 161.

25. See Laurence R. Helfer, *Exiting Treaties*, 91 VA. L. REV. 1579, 1632 (2005) (“Protecting the earth’s ozone layer and reducing global warming are classic collaboration problems.”).

26. See *id.* at 1632 n.137 (“In the ozone regime, iteration takes the form of a principal convention and a series of later protocols and revisions. States use ratification of these tiered agreements as a signal of their adherence to particular levels of commitment, thus promoting more durable cooperation and higher levels of compliance.”).

indicates that responses to climate change at the level of international oversight have been and “will likely continue to be wholly inadequate to confront the looming threat of climate change.”²⁷ This lack of progress by the traditional international actors using devices such as treaties and treaty regimes has led to “growing despair by many actors, including nongovernmental organizations (NGOs), state and local governments in the United States, and in many nations”²⁸ Given this sentiment, concerned parties look to other means to address climate change.

C. Turning to Local Actors: Local Governments and Local Courts

In conjunction with the limited success of traditional international efforts, the role of local governments and local courts in global affairs is growing. Subnational and national governments are implementing legislation pertaining to climate change and litigation is proceeding at the subnational, national, and international levels. Not only do these multilevel actions underscore the ineffectiveness of traditional international mechanisms, they also demonstrate how climate change is a global problem that lacks global oversight and cannot be solved from just one level of regulation.²⁹ Thus, local governments and local courts are becoming global actors.³⁰

On the subnational level, states, cities, and communities are addressing global climate change through legislation and regulation. District councils in New Zealand have tried to use their ability to control land use to mitigate climate change.³¹ For example, in *Genesis Power Ltd. v Franklin District Council*, the Franklin District Council rejected a wind farm application due to potential adverse environmental impacts.³² The Environment Court of New Zealand reversed the decision, but in its analysis of the case, the court addressed climate change by weighing the adverse impacts of climate change against the need for sustainable and

27. William C. G. Burns & Hari M. Osofsky, *Overview: The Exigencies That Drive Potential Causes of Action for Climate Change*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, *supra* note 13, at 1, 1.

28. *Id.* at 18.

29. *See id.* at 20 (“[C]limate change is not a problem that can be addressed at only one level of governance.”).

30. *See Katherine Trisolini & Jonathan Zasloff, Cities, Land Use, and the Global Commons: Genesis and the Urban Politics of Climate Change*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, *supra* note 13, at 72, 85 (discussing the obsolescence of the Westphalian system of nation-states and the increasing participation of local governments on an international level in response to globalization).

31. *See id.* at 72–80 (discussing the *Genesis Power* case and the actions of local courts).

32. [2005] NZEnvC 341 at para [3] Whiting J for the Court.

renewable energy.³³ The use of this balancing test indicates an awareness of and a willingness to address climate change and demonstrates that local governments possess the power to do so. And, when taken cumulatively, the decisions of local governments on land use can substantially affect GHG emissions.³⁴ Meanwhile, in the United States, states retain the capacity to create and implement climate change legislation and initiatives.³⁵ For instance, Minnesota enacted an “environmental externality reporting statute.”³⁶ The statute requires utility companies to conduct and provide estimates on environmental costs of power generation.³⁷ A commission considers these costs when they approve plans and issue permits.³⁸ Finally, an administrative law judge oversees contested cases.³⁹ The statute, however, lacks guidance on how to implement the requirements, how to weigh environmental concerns against other public concerns, and what kinds of environmental impacts are to be considered.⁴⁰ Additionally, it has been called a “relatively weak regulation.”⁴¹ Much state regulation has been criticized as “weak or symbolic regulation that lacks regulatory bite”; yet, the existence of such regulations indicates an effort and a capacity to address a global problem from the local level.⁴²

On the national level, legislation requires national administrative agencies to address climate change. For instance, in the United States, Congress issued a mandate to the Environmental Protection Agency (EPA) to set emission standards and to give Congress a “coordinated national policy on global climate change.”⁴³ This mandate acknowledges the global nature of climate change and the urgent need for a solution. Similarly,

33. Trisolini & Zasloff, *supra* note 30, at 78.

34. *See id.* at 73 (suggesting that, cumulatively, local land decisions can have a substantial impact on GHG emissions).

35. Stephanie Stern, *State Action as Political Voice in Climate Change Policy: A Case Study of the Minnesota Environmental Cost Valuation Regulation*, in *ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES*, *supra* note 13, at 31, 46 (explaining that the states retain power to create climate change legislation and regulations because the United States did not ratify the Kyoto Protocol and the federal government was reluctant to enact national legislation in the early 2000s).

36. *Id.* at 32.

37. *Id.*

38. *Id.*

39. *Id.*

40. *Id.* at 34–35.

41. *Id.* at 32.

42. *See id.* at 46–47 (discussing the nuanced power of seemingly weak regulations).

43. Global Climate Protection Act of 1987, Pub. L. No. 100-204, § 1103(b), 101 Stat. 1407, 1408–09.

Australian environmental legislation calls for Commonwealth involvement in the assessment and approval of an activity if a matter of national environmental significance is involved.⁴⁴ Specifically, the Environmental Planning and Assessment Act (“EP&A Act”) requires the Director-General of the Department of Planning, when conducting an environmental assessment, to consider certain environmental principles, as defined in the Protection of the Environment Administration Act.⁴⁵ These principles effectively require the Director-General to take the global nature of climate change into account.⁴⁶

Through the existence of these local (national and subnational) statutes and regulations, local legislators and administrators take on a global role. Since their laws address a global problem, actions taken in compliance with these laws may have effects beyond their original jurisdiction. The laws may have even been designed to have far-reaching effects. For example, the goals of the U.S. policy on climate change include “identify[ing] technologies and activities to limit mankind’s adverse effect on the global climate by . . . stabilizing or reducing atmospheric concentrations of greenhouse gases over the long term”⁴⁷ The United States may not have control over the atmosphere, but it intends to have an impact on the atmosphere through national policy. Likewise, Australian legislation specifically envisions the regulation of agency activities that are likely to have a significant environmental impact, even beyond Australian jurisdiction.⁴⁸

Subsequently, since the “traditional role accorded courts [is] to interpret the law,”⁴⁹ when local laws are related to climate change and permit judicial review, domestic courts will interpret and enforce those laws. Further, when appropriate plaintiffs bring viable claims, courts have both the capacity and duty to rule on those claims. Courts have a vital role to play in implementing and enforcing the rule of law⁵⁰ and, because of this

44. Linda Pearson, *Australia*, in *THE ROLE OF THE JUDICIARY IN ENVIRONMENTAL GLOBAL GOVERNANCE: COMPARATIVE PERSPECTIVES* 321, 325 (Louis J. Kotzé & Alexander R. Paterson eds., 2009).

45. See *Environmental Planning & Assessment Act 1979* (NSW) s 4 (defining “ecologically sustainable development” according to its description in the Protection of the Environment Administration Act).

46. See *Gray v Minister for Planning* [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006) ¶¶ 101, 122, 134 (discussing the requirement to take ecologically sustainable development principles into account, particularly the precautionary principle and the principle of intergenerational equity).

47. Global Climate Protection Act of 1987 § 1103(a)(3)(B).

48. See Pearson, *supra* note 44, at 326 (discussing the breadth of the EPBC Act).

49. *Powell v. McCormack*, 395 U.S. 486, 548 (1969).

50. See, e.g., *United States v. Leon*, 468 U.S. 897, 963 (1984) (Stevens, J., concurring in the

role, they are uniquely capable of addressing climate change. A recent statement from the South African Constitutional Court espouses the critical role of courts to “entrench and uphold . . . current endeavors to achieve sustainable environmental governance.”⁵¹ Moreover, institutions involved in “the judicial process at the national, regional and global levels[] are crucial partners for promoting compliance with, and the implementation and enforcement of, international and national environmental law.”⁵² If local courts can achieve this result, then they can truly address climate change as a global problem. And, since traditional international efforts are “not advancing,” parties are increasingly turning to litigation in local courts.⁵³ When local courts address this global problem, they become courts not for their traditional jurisdiction but for the global population and for the globe itself.⁵⁴

II. STANDING: ACCOMMODATING AND IMPEDING CLIMATE CHANGE LITIGATION

A. Standing Doctrine: A Threshold Issue for Adjudication

No matter how important the underlying problem of climate change may be, local courts cannot rule on the substantive aspects of claims if they do not have the jurisdictional authority to hear the case.⁵⁵ Within legal systems, courts have principles and doctrines at their disposal to determine whether a particular plaintiff has a justiciable claim. These doctrines serve as procedural hurdles, separating those claims suited for adjudication by courts from those that are not. In the United States, for instance, Article III of the Constitution limits the jurisdiction of federal courts to cases and controversies in which the court can address “questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process.”⁵⁶ The claims that fulfill this Constitutional

judgment) (explaining how the “Court’s broad holding will serve the public interest in enforcing obedience to the rule of law”).

51. Louis J. Kotzé & Alexander Paterson, *Preface to THE ROLE OF THE JUDICIARY IN ENVIRONMENTAL GLOBAL GOVERNANCE: COMPARATIVE PERSPECTIVES*, *supra* note 44, at 23.

52. *Id.* at 24.

53. Brian J. Preston, *Climate Change Litigation: A Conspectus*, 5 CARBON & CLIMATE L. REV. 3 (2011) (suggesting that litigation is an attractive alternative path).

54. See Michaels, *supra* note 9, at 16 (“Here, a world court is court for the world”).

55. See *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 559–60 (1992) (discussing how the jurisdiction of the judiciary is limited to cases and controversies under the separation of powers doctrine and how standing doctrine identifies those cases that are appropriate for judicial review).

56. *Massachusetts v. EPA*, 549 U.S. 497, 516 (2007) (quoting *Flast v. Cohen*, 392 U.S. 83, 95 (1968)) (internal quotation marks omitted).

constraint—those that involve suitable parties with appropriate timing, justiciable issues, and legal requests—are deemed to have judicial standing.⁵⁷ Similarly, in Australia, to bring a suit, it is necessary to have standing, which “depends on the identity of the person [bringing the claim] and the nature of the proceedings.”⁵⁸ Accordingly, standing is one of the most fundamental components of any climate change litigation.⁵⁹

In the U.S., under Article III standing doctrine, a plaintiff seeking federal jurisdiction has the burden of establishing: (1) concrete and particularized injury to a protected interest, (2) causation, meaning the injury can be traced to the actions of the defendant, and (3) redressability, such that the remedy sought from the court would mitigate, alleviate, remedy, or repair the injury.⁶⁰ While the “harms . . . are serious and well recognized,”⁶¹ the nature of climate change makes meeting these criteria and thus proving Article III standing difficult for plaintiffs.

This global problem affects the global population and climate, but specific plaintiffs and locations tend to incur a disproportionate amount of the harm. For instance, coastal areas are particularly affected because warmer temperatures cause ice to melt, which causes coastal lands to disappear due to rising water levels.⁶² Additionally, the increased intensity of storm surges threatens coastal areas with accelerated erosion or destruction.⁶³ In the Alaskan village of Kivalina, for example, melting ice, coastal erosion, and storm surges caused so much harm that the town brought a suit against ExxonMobil and other oil, energy, and utility companies, claiming that the companies’ large volume of GHG emissions caused these climate change injuries.⁶⁴ In another case, the state of Massachusetts brought a claim against the EPA, invoking the erosion of Massachusetts’s coastal lands as an injury caused by the EPA’s failure to

57. *See id.* at 505 (stating the requirement that a petitioner have standing in order to invoke the jurisdiction of the court under Article III).

