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# Political Externalities, Federalism, and a Proposal for an Interstate Environmental Impact Assessment Policy

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# POLITICAL EXTERNALITIES, FEDERALISM, AND A PROPOSAL FOR AN INTERSTATE ENVIRONMENTAL IMPACT ASSESSMENT POLICY

Noah D. Hall\*

## ABSTRACT

*Interstate environmental harms, which occur when decisions or actions in one state produce negative environmental impacts in another state, have challenged environmental law and American federalism for over a century. While even the strongest advocates of state primacy in environmental policy concede that interstate environmental harms necessitate federal governance, federal adjudication and regulation have had only modest success in addressing the problem. This is due, in part, to a failure to fully understand the causes of interstate environmental harms. This article provides a new framework for understanding interstate environmental harms as political externalities caused by a combination of inadequate information, public process bias, and traditional economic externalities. To address these causes, this article proposes a new state-based approach termed interstate environmental impact assessment. Interstate environmental impact assessment would provide a procedural mechanism for an affected state and its citizens to influence the source state and minimize or prevent interstate environmental harms. The process itself would address the causes of political externalities, and also produce information to improve federal adjudication and regulation when disputes arise over continuing harms.*

<i>Introduction</i> .....	50
<i>I. Interstate Environmental Harms as Political Externalities</i> .....	53
<i>A. The Problem of Interstate Environmental Harms</i> .....	53
<i>B. The Conceptual Bases for Interstate Environmental Harms</i> .....	58
<i>II. Responses to Political Externalities in a Federalist System</i> .....	61
<i>A. Federal Adjudication of Interstate Environmental Harms</i> .....	62
<i>B. Federal Regulation of Interstate Environmental Harms</i> ...	70
<i>C. Bargained Internalization Through Interstate Compacts</i> .....	75
<i>III. A Proposal for Interstate Environmental Impact Assessment</i> .....	78
<i>A. Environmental Impact Assessment Law</i> .....	79
<i>B. Crafting an Interstate Environmental Impact Assessment Policy</i> .....	84

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C. Evaluating the Necessity and Effectiveness of an Interstate Environmental Impact Assessment Policy .....	90
Conclusion .....	94

## INTRODUCTION

One of the foundational justifications for the federalization of environmental law is the problem of interstate environmental harms.<sup>1</sup> Interstate environmental harms occur when decisions and activities in one state cause pollution or other negative environmental impacts in another state. The nature of these harms suggests that they not be left to the individual states to address, but instead warrant a strong role for the federal government and regional governance institutions.<sup>2</sup> However, federal and regional responses to interstate environmental harms have had only limited success.<sup>3</sup> Other scholars have provided persuasive recommendations for improving federal regulation<sup>4</sup> and federal adjudication<sup>5</sup> of interstate harms, and in a previous article I advanced a cooperative horizontal federalism model for improving interstate regional environmental management.<sup>6</sup> While improved federal and regional governance are important, some interstate environmental harms do not justify the political costs of these more complex collective action solutions.<sup>7</sup>

This article proposes another potential solution that respects state sovereignty while directly addressing the informational and political process bi-

<sup>1</sup> Richard L. Revesz, *Federalism and Interstate Environmental Externalities*, 144 U. PA. L. REV. 2341, 2346 (1996) (“[T]he rationale for federal regulation premised on the problem of interstate externalities is analytically unimpeachable.”). See also Jonathan H. Adler, *Jurisdictional Mismatch in Environmental Federalism*, 14 N.Y.U. ENVTL. L.J. 130, 140 (2005) (“The strongest case for federal involvement comes in the context of interstate spillovers, such as when pollution crosses state lines and the affected states are unable to resolve the conflict on their own.”).

<sup>2</sup> See Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931, 932 (1997) (“Given the inherent difficulties in regulation by any single state, transboundary pollution would seem to present a clear case for shifting regulatory authority from local to more centralized levels of governance.”).

<sup>3</sup> See generally *id.* at 947 (the federal adjudicative system has not given “the kind of sustained attention to the problem [of transboundary pollution] that is probably necessary if a coherent body of decisional law is to emerge”); 959-61 (describing the shortcomings of federal statutory law); 965-67 (describing the shortcomings of regional compacts and agreements).

<sup>4</sup> See generally Revesz, *supra* note 1 (providing a new approach to interstate air pollution as a model for federal policy on interstate environmental harms).

<sup>5</sup> See Merrill, *supra* note 2. Merrill provides a new liability scheme for transboundary pollution based on the “golden rule” that an “affected state is entitled to be treated by the source state in the same way as the affected state treats its own citizens.” *Id.* at 936.

<sup>6</sup> See generally Noah D. Hall, *Toward A New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405 (2006) (advancing cooperative horizontal federalism as an approach for states to bind themselves to common substantive and procedural environmental protection standards, implemented individually with regional resources and enforcement).

<sup>7</sup> See Merrill, *supra* note 2, at 976-79.

ases that often lead to inefficient interstate environmental harms.<sup>8</sup> Interstate environmental harms are often inefficient because they result from source state decisions that fail to account for both technical information and public opposition regarding the impacts in the affected state.<sup>9</sup> As almost all interstate environmental harms also produce negative impacts in the source state, more complete accounting for impacts in the affected state may bolster source state considerations that weigh against a source of harm.<sup>10</sup>

Building on this conceptual approach, this article provides a framework for an interstate environmental impact assessment policy. Such a policy would draw on existing models including the National Environmental Policy Act ("NEPA"),<sup>11</sup> state environmental impact assessment laws, and international transboundary environmental impact assessment law. Individual states could effect an interstate environmental impact assessment either through the adoption of a new uniform act or, where applicable, through non-discriminatory application of existing state laws to citizens of other states.

Most instances of pollution and other environmental harms can be viewed as economic externalities, in which the benefits of the polluting activity are realized by one actor, but the costs are externalized on other actors or society as a whole.<sup>12</sup> Interstate pollution and environmental harms involve a traditional economic externality compounded by public process and lack of information biases resulting from the lack of accountability to, and knowledge of, the affected state. The focus of both public and private environmental law is to require internalization of externalized environmental costs.<sup>13</sup> This challenge is complicated for interstate environmental externalities by considerations of state sovereignty. While pollution and other environmental harms do not recognize state boundaries, our legal and political systems certainly do.

The interests of state sovereignty cut both ways in this context, as states enjoy both the right to regulate (or to not regulate) most environmentally harmful activities within their jurisdiction, and the right to be free of harm emanating from other states.<sup>14</sup> The federal government has attempted to bal-

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<sup>8</sup> Inefficient interstate environmental harms refer to those environmental harms that are only allowed because the harm is not imposed on the source state.

<sup>9</sup> See William W. Buzbee, *Recognizing the Regulatory Commons: A Theory of Regulatory Gaps*, 89 IOWA L. REV. 1, 27-28 (2003).

<sup>10</sup> See Merrill, *supra* note 2, at 977-78.

<sup>11</sup> National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321-4347 (2000)).

<sup>12</sup> See Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 154 (2004).

<sup>13</sup> See Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority*, 14 YALE L. & POL'Y REV. 23, 29 (1996).

<sup>14</sup