58. Brian J Preston, Chief Judge, Land & Env’t Court of N.S.W., Austl., Paper Presented to the Joint Seminar on Legality of Administrative Behaviours and Types of Adjudication: Standing to Sue at Common Law in Australia 2 (Apr. 11, 2006), available at http://www.lec.lawlink.nsw.gov.au/agdbasev7wr/_assets/lec/m4203011721754/preston_standing%20to%20sue%20at%20common%20law%20in%20australia.pdf.

59. *See* Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863, 877 (N.D. Cal. 2009) (citing *Lujan*, 504 U.S. at 559–60 (1992)) (discussing the need to fulfill standing requirements).

60. *Id.* (quoting *Sprint Comm’n Co., L.P. v. APCC Servs., Inc.*, 554 U.S. 269, 273 (2008)).

61. *Massachusetts v. EPA*, 549 U.S. at 521.

62. *Coastal Areas, Climate Change*, U.S. ENVTL. PROTECTION AGENCY, <http://www.epa.gov/climatechange/impacts-adaptation/coasts.html> (last visited June 14, 2012).

63. *Id.*

64. *See* 663 F. Supp. 2d 863 (providing an example of climate change litigation involving a private defendant).

implement emission standards.⁶⁵ These cases demonstrate that injured parties are going to court and seeking to legally link their climate change injuries to the increased GHG emissions of certain defendants or to the failure of agencies to implement required regulatory responses to climate change.

But successfully proving injury, linking that injury to a particular cause, and then proving that the court can provide redress is no small task. Given the way climate change occurs, many claims will not meet or not fit standing requirements. While standing criteria is not the same in all countries, using the U.S. requirements as a model enables a comparison to similar doctrinal hurdles in other jurisdictions and demonstrates how local courts address global problems.

B. Components of Standing

1. Injury

The first component of standing is injury. In the United States, to prove injury, plaintiffs must demonstrate “a concrete and particularized injury that is either actual or imminent.”⁶⁶ This standard indicates that (1) the case is ripe for adjudication because the injury has happened or will happen in the near future if the court does not act and (2) the plaintiffs have been harmed or their rights have been violated. Similarly, in Australia, plaintiffs must differentiate themselves from the greater public.⁶⁷ In the case of climate change, even if there is a colloquial injury, such as uncharacteristically intense erosion, judges have disagreed on how to assess climate change injuries under standing doctrine.

a. Injury as Defined by Common Law or Statutory Language

In *Massachusetts v. EPA*, the State of Massachusetts, joined by other state and local governments and environmental organizations, challenged the EPA’s refusal to regulate GHG emissions under the Clean Air Act.⁶⁸ The Clean Air Act requires the EPA to “prescribe . . . standards applicable to the emission of any air pollutant . . . [which] cause[s], or contribute[s] to, air pollution . . . anticipated to endanger public health . . .”⁶⁹ Thus, the U.S. Supreme Court faced a statutory interpretation question about whether

65. See 549 U.S. 497 (providing an example of a climate change case involving a regulatory agency).

66. *Id.* at 517.

67. Preston, *supra* note 58, at 11.

68. 549 U.S. at 505.

69. *Id.* at 528 (quoting 42 U.S.C. § 7521(a)(1) (2006)).

the EPA had the authority under the Clean Air Act to set standards on emissions and, if so, whether the EPA was required to set such standards.⁷⁰ If it resolved that such a requirement existed, the Court had to determine whether Massachusetts' injuries were caused by EPA inaction in the face of climate change.

First, the Court had to decide whether Massachusetts' alleged injury met the criteria of U.S. standing doctrine. In the circuit court opinion for *Massachusetts v. EPA*, Judge Tatel, dissenting, felt that the substantial probability that rising sea levels would "lead to serious loss of coastal property" qualified as particularized injury.⁷¹ Meanwhile, Judge Sentelle, concurring in part and dissenting in part, believed that while the plaintiffs had alleged global warming harms humanity as a whole, they could not allege particularized injuries to themselves.⁷² The EPA put forth a similar argument before the Supreme Court, asserting that the way in which GHG emissions cause widespread harm creates an "insuperable jurisdictional obstacle" because it is impossible to assert personal injury.⁷³

Eventually, the Supreme Court had the final word. The Court noted the globally detrimental effects of climate change⁷⁴ but reasoned that, to meet the injury requirement, plaintiffs who are suffering from the harmful effects of climate change must still establish injury "in a concrete and personal way."⁷⁵ Given that climate change causes widespread harm, however, proving concrete and particular injury ends up being a potential barrier to adjudication. The Court declared climate change risks, such as erosion from rising sea levels around the globe, are "widely shared."⁷⁶ But, relying on prior applications of standing doctrine, it held Massachusetts's injury and its interests in alleviating such injury through litigation⁷⁷ were not minimized simply because climate change harms are widely shared. Looking to *Federal Election Commission v. Akins*, the Court declared, "where a harm is concrete, though widely shared, the Court has found 'injury in fact.'"⁷⁸

70. *Id.* at 516 ("The parties' dispute turns on the proper construction of a congressional statute.").

71. *Id.* at 515 (citing 415 F.3d 50, 65–66 (D.C. Cir. 2005), *rev'd*, 549 U.S. 497 (2007)).

72. *Id.* at 514–15.

73. *Id.* at 517.

74. *Id.* at 521.

75. *Id.* at 517 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 581 (1992) (Kennedy, J., concurring)) ("While it does not matter how many persons have been injured by the challenged action, the party bringing suit must show that the action injures him in a concrete and personal way." (internal quotation marks omitted)).

76. *Id.* at 522 (quoting *FEC v. Akins*, 524 U.S. 11, 24 (1998)) (internal quotation marks omitted).

77. *Id.*

78. *Id.* (quoting 524 U.S. 11, 24 (1998)).

Furthermore, the Supreme Court distinguished the global nature of climate change from particular injuries resulting from climate change. The specific injury in *Massachusetts v. EPA* resulted from the rising sea levels eroding and “swallow[ing]” the Massachusetts coast.⁷⁹ Since Massachusetts “owns a substantial portion of coastal property,” it had a particularized and personal injury in its “capacity as a landowner.”⁸⁰ Specifically, Massachusetts stood to lose an asset (its lands) and incur costs if climate change erosion continued unmitigated by EPA regulations. As evidence, a Massachusetts official reasoned that “[i]f sea levels continue to rise as predicted . . . a significant fraction of coastal property will be ‘either permanently lost through inundation or temporarily lost through periodic storm surge and flooding events.’”⁸¹ The petitioners also alleged that remediation costs “could run well into the hundreds of millions of dollars.”⁸² Given that erosion and rising sea levels would undisputedly lead to the loss of Massachusetts’s sovereign territory, the State successfully proved concrete, particularized, imminent injury.⁸³ Yet, the subsequent components of the Court’s reasoning emphasized the sovereign nature of Massachusetts’s claim, suggesting mere landownership is not sufficient.⁸⁴

In comparison, in Australia, what constitutes an injury is significantly more expansive, especially under key pieces of environmental legislation. For example, the Environment Protection and Biodiversity Conservation Act of 1999 (the EPBC Act) requires “Commonwealth involvement in assessment and approval of an activity” involving a matter of national environmental significance⁸⁵ or of activities that will likely have a significant environmental impact “inside or outside Australian jurisdiction.”⁸⁶ Given the broad standing provision for plaintiffs,⁸⁷ the emphasis of the injury inquiry is on the environment. Thus, when bringing a claim based on improper environmental assessment under the EPBC Act,⁸⁸ plaintiffs must show that emissions from proposed activities would

79. *Id.*

80. *Id.*

81. *Id.* at 523.

82. *Id.*

83. *Id.* at 521.

84. See *infra* Part I.B.1.b for a further discussion on this point.

85. Pearson, *supra* note 44, at 325.

86. *Id.* at 326.

87. See Preston, *supra* note 58, at 48 (discussing how the open standing provisions in much of the environmental legislation of New South Wales allow any person to bring a claim to remedy a breach of statute).

88. Such a failure may involve the decision-maker improperly conducting the assessment and thus allowing the defendant to perform an activity that threatens protected environmental matters.

directly or indirectly affect a protected area or matter or identify the extent to which emissions would aggravate the climate change problem.⁸⁹ Despite the difference in focus, the EPBC Act evidentiary threshold functions similarly to the U.S. requirement of a concrete and particularized injury to a protected interest. The EPBC Act is just one example of planning legislation that requires decision-makers to conduct an assessment of environmental impacts.⁹⁰

Both U.S. and Australian injury requirements seek to establish that some particular harm has occurred as a result of the defendant's actions. The U.S. requirement places more emphasis on linking the plaintiff and the defendant to the injury, whereas the focus under the EPBC Act is on environmental injury. Additionally, the Australian formulation under the EPBC Act is more accommodating because it allows for either (1) particularized injury to a specific locality or plaintiff through direct or indirect means or (2) proof of aggravation of a global problem. The doctrinal focus on harmful impacts to protected areas or on the global problem shifts the inquiry away from the claimant and towards the environment. Furthermore, allowing courts to rule on environmental impacts outside Australian boundaries drastically expands the scope of the legislation and the court's jurisdiction. As a result, Australian courts can use environmental legislation to become global actors, assuming jurisdiction over global injuries and global issues. In contrast, in the United States, the problem may be global, but the injury still needs to be particularized to a suitable plaintiff. Substantially freed from finding the appropriate plaintiff to bring the claim and able to consider direct and indirect impacts, EPBC doctrine potentially enables the Australian courts to recognize a greater array of injuries than can their American counterparts.

Still, the application of Australian doctrine to climate change is not always successful. In *Wildlife Preservation Society of Queensland Proserpine/Whitsunday Branch Inc. v Minister for the Environment & Heritage (Wildlife Whitsunday)*, the plaintiffs⁹¹ sought review of decisions under the EPBC Act regarding development of a new coal mine known as

89. Lesley K. McAllister, *Litigating Climate Change at the Coal Mine*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, *supra* note 13, at 48, 58.

90. Pearson, *supra* note 44, at 325. For a list of planning legislation incorporating environmental impact assessments, see also *id.*, at 325 n.18.

91. While the text of the case uses "applicant," the terms "applicant" and "plaintiff" are interchangeable, so the term "plaintiff" will be used here for the sake of consistency with the U.S. cases. See *Roles in Court*, COURTS & TRIBUNALS VICTORIA, <http://www.courts.vic.gov.au/courts-tribunals/going-court/roles-court/> (last visited Jan. 16, 2014) (stating that the plaintiff, complainant, or applicant is "the person who initiates the case in a non-criminal (civil) matter").

the Isaac Plains project.⁹² Since the key question under the EPBC Act is whether “an action has, will have or is likely to have a significant impact on a matter protected by the Act,”⁹³ the decision-maker, and ultimately the court in its review of the decision-maker’s assessment, had to consider the potential environmental effects of the proposed coal mine. In its opinion, the court took the potential direct and indirect impacts of the mine into account but ultimately held that the factual circumstances and a lack of concrete evidence required dismissal of the case.⁹⁴ The court was simply not convinced that “indirect impact” envisioned the “burning of coal at some unidentified place in the world, the production of greenhouse gases from such combustion, its contribution toward global warming and the impact of global warming upon a protected matter.”⁹⁵ As such, even though it is possible to measure the quantity of greenhouse gases a particular project would produce,⁹⁶ the court did not accept that quantity of GHG emissions qualified as adverse environmental impact on a protected matter. The cumulative nature of climate change did not fit traditional notions of impact, and the court refused to allow the doctrine to expand to accommodate climate change.

Additionally, the court concluded that GHG emissions of a single project do not cause “any particular local environmental impact.”⁹⁷ The plaintiff focused on how GHG emissions lead to climate change but “paid little or no attention to the actual effect on an identified protected matter.”⁹⁸ Since the standard under the EPBC Act is “significant impact on a protected matter,”⁹⁹ failing to show such injury proved fatal to the plaintiffs’ case.¹⁰⁰ This part of the court’s ruling is similar to the U.S. requirement of a particularized injury. Yet, since many areas are protected, evidence focusing on harm to one of those areas might have helped the plaintiff’s case. Moreover, the injury to that protected matter can be indirect rather than concrete and particularized.

92. (2006) 232 ALR 510, ¶ 9.

93. Chris McGrath, *Federal Court Case Challenges Greenhouse Gas Emissions from Coal Mines, Wildlife Whitsunday Case*, ENVTL. L. PUBLISHING 1, 1 (2006), available at <http://www.envlaw.com.au/whitsunday19.pdf>.

94. See 232 ALR, ¶¶ 72–73 (discussing the direct and indirect impacts of the mine and summarizing the circumstances for dismissal).

95. *Id.* ¶ 72.

96. McAllister, *supra* note 89, at 66.

97. *Id.* at 66–67.

98. 232 ALR, ¶ 40.

99. *Id.* ¶ 51.

100. See *id.* ¶ 44 (“There was no significant impact for the purposes of Part 3. The applicant must fail on each of its first two grounds.”).

Thus, in Australian courts as well as in U.S. courts, the global nature of climate change can be a major hurdle to proving injury. Australian direct and indirect impacts doctrine appears more accommodating than the U.S. particularized injury requirement, but *Wildlife Whitsunday* demonstrates the limits on the judiciary to apply law as enacted.¹⁰¹ Courts may interpret legislation, at times expanding or accommodating new, potentially global, problems, but ultimately courts are and ought to be confined by how the law is written and by established doctrines. For example, the court in *Wildlife Whitsunday* did not think the indirect impact doctrine could correctly be applied to GHG emissions from coal mines.¹⁰² But, from the cases cited above, it appears the existence of a viable injury depends on how the plaintiffs and judges characterize climate change and on the relationship of the particular plaintiffs or environmental impacts to this global problem. These limitations suggest that courts may not be able to adjudicate certain cases.

b. Injury Based on Statutory and Procedural Rights

In *Gray v Minister for Planning*, the Land and Environment Court of New South Wales¹⁰³ considered whether an assessment by the Director-General of the Department of Planning regarding a proposal to build a large coal mine, known as the Anvil Hill project, was void under the EP&A Act.¹⁰⁴ The plaintiff claimed the Director-General had to consider the impact that burning coal would have on GHG levels and to take the ecologically sustainable development principles (ESD principles)¹⁰⁵ into account in his environmental impact assessment.¹⁰⁶

In that case, the purported injury was related to the Director-General's failure to appropriately consider those environmental impacts. Under the Act, an "affected person"¹⁰⁷ can obtain judicial relief if "he can show that the authority has misdirected itself in law or that it has failed to consider

101. THE ROLE OF THE JUDICIARY IN ENVIRONMENTAL GLOBAL GOVERNANCE: COMPARATIVE PERSPECTIVES, *supra* note 44, at 344.

102. McGrath, *supra* note 93, at 2.

103. The Land and Environment Court is a special environment court composed of judges with relevant qualifications and experiences. Generally, the court engages in merits review and judicial review of decisions. Pearson, *supra* note 44, at 332–33.

104. [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006), ¶ 1.

105. The ESD principles are the precautionary principle; intergenerational equity; conservation of biological diversity and ecological integrity; and improved valuation, pricing, and incentive mechanisms. Pearson, *supra* note 44, at 327.

106. [2006] NSWLEC 720, ¶ 35–45.

107. Since the court did not address this component of standing, this paper will not analyze the notion of an "affected person."

matters that it was required to consider or has taken irrelevant matters into account.”¹⁰⁸ This standard indicates that the court, in conducting judicial review of decision-making, is limited to issues of law. It could conclude the Director-General failed to perform his assessment in a manner required by law. Here, the court carefully examined the environmental assessment requirements and concluded the Director-General had failed to adequately consider direct and indirect impacts and had failed to take ESD principles into account.¹⁰⁹ As a result, his assessment was void.¹¹⁰ Thus, injury under the EP&A Act is not literal; it is the violation of a legal requirement that will lead to environmental harms that the statute is supposed to prevent. Such statutes are critical in standing analysis because they enable the plaintiffs to ask the court to engage in judicial review of an agency decision and its purported deficiencies.

Similarly, in the United States, statutes can create a procedural right, and violations of a procedural right are accorded special treatment under standing doctrine. If Congress grants a litigant “a procedural right to protect his concrete interests,”¹¹¹ then the litigant can invoke that right and achieve standing “without meeting all the normal standards for redressability and immediacy.”¹¹² Effectively, Congress has predetermined that certain individuals have the right to bring certain claims to courts and has also authorized courts to hear such claims. Thus, raising a procedural violation enables plaintiffs to more easily fulfill standing requirements, especially injury, because plaintiffs only have to show that (1) they have already been granted the procedural right to protect their interests and (2) there is some threat to a concrete interest.¹¹³ Moreover, only one of the litigants needs to have such standing to obtain review by the courts,¹¹⁴ allowing litigants with a procedural right to unite with other concerned, affected, and interested parties.

For example, in *Friends of the Earth, Inc. v. Watson*, the plaintiffs alleged that emissions from projects supported by the Overseas Private Investment Corporation (OPIC)¹¹⁵ and the Export-Import Bank of the

108. [2006] NSWLEC 720, ¶ 77.

109. *Id.* ¶¶ 96–100, 143.

110. *Id.* ¶ 152.

111. *Massachusetts v. EPA*, 549 U.S. 497, 517 (2007) (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992)) (internal quotation marks omitted).

112. *Id.*

113. *Friends of the Earth, Inc. v. Watson*, No. C 02-4106 JSW, 2005 WL 2035596, at *2 (N.D. Cal. Aug. 23, 2005) (quoting *Douglas Cnty. v. Babbitt*, 48 F.3d 1495, 1500 (9th Cir. 1995)).

114. *Massachusetts v. EPA*, 549 U.S. at 517.

115. OPIC is an independent government development finance institution. It offers political risk insurance, loans, and loan guarantees for projects in developing countries. *Watson*, 2005 WL 2035596,

United States (Ex-Im)¹¹⁶ contributed to climate change without complying with requirements set forth in the National Environmental Policy Act of 1969 (“NEPA”)¹¹⁷ and the Administrative Procedure Act.¹¹⁸ They claimed that emissions from these projects caused adverse environmental impacts that resulted in injury to members of the organization nationwide.¹¹⁹ Their evidence demonstrated that (1) the aforementioned projects were directly or indirectly responsible for eight percent of the world’s annual emissions; (2) continued increases in GHG emissions would increase global warming, causing widespread environmental impacts; and (3) these impacts “have and will effect [sic] areas used and owned by Plaintiffs.”¹²⁰ In response, the court held that the plaintiffs had an injury based on a procedural right because their evidence was “sufficient to demonstrate it is reasonably probable that emissions from projects supported by OPIC and Ex-Im support projects [sic] will threaten Plaintiffs’ concrete interests.”¹²¹

Similarly, in *Massachusetts v. EPA*, the plaintiffs brought a claim challenging the EPA’s denial of the plaintiff’s rulemaking petition, which urged the EPA to fulfill its mandate to set emission standards.¹²² The plaintiffs had submitted the rulemaking petition because Congress had ordered the EPA to prescribe applicable standards for emissions under 42 U.S.C. § 7521(a)(1).¹²³ The plaintiffs then filed suit in court because Congress had also provided the states a procedural “right to challenge the rejection of its rulemaking petition as arbitrary and capricious” under 42 U.S.C. § 7607(b)(1).¹²⁴ After holding that Massachusetts had suffered an injury,¹²⁵ the Court analyzed Massachusetts’s claim with regard to its procedural right to bring a claim as a state.

While Congress had not provided a private right of action, it had granted states a procedural right. Furthermore, “states are not normal

at *1; *Who We Are*, OVERSEAS PRIVATE INV. CORP., <http://www.opic.gov/who-we-are/overview> (last visited Jan. 2, 2013).

116. Ex-Im is the official export credit agency of the United States and provides financing support for U.S. exports into international markets. *About Us*, EXP.-IMP. BANK OF THE U.S., <http://www.exim.gov/about/> (last visited Jan. 2, 2013).

117. 42 U.S.C. §§ 4321–4335 (2012).

118. 5 U.S.C. §§ 701–706 (2012); *Watson*, 2005 WL 2035596, at *1.

119. 2005 WL 2035596, at *1.

120. *Id.* at *3.

121. *Id.*

122. 549 U.S. 497, 519–20 (2007).

123. *Id.*

124. *Id.* at 520.

125. *See supra* Part II.B.1.a.

litigants for the purpose of invoking federal jurisdiction.”¹²⁶ Due to the quasi-sovereign status of states, a state has “an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.”¹²⁷ This interest means a state has standing to sue *parens patriae* if “the injury is one that the state, if it could, would likely attempt to address through its sovereign lawmaking powers.”¹²⁸ Since the EPA refusal to regulate GHG emissions had caused actual and imminent harm to Massachusetts and since Massachusetts naturally has a desire to preserve its territory for its citizens, the State had suffered an injury and had standing to sue *parens patriae*.¹²⁹

Moreover, the Court emphasized that Congress had “authorized this type of challenge to EPA action,”¹³⁰ giving courts the legitimacy and capacity to become involved. Thus, while the Court was a local actor because it was interpreting a federal mandate requiring the EPA to set emission standards, it was also a global actor because the mandate envisions a response to a global problem. Theoretically, such emission standards can actually decrease net emissions, thereby mitigating the risk of harm to the atmosphere, the environment, and the human population.

c. Conclusions on Injury

These cases suggest that procedural rights expand the inherent ability of courts to adjudicate a dispute. In the United States, procedural rights make it more likely that a plaintiff will have standing because once a plaintiff establishes injury based on a procedural violation, some uncertainty about causation and redressability is acceptable.¹³¹ If, however, there is no procedural right, then a plaintiff must show a particularized and personal injury and then proceed to prove causation and redressability under traditional standards. Consequently, if the procedural right relates to climate change, then it is likely that the local court can function as a global actor addressing a global problem. In some cases, the identity of the plaintiff makes a difference. For example, the Court’s emphasis on Massachusetts’s ability to sue *parens patriae* based on quasi-sovereign status suggests that this was an essential component of Massachusetts’s

126. 549 U.S. at 518.

127. *Id.* at 518–19.

128. *Id.* at 519 (quoting *Alfred L. Snapp & Son, Inc. v. Puerto Rico ex rel. Bares*, 458 U.S. 592, 607 (1982)) (internal quotation marks omitted).

129. *Id.* at 521.

130. *Id.* at 516 (citing 42 U.S.C. § 7607(b)(1) (2006)).

131. *Friends of the Earth, Inc. v. Watson*, No. C 02-4106 JSW, 2005 WL 2035596, at *2 (N.D. Cal. Aug. 23, 2005) (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992)).

ability to prove standing.

While the plaintiff's identity may be critical in U.S. courts, Australian courts, for the most part, do not focus on the plaintiff. Instead, they focus on the injury itself. This difference is due in part to the standing requirements in Australian legislation. For instance, the EPBC Act allows "an 'interested person' to initiate proceedings for an injunction to enforce the act."¹³² Given the breadth of this standard, courts are prone to skip a discussion of the plaintiffs and go straight to the purported injury.¹³³ From that point, the court's inquiry is a function of the legislation. Australian cases tend to focus on either (1) whether injury will occur to a specific area or (2) whether required assessments have been properly conducted.

Litigation under the EPBC Act is more like a traditional claim in the United States because the Act requires consideration of injury to protected areas. The focus is on a specific environmental injury caused by climate change, much like the way in which the traditional injury in the United States focuses on concrete and particularized injury to the plaintiff or the plaintiff's interests, as in *Massachusetts v. EPA*.¹³⁴ In contrast, litigation under the EP&A Act is more akin to procedural-right claims because the issue before the court is proper fulfillment of a statutory requirement, as was the case in *Watson*. Additionally, under the EP&A Act, the injury is the violation of procedural requirements mandated by law. This distinction makes a difference because in *Wildlife Whitsunday*, a case under the EPBC Act, the court could not link the Isaac Plains coal mine to environmental harm to a protected matter, but in *Gray*, the court could determine that there had been a procedural violation of the EP&A Act.

Ultimately, though their focuses and lines of inquiry differ, both U.S. and Australian courts use existing legislation and doctrines to assess climate change injuries. Legislation implementing a procedural requirement or a procedural right facilitates the court's ability to adjudicate, as in *Gray* and *Watson*, respectively. For claims based on tangible injury, however, satisfying the standing requirement is a complicated task. For instance, the plaintiff and the plaintiff's ability to prove injury was an essential component of litigation in *Massachusetts v. EPA*, especially since the judges from the circuit court opinion debated what constituted injury. The Australian courts engaged in a similar debate in *Wildlife Whitsunday*, where the court had to evaluate what qualified as indirect impact.

132. Pearson, *supra* note 44, at 340–41.

133. None of the cases referenced in this paper discuss the plaintiffs *per se*.

134. Despite the other factors of *Massachusetts v. EPA*, the Court still analyzed injury in a more traditional sense rather than as a procedural right violation. See *supra* Part II.B.1.a.

Unfortunately, the complications involved in assessing climate change in light of standing doctrine do not end with injury. Once courts determine there is an injury, they face the potentially more daunting task of establishing a causal link between the defendant's actions and that injury.

2. Causation

While some actions or some actors emit more GHGs than others, these emissions cumulatively cause climate change, which causes injuries. But, given the existence of an indeterminate number of emitters, the accumulation of GHGs in the atmosphere, and the lapse of time and distance between emissions and harmful effects, "linking specific climate injuries to specific causes" is difficult at best and sometimes impossible.¹³⁵ For instance, a potential chain of proximate cause for climate change might look like this:

(1) companies produce fuel, power, vehicles, etc.; (2) consumer use of these items generates greenhouse gas emissions, which rise into the atmosphere; (3) the emissions combine with other greenhouse gas emissions to warm the Earth; (4) this warming causes sea levels to rise, snowpack to melt, etc.; and (5) these effects cause damage to plaintiff's property.¹³⁶

As a result of these factors, two major issues arise in relation to causation: cumulative emissions and traceability.

First, climate change functions cumulatively. It only happens because total GHG emissions have surpassed a safe and sustainable level. As such, the overall mitigation achieved by one emitter or one nation setting emission limits has an almost imperceptible effect. For example, if Australia does not allow projects for coal mining to proceed and does not export coal to Japan, then Japan will just acquire and burn coal from another source and the climate change harms will still occur, regardless of Australia's state action.¹³⁷ Adding to this complication, past and present emissions not only have immediate impact but also have consequences that may go unrealized for decades as GHGs continue to accumulate or sea levels continue to rise and eliminate coastal lands. Consequently, the cumulative nature of climate change tends to complicate and often derail

135. See Marilyn Averill, *Climate Litigation: Ethical Implications and Societal Impacts*, 85 DENV. U. L. REV. 899, 910 (2008) (discussing some of the inherent challenges involved in adjudicating climate change).

136. David A. Grossman, *Tort-Based Climate Litigation*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, *supra* note 13, at 193, 219.

137. McAllister, *supra* note 89, at 69.

the plaintiffs' claims.

Second, once these GHG emissions go up into the atmosphere where they cumulatively cause climate change, the harmful effects are felt around the world. But, since the atmosphere encompasses the globe, belonging to all and yet none, it is nearly impossible to trace harmful levels of GHG emissions to their sources or to determine which combinations of sources caused a particular injury. It is also difficult to properly allocate liability because the damage occurs beyond the boundaries of any one court's jurisdiction.

In the face of these considerations, the ability of local courts to incorporate a global problem like climate change into the traditional notions of causation is limited. Nevertheless, U.S. law requires, and liability ultimately depends on, showing that the defendant or an instrumentality in the defendant's control caused the plaintiff's injury.¹³⁸ In general, a plaintiff must show a "fairly traceable" causal connection.¹³⁹ But that does not mean the "traceability" must "rise to the level of proximate causation."¹⁴⁰ Moreover, the United States is not unique in prescribing certain standards for and theories of causation. As such, local courts have to decide exactly how much of a causal link is required in climate change claims.

a. Causation under Common Law Claims

In *Native Village of Kivalina v. ExxonMobil Corporation*, the Alaskan Inupiat Eskimo village Kivalina claimed that global warming was causing the sea ice protecting the Kivalina coast to thin, resulting in erosion and destruction that ultimately rendered Kivalina uninhabitable.¹⁴¹ The village brought a federal common law public nuisance claim against twenty-four oil, energy, and utility companies, seeking damages for the cost of relocation of the village.¹⁴² They sought to link the vast volume of GHGs that these companies had emitted to Kivalina's climate change injury.¹⁴³ Establishing causation under standing doctrine, however, proved to be a major point of contention.

For approaches to causation, the plaintiffs in *Kivalina* turned to prior

138. Averill, *supra* note 135, at 911.

139. *Native Vill. of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863, 877 (N.D. Cal. 2009) (quoting *Salmon Spawning & Recovery Alliance v. Gutierrez*, 545 F.3d 1220, 1227 (9th Cir. 2008)).

140. *Id.* at 878 (quoting *Habecker v. Town of Estes Park, Colo.*, 518 F.3d 1217, 1225 (10th Cir. 2008)) (internal quotation marks omitted).

141. *Id.* at 868.

142. *Id.*

143. *Id.*

environmental and pollution cases, looking particularly at water pollution cases. First, they argued that the “contribution approach” indicated the proper degree of causation required.¹⁴⁴ Under this causation theory, which has been employed in water pollution cases, courts look at whether the plaintiff can prove that (1) the defendant’s polluting source is the “seed of [the plaintiff’s] injury” and (2) the defendant has not indemnified or proposed an alternative offender.¹⁴⁵ The court, however, disagreed with the *Kivalina* plaintiffs. First, it pointed out that, while there are similarities between water pollution and climate change, “[t]here is a critical distinction between a statutory water pollution claim versus a common law nuisance claim.”¹⁴⁶ The statutory water pollution cases referenced by the plaintiffs relied on the Clean Water Act.¹⁴⁷ The Clean Water Act establishes the presumption that discharge exceeding congressionally mandated limits gives rise to a substantial likelihood that the defendant caused the plaintiff’s harm, regardless of whether other parties made similar discharges.¹⁴⁸ There is no comparable federal standard limiting GHG emissions, however, and no statutory presumption declaring that there is a substantial likelihood that the defendant’s conduct caused the plaintiff’s injury.¹⁴⁹ Thus, without statutory limits and statutory presumptions, the court could not apply the contribution approach, and it held that whether the defendant contributed to the injury was irrelevant.¹⁵⁰ Given the nature of climate change, it makes sense that discharge alone or mere contribution is insufficient to create a causal link. Otherwise, every emitter of GHGs would be potentially liable.

Sua sponte, the court also briefly considered applying a “seed of injury” analysis, under which the plaintiffs would have needed to prove the emissions of the oil, energy, and utility companies were the source of their climate change injury.¹⁵¹ Unfortunately, this method is also difficult to apply to a global phenomenon like climate change. Given the plaintiffs’ concessions regarding “the undifferentiated nature of greenhouse gas emissions from all global sources and their worldwide accumulation over long periods of time,” the court acknowledged that “there [was] no realistic

144. *Id.* at 878.

145. *Id.* at 879 (quoting *Tex. Indep. Producers and Royalty Owners Ass’n v. EPA*, 410 F.3d 964, 974 (7th Cir. 2005)).

146. *Id.*

147. *Id.*

148. *Id.*

149. *Id.* at 879–80.

150. *Id.* at 880.

151. *See id.* at 879 (quoting *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 162 (4th Cir. 2000)) (describing the standard for a “seed of injury” claim).

possibility of tracing any particular alleged effect of global warming to any particular emissions by any specific person, entity, group at any particular point in time.”¹⁵² When characterized in this manner, no matter how egregious or substantial the defendant’s emissions, the plaintiffs simply could not prove that the defendant’s conduct was the seed of their injury.¹⁵³

Finally, the court considered whether the plaintiffs were within the “zone of discharge” of the defendant, a test that had been used in several pollution cases. For this approach, plaintiffs that are sufficiently in the discharge zone of a polluter can argue that their injuries are fairly traceable to that polluter’s actions.¹⁵⁴ This method, however, is inapplicable for the same reasons that the “seed of injury” analysis failed: the inherently global nature of climate change prevents the plaintiffs from tracing the path of particular GHG emissions.¹⁵⁵ Acknowledging this complication, the plaintiffs tried to argue that the geographical area for the zone of discharge in global warming cases should be the entire world.¹⁵⁶ The court dismissed the argument because it “suggests that every inhabitant on this Earth is within the zone of discharge, thereby effectively eliminating the issue of geographic proximity in any case involving harms caused by global warming.”¹⁵⁷ While not necessarily relevant in the context of climate change, geographic proximity would have been necessary to successfully prove causation under the zone of discharge theory. Thus, while the argument accurately characterizes climate change as a global problem, the court’s reasoning suggests that the zone of discharge theory cannot accommodate climate change.

In conclusion, the plaintiffs failed to assert causation, and thus the plaintiffs’ claim for nuisance was ultimately barred for lack of standing.¹⁵⁸ *Kivalina* demonstrates how existing doctrine can limit the court’s ability to rule on the merits of climate change cases. While there are many available theories of causation, not all of them can be adapted to accommodate climate change. Many of the methods that the plaintiffs tried to use are not applicable to and should not be used for climate change cases. For example, the zone of discharge theory is not suited to a global problem due

152. *Id.* at 880.

153. *Id.* at 881.

154. *See id.* (quoting *Tex. Indep. Producers and Royalty Owners Ass’n v. EPA*, 410 F.3d 964, 973 (7th Cir. 2005)) (describing the “zone of discharge” standard).

155. *Id.* at 881.

156. *Id.*

157. *Id.*

158. *Id.* at 863, 868–83. While the claim was also barred under the political question doctrine, that issue is beyond the scope of this paper.

to its emphasis on geographical proximity. The contribution approach, however, is not useful because limits and statutory presumptions do not exist for climate change. Rather than suggesting courts cannot or should not adjudicate climate change suits, *Kivalina* demonstrates the need for judicially manageable standards by which to assess the causal link between emissions and injuries. If there are no such standards, then courts simply do not have the capacity or legitimacy to assess such claims.

b. Causation under Statutory Claims and Procedural Rights

Plaintiffs have had far more success proving causation under statutory claims than under common law claims. This success is due in part to the fact that when a plaintiff is proceeding under a procedural challenge, as in *Watson*, and has already established injury, the “causation and redressability standards are relaxed.”¹⁵⁹ Specifically, to demonstrate standing in a procedural rights case, the “plaintiff must show not only that the defendant’s acts omitted some procedural requirement, but also that it is substantially probable that the procedural breach will cause the essential injury to the plaintiff’s own interest.”¹⁶⁰ In *Watson*, the federal law in question, NEPA, required that the defendants conduct environmental assessments before giving support to certain projects.¹⁶¹ The statute also granted local courts the ability to ensure that this requirement was fulfilled.¹⁶² Given the plaintiffs’ reasoning that (1) the OPIC and Ex-Im projects were directly or indirectly responsible for eight percent of the world’s annual emissions, (2) continued increases in GHG emissions cause global warming, resulting in widespread environmental impacts, and (3) these impacts “have and will effect [sic] areas used and owned by Plaintiffs,”¹⁶³ the court concluded that the plaintiffs “sufficiently demonstrated causation.”¹⁶⁴ The attenuated causal link between a significant percentage of world GHG emissions and the general impact on areas that the plaintiffs owned and used by evidences the relaxed standards

159. *Friends of the Earth, Inc. v. Watson*, No. C 02-4106 JSW, 2005 WL 2035596, at *3 (N.D. Cal. Aug. 23, 2005) (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992)).

160. *Fla. Audubon Soc. v. Bentsen*, 94 F.3d 658, 664–65 (D.C. Cir. 1996).

161. *Id.* at *1.

162. NEPA claims were also pursued in *Center for Biological Diversity v. United States Department of the Interior*, 563 F.3d 466 (D.C. Cir. 2009), in which the petitioners argued that the Department of the Interior’s approval of projects to expand leasing areas in the Outer Continental Shelf for offshore oil and gas development violated the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. §§ 1331–1356a (2006), and NEPA because the Department did not consider the effect on climate change. *Ctr. for Biological Diversity*, 563 F.3d at 471. The NEPA claims were ultimately held not ripe for adjudication. *Id.* at 472.

163. 2005 WL 2035596, at *3.

164. *Id.* at *4.

under statutory claims.

Similarly, in *Wildlife Whitsunday*, the Australian court was concerned with the environmental impacts the Minister is required to consider under section 75 of the EPBC Act.¹⁶⁵ The plaintiffs argued that “[c]onsideration of the impacts of the action under section 75 of the EPBC Act must consider the potential impacts of greenhouse gas emissions from the burning of the coal on global warming and the consequential impacts on matters of national environmental significance.”¹⁶⁶ Declaring that an impact is “the difference between the position if the action occurs and the position if it does not,”¹⁶⁷ the court concluded that the purpose of the EPBC Act was “to prevent or minimize such adverse impacts” via the required consideration under section 75.¹⁶⁸ Here, the focus was on environmental impacts resulting from the creation of the Isaac Plains mine.¹⁶⁹ But, beyond the vague (though accurate) notion that “greenhouse gas emission is bad, and that the Australian government should do whatever it can to stop it,” the plaintiffs could not establish a traceable causal link between the project under consideration and potential adverse impacts on the environment.¹⁷⁰ Furthermore, the court found that the Minister had fulfilled his statutory requirement to consider both the direct and indirect impacts of the specific project: the Minister had analyzed the possible direct impact on the Isaac River “as the result of pollution” and the indirect impacts, “includ[ing] the issue of greenhouse gas emission and climate change.”¹⁷¹ In other words, the Minister accounted for “the possibility that greenhouse gas emission might cause climate change and consequential effects upon protected matters.”¹⁷²

Interestingly, the actual emissions from the Isaac Plains Coal Project and the Sonoma Coal Project would have been responsible for GHG emissions equivalent to 25% of Australia’s total GHG emissions in 2003.¹⁷³ Yet, the court did not draw a causal connection between these projects and adverse impacts. The court was limited in part by skepticism about its ability to apply the indirect impact doctrine to GHG emissions. This

165. *Wildlife Pres. Soc’y of Queensl. Proserpine/Whitsunday Branch Inc. v Minister for the En’t & Heritage (Wildlife Whitsunday)*, (2006) 232 ALR 510, ¶ 8.

166. *Id.* ¶ 11.

167. *Id.* ¶ 55.

168. *Id.* ¶ 57.

169. *Id.* ¶ 9.

170. *Id.* ¶ 72.

171. *Id.* ¶ 22.

172. *Id.* ¶ 42.

173. McGrath, *supra* note 93, at 4.

limitation suggests a deficiency in the EPBC Act, the indirect impacts language of which does not accommodate climate change injuries.¹⁷⁴ The global nature of climate change and the injuries it causes also limited the court. The global problem simply did not fit within the causation doctrine the court had at its disposal.

The chain of causation was also a major point of contention in *Gray*. In this case, the plaintiffs proceeded under the EP&A Act and claimed noncompliance with the environmental assessment requirements therein, as described in section 75.¹⁷⁵ The plaintiffs argued that “it was common sense to determine that there would be greenhouse impacts resulting from the burning of the coal from the Anvil Hill Project which would contribute to global warming/climate change and that therefore this impact should be considered in the environmental assessment for the project.”¹⁷⁶ But the court found it “problematic” to apply a common sense approach, created for establishing liability in private law matters, where the plaintiff’s injury is in connection with the breach of a duty of care, to an appellate case on environmental assessments under the EP&A Act.¹⁷⁷ Since there were no climate change cases in which such reasoning had been “applied in a judicial review context” and since other cases had established “limitations in relation to the application” of a common sense approach where it had been applied, the court was simply not going to allow the doctrine to be expanded and applied to climate change cases.¹⁷⁸

In contrast to the method suggested by the plaintiffs, many prior climate change cases had required Australian courts to analyze “what impacts are sufficiently related to the proposed activity and therefore necessary to be considered in environmental assessments.”¹⁷⁹ These cases had established the principle that impacts sufficiently connected to a project, including off-site impacts resulting from third parties, ought to be considered.¹⁸⁰ Additionally, courts in these cases had held that where a “‘real and sufficient link’ is demonstrated,” external environmental impacts are relevant to the assessment of total environmental impact.¹⁸¹

174. See *id.* at 4–5 (proposing that the EPBC Act does not effectively regulate coal mine emissions and that there is a need for a greenhouse gas trigger under the EPBC Act).

175. *Gray v Minister for Planning* [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006), ¶ 15.

176. *Id.* ¶ 83.

177. *Id.*

178. *Id.*

179. *Id.* ¶ 84.

180. *Id.*

181. *Id.*

Furthermore, a wider inquiry into impacts could be required to the extent that significant effects are likely.¹⁸² Referring to this case law under the EP&A Act, the court reiterated the duty to consider direct and indirect effects,¹⁸³ finding a sufficient link existed between the Anvil Hill Project, climate change, and impacts on the environment. The court stated:

Given the quite appropriate recognition by the Director-General that burning the thermal coal from the Anvil Hill Project will cause the release of substantial GHG in the environment which will contribute to climate change/global warming which, I surmise, is having and/or will have impacts on the Australian and consequently NSW environment it would appear that Bignold J's test of causation based on a real and sufficient link is met.¹⁸⁴

Importantly, the court also discussed climate change and how it should fit into existing doctrine:

Climate change/global warming is widely recognised as a significant environmental impact to which there are many contributors worldwide but the extent of the change is not yet certain and is a matter of dispute. The fact there are many contributors globally does not mean the contribution from a single large source such as the Anvil Hill Project in the context of NSW should be ignored in the environmental assessment process. The coal intended to be mined is clearly a potential major single contributor to GHG emissions deriving from NSW given the large size of the proposed mine. That the impact from burning the coal will be experienced globally as well as in NSW, but in a way that is currently not able to be accurately measured, does not suggest that the link to causation of an environmental impact is insufficient.¹⁸⁵

The court impeccably articulated the challenges of a global problem. It addressed how cumulative emissions cause climate change and, much like the Supreme Court in *Massachusetts v. EPA*, disaggregated the global and cumulative nature of the problem from the ability to find causation from a certain project or a certain injury. Ultimately holding the assessment void,¹⁸⁶ the local court, by following this line of reasoning and by applying statutory and case law, was able to find causation, address a global problem, and become a global actor.

182. *Id.* ¶ 88.

183. *Id.* ¶ 91.

184. *Id.* ¶ 97.

185. *Id.* ¶ 98.

186. *Id.* ¶ 152.

c. Conclusions on Causation

As in the injury analysis, the cumulative nature of climate change and the difficulty of tracing emissions to injuries frequently prevent courts from finding causation under traditional standards. Under certain circumstances, courts find a causal link, as in *Massachusetts v. EPA*. More often, plaintiffs have success establishing causation under a statutory, as opposed to a common law, claim. In the United States, traditional causation doctrine for plaintiffs pursuing a common law claim is unfavorable for global problems like climate change because it requires an impossibly close link between emission sources and injuries. Even other environmental causation theories are not applicable because other forms of pollution do not operate in the same way that climate change does. As a result, courts simply cannot use those doctrines. For instance, in *Kivalina*, the court could not consider the merits of the case because the plaintiffs did not (or could not) adequately trace the defendants' GHG emissions to global warming and then to their injury. Since they failed to demonstrate causation, they did not have standing. If, however, there is a statute in place providing a procedural right, then it is significantly easier to prove causation because the standards are relaxed. This circumstance occurred in *Watson*, where the plaintiff's evidence on causation was sufficient, though not significantly more precise than the seed of injury evidence considered *sua sponte* by the court in *Kivalina*. These cases exemplify the essentialness of the relaxation of the causation requirement because establishing a causal link between a particular activity and a particular injury is inherently problematic in a suit based on the global accumulation of GHGs.

Meanwhile, the Australian causation standard is significantly more expansive than the U.S. standard because the impacts considered in environmental assessments in Australia can be direct or indirect. This direct or indirect impacts test is better suited to climate change because GHG emissions, which cause environmental injuries only through the global warming caused by their accumulation, inherently have an indirect effect on protected matters. Nevertheless, Australian courts still face challenges under the causation prong. The court in *Wildlife Whitsunday* was unable to find causation under the EPBC Act due to its inability to fit the nature of climate change into the existing indirect impact doctrine. The court in *Gray*, however, not only established a causal link but also explained how the EP&A Act assessment standards adequately accommodated the unique problem of climate change. The court demonstrated an acute understanding of the issue by acknowledging and accepting uncertainties to a certain degree and then fitting climate change into doctrine available under case law. This case also suggests that

Australian legislation and, in turn, local environmental courts are significantly more prepared to handle global problems like climate change.

Still, these successes and failures demonstrate that much will depend on the circumstances of the case, the degree of causation required under either common or statutory law, and how plaintiffs phrase their arguments. Plaintiffs will be most successful at establishing causation when they present evidence showing a more particular causal link than the general and vague argument that emissions cause climate change and climate change causes adverse effects. While this statement may be true, it does not help courts trace the defendants' actions to the injuries at issue. As seen in *Wildlife Whitsunday* and *Kivalina*, however, it is not always possible to provide such a precise link, and where such uncertainty is unacceptable, courts will simply not have the capacity to address a global problem like climate change.

3. Redressability

Once, and if, plaintiffs satisfy injury and causation standards, they face another task: proving redress. They must show that the court is functionally able to provide a remedy by requiring agency action, holding agency action invalid,¹⁸⁷ or, in the case of private defendants, awarding damages.¹⁸⁸ Essentially, the redressability prong concerns the court's ability to effect change. A single court judgment against a single defendant will not solve climate change because other parties will continue to emit GHGs. If this interpretation were the only one, then redressability would be a permanent hurdle to adjudicating climate change. Therefore, courts often consider redressability in light of administrative decisions under statutes or mandates related to climate change. Shifting away from literal redress, such as completely alleviating the plaintiff's injury, towards symbolic redress, such as requiring an agency to act in an appropriate way or follow its mandate, enables courts to address climate change within the bounds of their judicial and doctrinal capacity.

a. Redress against Administrative Agencies

In response to the redressability requirement for standing, in *Massachusetts v. EPA*, the EPA contended that even if there were a

187. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561–62 (1992) (“[S]tanding depends considerably upon whether the plaintiff is himself an object of the action (or forgone action) at issue. If he is, there is ordinarily little question that the action or inaction has caused him injury, and that a judgment preventing or requiring the action will redress it.”).

188. *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 127 (1998) (“When one private party is injured by another, the injury can be redressed . . . by awarding compensatory damages . . .”).

traceable injury, it did not “believe that any realistic possibility exists that the relief petitioners seek would mitigate global climate change and remedy their injuries.”¹⁸⁹ It argued that a local court decision requiring a national administrative agency to set emission standards cannot solve climate change because foreign countries may continue to emit at will, GHGs will still accumulate in destructive amounts, and climate change will still result in injuries.¹⁹⁰ Therefore, the EPA concluded that the court is not a proper forum for global problems like climate change because its actions cannot significantly affect the global problem.¹⁹¹ The Court rejected the EPA’s contention.¹⁹² In doing so, it shifted away from literal redress towards a more nuanced form that is more appropriate for the judiciary and for a global problem. It acknowledged legislative action does not “resolve massive problems in one fell regulatory swoop.”¹⁹³ It declared that the EPA incorrectly relied on the assumption that “a small incremental step, because it is incremental, can never be attacked in a federal judicial forum.”¹⁹⁴ This assumption is erroneous because federal courts still have jurisdiction to “determine whether that step conforms to law”¹⁹⁵ and can provide redress by making such a determination. The Court set a standard: if the “risk of catastrophic harm, though remote, is nevertheless real” and “[t]hat risk would be reduced to some extent if petitioners received the relief they seek,” then there is standing.¹⁹⁶ The importance of this determination in the context of climate change litigation cannot be overstated. Essentially, the Court accepted the global nature of the issue but declared that it can still adjudicate climate change and play a role in solving the problem.

This conclusion means that given a combination of facts and circumstances that satisfy standing requirements, local courts are viable forums to address climate change. They can become global forums by ruling on the actions that fall within their jurisdictional and judicial capacity. For example, U.S. courts can address EPA actions and interpret Congressional mandates¹⁹⁷ whereas Australian courts can ensure

189. 549 U.S. 497, 523 (2007).

190. *Id.* at 523–24.

191. *Id.* at 525.

192. *Id.* at 524–25.

193. *Id.* at 524.

194. *Id.*

195. *Id.*

196. *Id.* at 526.

197. *Id.* at 516.

compliance with statutes such as the EPBC Act¹⁹⁸ and the EP&A Act.¹⁹⁹ So, while holding the EPA responsible for regulating motor-vehicle emissions “will not by itself reverse global warming, it by no means follows that [the Court] lack[s] jurisdiction to decide whether the EPA has a duty to take steps to slow or reduce it.”²⁰⁰

Similarly, in *Watson*, since the plaintiffs sued under a procedural right and successfully proved injury and causation, they only had to show that the agency’s “decision *could be influenced* by the environmental considerations that [the relevant public statute] requires an agency to study” to satisfy the redressability prong.²⁰¹ There, the court determined that the OPIC and Ex-Im decisions could have been influenced by further environmental studies required under NEPA. Since the plaintiffs were able to prove injury, causation, and redressability and were challenging final agency actions under a statute that did not specifically preclude judicial review, they were able to bring their case before the courts.²⁰² Thus, local courts were a viable forum to rule on the merits of the claim and potentially hold OPIC and Ex-Im liable for the global effects of their choices and actions,²⁰³ even if that included projects condoned far from the local court’s geographic jurisdiction.²⁰⁴ This case exemplifies the ways in which local courts can ensure that agencies take climate change into account when taking action under relevant legislation. It is also one indication that local courts can compel action to address a global problem.

b. Redress in Response to Administrative Decisions

Some courts also possess the power to conduct judicial review in order to provide redress for incorrectly performed environmental assessments. As an example, in *Gray*, the plaintiffs claimed the Director-General did not take the ESD principles—in particular, the precautionary principle and the principle of intergenerational equity—into account when assessing the

198. *Wildlife Pres. Soc’y of Queensl. Proserpine/Whitsunday Branch Inc. v Minister for the En’t & Heritage (Wildlife Whitsunday)*, (2006) 232 ALR 510, ¶ 8.

199. *Gray v Minister for Planning* [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006), ¶ 1.

200. *Massachusetts v. EPA*, 549 U.S. at 525.

201. *Friends of the Earth, Inc. v. Watson*, No. C 02-4106 JSW, 2005 WL 2035596, at *4 (N.D. Cal. Aug. 23, 2005) (quoting *Citizens for Better Forestry v. U.S. Dept. of Agric.*, 341 F.3d 961, 975 (9th Cir. 2003)) (internal quotation marks omitted).

202. *Watson*, 2005 WL 2035596, at *8.

203. *See id.* at *6 (discussing the plaintiff’s challenge of the actions of Ex-Im and OPIC).

204. Ex-Im and OPIC facilitate projects around the world. *Who We Are*, OVERSEAS PRIVATE INV. CORP., <http://www.opic.gov/who-we-are/overview> (last visited Jan. 2, 2013); *About Us*, EXP.-IMP. BANK OF THE U.S., <http://www.exim.gov/about/> (last visited Jan. 2, 2013).

environmental impact of the Anvil Hill Project.²⁰⁵ They argued that it was therefore the court's responsibility to determine whether the Director-General had complied with the legal requirements embodied in the EP&A Act.²⁰⁶

First, the court had to assess what was required under the ESD principles. The precautionary principle stands for the notion that "if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."²⁰⁷ The intergenerational equity principle provides that "the present generation should ensure that the health, diversity, and productivity of the environment are maintained or enhanced for the benefit of future generations."²⁰⁸ When the intergenerational equity principle is applied to an environmental assessment, it is particularly important to analyze the "cumulative impacts of proposed activities on the environment."²⁰⁹ Since cumulative emissions cause climate change, this principle is particularly applicable to climate change cases. More importantly, it allows courts to apply a broad principle that already exists in their doctrinal arsenal to reach a global problem.

In *Gray*, the court articulated that the existence of cumulative effects does not preclude consideration of an environmental impact. Bearing the precautionary principle in mind, the court reasoned that "failure to consider cumulative impact will not adequately address the environmental impact of a particular development where often no single event can be said to have such a significant impact that it will irretrievably harm a particular environment but cumulatively activities will harm the environment."²¹⁰ The court readily applied these principles to climate change and required the Director-General to do so as well, holding that the difficulty of "quantify[ing] an impact with precision" did not excuse the Director-General from assessing such impacts and taking into account the principles he is legally required to consider.²¹¹

While acutely aware of its limited role and the need to avoid intruding on an administrative decision, the court also knew it had the power and the duty to hold administrative agencies accountable for failure to fulfill a legal

205. *Gray v Minister for Planning* [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006), ¶ 101.

206. *Id.* ¶ 1.

207. *Id.* ¶ 101.

208. *Id.*

209. *Id.* ¶ 122.

210. *Id.*

211. *Id.* ¶ 138.

requirement.²¹² Accordingly, the court exercised its discretion to grant relief²¹³ by holding the environmental assessment void.²¹⁴ In doing so, the court not only considered the detrimental impacts of climate change but also ensured that those impacts would be considered in determining whether a GHG-emitting mine can be operated. It provided redress to a global problem.

c. Redress against Private Defendants

In contrast to decisions involving administrative agencies, redress for private defendants has been largely unsuccessful. For example, when the Alaskan Inupiat Eskimo village Kivalina filed a complaint against several oil companies, power companies, and utility providers, alleging federal common law public nuisance, state law private and public nuisance, civil conspiracy, and concert of action,²¹⁵ the court did not even address the redressability prong of standing because the plaintiffs could not establish causation.²¹⁶ The problem was not only that the defendants were private companies rather than agencies with congressional mandates or statutes to enact, but also that the plaintiff was a private party with no special status.

As seen in the above-mentioned cases, without special status or a procedural right, standing is more difficult to achieve. So, seeking to replicate Massachusetts' success in *Massachusetts v. EPA*, Kivalina sought the special solicitude "generally afforded to sovereigns,"²¹⁷ which would have entitled them to special standing requirements.²¹⁸ Unlike Massachusetts, however, Kivalina was "not seeking to enforce any procedural rights concerning an agency's rulemaking authority."²¹⁹ Instead, Kivalina made a claim for damages against private entities.²²⁰ But states only retain a procedural right to challenge federal agency actions because they have surrendered certain sovereign prerogatives to the federal government, which exercises those prerogatives through agency action (here, by issuing a federal mandate to the EPA to set emission

212. *Id.* ¶ 126.

213. *Id.* ¶ 145.

214. *Id.* ¶ 152.

215. Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863, 869 (N.D. Cal. 2009).

216. *Id.* at 877–82 (illustrating that the court's discussion of Article III standing includes an analysis of contribution to injury and various theories of causation but does not include redressability).

217. *Id.* at 882.

218. *See id.* (discussing the special situation of states and their entitlement to special solicitude in the standing analysis).

219. *Id.*

220. *Id.*

standards).²²¹ Thus, while Massachusetts could bring a claim against a federal administrative agency, Kivalina could not bring a claim against private oil, power, and utility companies. Moreover, Kivalina could not even invoke quasi-sovereign status to sue *parens patriae* because that status is “predicated on the rights a *State* relinquishes to the federal government when it ‘enters the Union’”²²² and Kivalina is a village, not a state. Consequently, this case also demonstrates that success in climate change cases in the United States is predominantly limited to cases against administrative agencies rather than private defendants.

In contrast, in the Nigerian case *Gbemre v. Shell Petroleum Development Co. Nigeria*, private plaintiffs successfully brought a claim against private defendants.²²³ Much as the people of Kivalina joined together as a village to sue private oil, power, and utility companies, members of a local community in the Niger Delta joined together as a class and sued oil companies engaged in gas flaring in their community. Since the plaintiffs were Nigerian citizens in a Nigerian forum, the court readily concluded that the plaintiffs had standing²²⁴ and proceeded to address the merits of their claims.

The plaintiffs claimed that the defendants’ gas flaring activities seriously polluted the air,²²⁵ adversely affected climate change,²²⁶ and caused injury to the health of the community.²²⁷ Since natural gas drilling and gas flaring by foreign companies in Nigeria contribute more GHGs than the rest of sub-Saharan Africa combined,²²⁸ the plaintiffs were not exaggerating. They argued that this activity was a

violation of their fundamental rights to life (including healthy environment) and dignity of human person guaranteed by sections 33(1) and 34(1) of the Constitution of Federal Republic of Nigeria, 1999 and reinforced by articles 4, 16 and 24 of the African Charter on Human and

221. *Id.*

222. *Id.* at 882 (quoting *Massachusetts v. EPA*, 549 U.S. 497, 519 (2007)).

223. (2005) AHRLR 151, ¶ 2, available at http://www1.chr.up.ac.za/images/files/publications/ahrlr/ahrlr_2005.pdf.

224. *Id.* ¶ [5](1) (“[T]he applicants were properly granted leave to institute these proceedings in a representative capacity for himself and for each and every member of the Iweherekan Community in Delta State of Nigeria.”).

225. *Id.* ¶ 4.

226. *Id.* ¶ [4](7)(c).

227. *Id.* ¶ 4.

228. Amy Sinden, *An Emerging Human Right to Security from Climate Change: The Case against Gas Flaring in Nigeria*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES, *supra* note 13, at 173, 177. While the climate change effects are far-reaching and global in nature, the harms are also acutely felt within Nigeria. *Id.*

Peoples' Rights (Ratification and Enforcement) Act, Cap A9, vol1, Laws of the Federation of Nigeria, 2004.²²⁹

The rights constitutionally guaranteed by these documents include the right to clean, poison- and pollution-free healthy environments.²³⁰ The plaintiffs further claimed that the defendants' failure "to carry out environmental impact assessment[s] in the applicant's community concerning the effects of their gas flaring activities is a violation of section 2(2) of the Environmental Impact Assessment Act, Cap E12 vol. 6 Laws of the Federation of Nigeria, 2004."²³¹ By using the climate change harms resulting from the defendants' gas flaring activities as the basis to invoke their constitutional and human rights,²³² the plaintiffs forced the court to interpret the right to life to include protection from the harmful effects of climate change.

Technically, the plaintiffs won their case. The court held that the aforementioned constitutionally guaranteed rights "inevitably include[] the rights to clean, poison-free, pollution-free healthy environment[s]"²³³ and that the oil exploration and production activities of the defendants are a "gross violation of [the] fundamental right to life . . . and dignity of human person as enshrined in the Constitution."²³⁴ The decision, however, contains major deficiencies in its treatment of climate change. While the court read the right to life to include environmental rights,²³⁵ it did not determine the circumstances in which climate change harms constitute a violation of that fundamental right.²³⁶ Based on the enormous contributions that gas flaring makes to climate change and on climate change's harmful effects on populations, it is possible that "where plaintiffs

229. (2005) AHRLR, ¶ 2.

230. *Id.* ¶ [2](1).

231. *Id.* ¶ [2](3).

232. Sinden, *supra* note 228, at 179 (citing Motion Ex Parte under Section 46(1) of the Constitution of the Federal Republic of Nigeria, Statement Pursuant to Order 1, Rule 2(3) of the Fundamental Rights (Enforcement Procedure) Rules, and Verifying Affidavit Pursuant to Order 1 Rule 2(3) of the Fundamental Rights (Enforcement Procedure) Rules, *Gbemre v. Shell Petroleum Development Co.*, (2005) AHRLR 151 (Suit No. FHC/CS/B/153/2005), *available at* <http://www.climatelaw.org/cases/country/nigeria/gasflares/> ("Read the Plaintiff's Pleadings"); *see also Gbemre*, (2005) AHRLR, ¶ [4](7)(c) ("That burning of gas by flaring same in their community gives rise to the following: . . . Contributes to adverse climate change as it emits carbon dioxide and methane which causes warming of the environment, pollutes their food and water.").

233. *Id.* ¶ [5](3).

234. *Id.* ¶ [5](4).

235. *See id.* (holding that continuing to flare gas, which causes adverse environmental effects and contributes to global climate change, is a violation of the plaintiffs' fundamental right to life).

236. Sinden, *supra* note 228, at 181.

can show they will suffer some risk of death or personal injury from the impacts of climate change, they may be able to claim a violation of the core civil and political rights to life, dignity, and personal security.”²³⁷ This formulation empowers local courts to use their doctrines on fundamental rights to address a global issue when the local population suffers the devastating effects of climate change. Theoretically, local courts could force private defendants, one by one, in incremental steps, to stop or correct a destructive behavior with global as well as local effects. Since not much has happened in the wake of the *Gbemre* decision,²³⁸ it has yet to be seen if other local courts will use this theory.

d. Conclusions on Redressability

The discussion of redressability reveals that local courts are well aware that agency actions are not expected to cure problems in one fell swoop. Actions required under statutes or mandates, such as setting emission standards to slow or reduce global warming or considering certain aspects of climate change in environmental assessments, are intended to “whittle away at [problems] over time.”²³⁹ When plaintiffs bring claims related to these statutes or mandates, local courts can redress agency actions rather than climate change *per se*. These courts, particularly in Australia and the United States, provide redress by holding agencies accountable and ensuring that the agencies consider and react to climate change as mandated by the executive or legislature.²⁴⁰ This makes local courts indirect global actors because they use their judicial role to reach a global problem.

Still, in the United States, it has yet to be seen how narrowly or broadly courts will construe the seminal case *Massachusetts v. EPA* and whether future plaintiffs will be able to present claims with sufficient particularity to achieve standing. With its holding, the Court opened the door for a specific set of cases, but since (1) the harms of climate change affect the global population, not just individual plaintiffs; (2) not all plaintiffs are states; and (3) not all injured parties can invoke a federal statute or agency inaction, many climate change cases may remain nonjusticiable. And, as a result, courts will not be able to provide redress.

Without the appropriate doctrinal tools to actually provide redress, courts are functionally not the appropriate venue for climate change.

237. *Id.* at 186.

238. *See id.* at 181 (noting that the defendants still have not stopped flaring).

239. *Massachusetts v. EPA*, 549 U.S. 497, 524 (2007).

240. The discussions of *Massachusetts v. EPA* and *Gray v Minister of Planning* attest to this statement.

Performing judicial review and holding that an agency did not fulfill legal requirements is a normal role. Courts can interpret the law and then require agencies to correct their conduct, as in *Gray* or *Massachusetts v. EPA*. Courts, however, are neither equipped nor entitled to set standards themselves or to determine that parties are liable without using judicially manageable standards, which would be found in legislation and existing doctrine. So while the inability to offer redress in cases like *Kivalina* is unfortunate, courts are also not the appropriate forums for such cases. Still, where courts retain the functionality, legitimacy, and capacity to provide redress, they are particularly well suited to address a global problem like climate change.

III. BECOMING PART OF THE SOLUTION

A. How Courts Address Global Problems

The above cases demonstrate that the global nature of the problem does not seem to be changing the way courts tackle climate change. Local courts use local legislation and local doctrines to address this global problem. Plaintiffs still have to meet traditional standing requirements, and courts must follow existing statutes, case law, principles, and doctrines. Because these doctrines were developed for localized problems, localized parties, and discrete jurisdictions, they do not always adapt easily to accommodate a global problem like climate change. Standing, for example, is intended to weed out issues that are not appropriate or not ripe for adjudication. As a result, some climate change claims will not have standing and courts will simply not be able to adjudicate.

This result, however, is neither a problem nor necessarily a “flaw in the system” because “an inescapable result of any standing doctrine application is that at least some disputes will not receive judicial review.”²⁴¹ Climate change, with its latent effects caused by cumulative emissions, often does not fit nicely into the existing standing criteria. As a result, many plaintiffs’ claims will fail before courts can even rule on the merits. This was the case in *Kivalina*, where the plaintiffs could not prove causation, and in *Wildlife Whitsunday*, where the court could not establish injury despite the expansive direct and indirect effects test. In this way, doctrine can impede climate change litigation by limiting courts to the rules and standards available and applicable. Conversely, if the problem is characterized in a way that fits into existing doctrine, then courts can adjudicate. In *Gray*, the EP&A standards and ESD principles readily

241. Fla. Audubon Soc. v. Bentsen, 94 F.3d 658, 665 (D.C. Cir. 1996).

accommodated climate change. In other circumstances, the existence of a procedural right or special standing modifies the doctrine applied by the courts into one that more easily accommodates global problems. This was the case in *Watson* and *Massachusetts v. EPA* respectively. In sum, where doctrine empowers courts, courts can address global problems like climate change.

B. The Institutional Role of Courts

1. Jurisdictional Authority

Even when local courts do possess the jurisdictional authority and willingness to address climate change, it is debatable whether a global problem like climate change ought to be subject to judicial review. Courts have a limited institutional capacity, but in many cases they are well suited to address global problems. First, courts place checks on the legislative and executive branches and can serve as a means of accountability for administrative agencies.²⁴² Therefore, if legislation requires an agency to take action on climate change, such as the federal mandate to the EPA to set emission standards or the EP&A Act requirement that Director-Generals consider climate change in environmental assessments, then courts can apply judicial reasoning to assess the situation. After evaluating the legal requirements, courts can hold agencies accountable. They can oblige the EPA to create emission standards or require environmental assessments to include climate change.

While they are responding to local plaintiffs and national actors, at the core, local courts are addressing a global problem. The courts are not setting emission standards or coordinating efforts across national boundaries, but they are requiring action to be taken in solving a global problem. Like agencies that are required to “whittle away at [massive problems] over time, refining their preferred approach as circumstances change and as they develop a more-nuanced understanding of how best to proceed,”²⁴³ courts can address climate change little by little, according to the scope provided by existing doctrines, particularly standing doctrine.

2. Courts as an Appropriate Forum for Climate Change

As local courts confront climate change, the question remains how,

242. See *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009) (“The Administrative Procedure Act . . . sets forth the full extent of judicial authority to review executive agency action for procedural correctness.” (citation omitted)); see also *United States v. Morton Salt Co.*, 338 U.S. 632, 644 (1950) (“The Administrative Procedure Act was framed against a background of rapid expansion of the administrative process as a check upon administrators.”).

243. *Massachusetts v. EPA*, 549 U.S. at 524.

can, and should they be making decisions, taking action, and delegating responsibility and liability. In this era of globalization, courts are responding to international, cross-border, and global problems, and they are not allowing the transnational nature of these problems to frustrate their ability to act.²⁴⁴ This willingness and ability to address global concerns indicates the increasingly global role of local courts. Yet even if courts are willing and able, three main issues arise: functionality, legitimacy, and capacity.

a. Functionality

The first consideration is why local courts, rather than supranational institutions, political branches, and global markets, are suited to tackle global problems.²⁴⁵ In the case of climate change, no single institution possesses the authority to regulate the atmosphere, and there is no world court with superior jurisdiction. Most importantly, climate change is a global phenomenon. As GHGs are a substance “fairly consistent in concentration throughout the *world’s* atmosphere,”²⁴⁶ climate change cannot be localized. Emissions may occur in a particular locale, but climate change does not have local origins. Harm is only caused by accumulation of increasing levels of GHGs in the atmosphere. Further, the impact of climate change may be felt locally, particularly in coastal areas,²⁴⁷ but simply addressing local components will not solve the problem. For example, in the *Gbemre* case, emissions and injury occurred in the same locale as the one in which the court was located. That court’s decision, however, has no effect on emissions from Australian coal mines, and those emissions also contribute to climate change and therefore to the harms felt in Nigeria. Ultimately, the effects of climate change are felt in different ways and to differing degrees in different locales both near and far²⁴⁸ from major sources of emissions.

Local courts have functional advantages in addressing such a global problem.²⁴⁹ First, local courts are established fora with existing laws and

244. See generally WILLIAM J. ACEVES, *THE ANATOMY OF TORTURE: A DOCUMENTARY HISTORY OF FILARTIGA V. PEÑA IRALA* 168 (2007) (“[D]omestic courts are increasingly less content . . . to allow national boundaries to frustrate the efficacy of the civil justice process’ [in tort litigation].”).

245. See Michaels, *supra* note 9, at 5 (discussing U.S. courts in the role of world courts).

246. Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52,922, 52,927 (Sept. 8, 2003) (emphasis added).

247. *Massachusetts v. EPA*, 549 U.S. 497, and *Native Village of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863, 878 (N.D. Cal. 2009), are examples of cases based on injury to coastal areas.

248. In *Kivalina* the village is in northern Alaska, whereas ExxonMobil and other oil, energy, and utility companies emit GHGs all over the world, not only in close proximity to Kivalina.

249. See Michaels, *supra* note 9, at 19 (discussing the functional advantages of U.S. courts).

developed doctrine. When those laws pertain to climate change, courts can use their doctrines to address and mitigate the problem. For instance, the Australian Land and Environment Court possesses the expertise and jurisdiction to adjudicate matters under environmental laws, such as the EP&A Act, which address climate change. In *Gray*, the court did just that and successfully addressed climate change by requiring the Director-General to take into account environmental impacts and ESD principles in his assessment of the Anvil Hill Project.²⁵⁰ Second, local courts have the institutional ability to ensure compliance with their decisions in ways that international courts would not. For instance, after *Massachusetts v. EPA*, the United States Circuit Court for the District of Columbia upheld emissions standards set by the EPA.²⁵¹ Third, local courts are readily accessible to scores of plaintiffs, and the parties will often be familiar with their own legal system.²⁵² As an example, Nigerian plaintiffs brought suit in Nigerian courts against multinational corporations in the *Gbemre* case.

b. Legitimacy

Despite these functional advantages, local courts apply local laws and doctrines within the local system to a problem that cannot be localized. Moreover, while these local courts are only locally accountable, their actions may have impacts beyond their jurisdictions. Thus, courts also run the risk of interfering with foreign affairs. This situation raises both internal and external concerns about legitimacy.

Internally, states may frown upon local courts addressing non-local problems due to the dubious boundary between cases suited for adjudication and cases to be handled under the foreign relations power.²⁵³ Because foreign relations are political affairs under the jurisdiction of the executive branch, courts must defer internally on these matters.²⁵⁴ Courts often discuss these issues when they consider whether the case presents a

250. See *Gray v Minister for Planning* [2006] NSWLEC 720 (Unreported, Pain J, Nov. 27, 2006), ¶¶ 146, 152 (holding that the assessment was void, which meant that the Director-General had to make a new assessment in compliance with the legal requirements).

251. See Matthew L. Wald, *Court Backs E.P.A. over Emissions Limits Intended to Reduce Global Warming*, N.Y. TIMES, June 26, 2012, <http://www.nytimes.com/2012/06/27/science/earth/epa-emissions-rules-backed-by-court.html> (discussing EPA findings and related rules setting limits on GHG emissions in the wake of *Massachusetts v. EPA*).

252. See Michaels, *supra* note 9, at 19–20 (providing the groundwork for these statements by comparing domestic U.S. courts to international courts).

253. *Id.* at 3 (describing how the U.S. administration has asked courts to dismiss international cases because they disturb foreign relations).

254. See RICHARD A. FALK, *THE ROLE OF DOMESTIC COURTS IN THE INTERNATIONAL LEGAL ORDER* 9 (1964) (discussing the internal function of deference to transfer disputes to the foreign office).

nonjusticiable political question, as in *Kivalina*.²⁵⁵ If it does, then courts cannot adjudicate.²⁵⁶ This transfer of responsibility from courts to executives, however, is only appropriate in certain cases where the executive has superior means to address the issue. For example, “the executive has a flexibility in the negotiating context that enables consideration of special circumstances, whereas the judiciary is confined by craft and by tradition to a narrow definition of the legal problem.”²⁵⁷ While this may be true, when the judiciary is within its proper bounds there is no reason why it cannot adjudicate the problem rather than deferring it. For instance, the U.S. Supreme Court readily affirmed that it had the right to adjudicate in *Massachusetts v. EPA* because “[the] case suffers from none of the[] defects” that would have precluded it from being considered a justiciable controversy under Article III.²⁵⁸ Additionally, “[t]he parties’ dispute turns on the proper construction of a congressional statute, a question eminently suitable to resolution in federal court.”²⁵⁹ When this is the case, courts are legitimate forums vis-à-vis other domestic institutions.

Externally, if foreign entities disagree with the laws, doctrines, or legal systems of local courts, they may oppose adjudication in those forums. For instance, while the United States technically owes deference to foreign nations by way of international comity,²⁶⁰ U.S. courts have replaced international law with domestic law when serving as global appeals courts for matters of human rights. Nations who oppose the U.S. system or relevant U.S. laws but feel the effects of the ruling may oppose the role taken by U.S. courts.²⁶¹

Yet, to the extent that existing doctrines are applicable, there is no real reason courts should not use the doctrinal tools at their disposal to address climate change. If the legislature has enacted a statute related to climate change, then courts can interpret that statute, as in *Massachusetts v. EPA*. If the statute or regulation has created a procedural right, then courts can

255. See *supra* note 158.

256. *Native Vill. of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863, 871 (N.D. Cal. 2009) (citing *Corrie v. Caterpillar, Inc.*, 503 F.3d 974, 980 (9th Cir. 2007)).

257. FALK, *supra* note 254, at 9.

258. 549 U.S. 497, 516 (2007).

259. *Id.*

260. See FALK, *supra* note 254, at 9 (discussing deference in external relations). This deference preserves the special character of international law and its place in a global system marked by “jurisdictional rules for a social system that is both decentralized and divided.” *Id.*

261. See Michaels, *supra* note 9, at 2–3 (explaining that Europeans reject the tendency of U.S. courts to hear claims by foreign parties based on foreign events and yet apply U.S. law, specifically in the context of human rights).

adjudicate claims brought by particular plaintiffs,²⁶² as was the circumstance in *Watson*. Finally, if the legislative or executive body has mandated that an administrative agency create regulations related to climate change, as the Court held in *Massachusetts v. EPA*, then, assuming the regulation does not preclude judicial review, courts can ensure that agencies are held accountable for their final decisions.²⁶³ When these situations occur, local courts can use existing judicial doctrine to assess claims instead of deferring to other institutions. They retain legitimacy by remaining within their doctrinal and judicial bounds, while taking part in solving a global problem.

c. Capacity

Within these bounds, local courts have the capacity to address global problems. One local court ruling on one local land use case may have minimal impact on overall GHG emissions, but, cumulatively, local courts ruling on statutes pertaining to local environmental impact and forcing local agencies to properly perform environmental assessments has a “substantial impact on greenhouse gas production.”²⁶⁴ In these local cases, courts use the doctrines at their disposal to reach the global problem. Since the doctrines that local courts use developed in response to traditional localized problems—involving localized parties and discrete jurisdictions—they do not always accommodate global problems like climate change. *Kivalina* demonstrates that traditional standing requirements make it nearly impossible to establish causation because the available theories do not accommodate the cumulative nature of climate change.

In the face of globalization, courts could transform such doctrines by expanding their application to accommodate climate change. For instance, the courts in *Massachusetts v. EPA* struggled with how to define injury in the context of climate change until the Supreme Court disaggregated the global nature of climate change from the particular injuries that result.²⁶⁵ Alternatively, courts could accept limitations under existing doctrine as appropriate. The Australian court in *Wildlife Whitsunday* could not link

262. See *Fla. Audubon Soc. v. Bentsen*, 94 F.3d 658, 664 (D.C. Cir. 1996) (discussing standing in procedural rights cases).

263. See *Friends of the Earth, Inc. v. Watson*, No. C 02-4106 JSW, 2005 WL 2035596, at *4 (N.D. Cal. Aug. 23, 2005) (quoting *Lujan v. Nat’l Wildlife Fed’n*, 497 U.S. 871, 882 (1990)) (explaining the requirement that plaintiffs only challenge final agency action so that courts do not pervasively monitor the day-to-day decisions of administrative agencies).

264. *Trisolini & Zasloff*, *supra* note 30, at 73.

265. See 549 U.S. 497, 522 (2007) (explaining that *Massachusetts* had a concrete injury despite the fact that the harms of climate change are widely shared).

coal mine emissions of GHGs to environmental injury to a protected matter under the direct and indirect effects test. Following a different approach, there could be a call for new, more adequate legislation. For example, the EP&A Act and the accompanying ESD principles from *Gray* are significantly more suited to the global phenomenon of climate change. No matter the approach, applicable doctrines define limits, creating an arena in which local courts have the capacity to address climate change and become part of the solution to the global problem.

CONCLUSION

The most successful climate change litigation to date involves requirements under climate change legislation. Since one of the essential roles of courts is interpretation of statutes or applicable standards under such statutes, courts are appropriate forums in these cases. Functionally, they have doctrines for judicial analysis, possess compliance mechanisms, and are accessible to litigants. When courts stay within their established judicial role, they owe no internal or external deference and thus possess legitimacy. Finally, the existence of applicable doctrine and judicially manageable standards also gives them the capacity to handle the claims.

Still, the courts' ability to adjudicate is based on plaintiffs having standing to bring a suit in court. In the United States, standing requires injury, causation, and redressability. Given the conceptual difficulty of applying climate change to this construct, cases in which the plaintiff has had some special status or procedural right and that have involved an administrative institution rather than a private defendant have been the most successful. States, for example, can sue *parens patriae*, as in *Massachusetts v. EPA*. Similarly, plaintiffs suing under a procedural right have relaxed causation and redressability standards, as in *Watson*. Notably, these cases, as well as the Australian cases discussed, involve courts ruling on or against administrative agencies and their decisions, rather than private defendants. The key factors for success include relaxed standards that enable courts to more easily fit climate change into existing doctrine and a court's inherent ability to hear and solve legal questions, such as through statutory interpretation or judicial review of administrative decisions. When those powers coincide with a global problem like climate change, courts are prepared to adjudicate. Without these special circumstances, however, many claims fail on injury, causation, or redressability, as in *Kivalina*.

Local courts are limited not by the global nature of the problems but by the way in which a discrete case fits into existing doctrine and established judicial limits. Thus, to the extent there are relevant

regulations, enforceable mandates, or applicable doctrines, courts can address global climate change. Consequently, doctrine enables local courts to address global problems and to be catalysts for solving climate change.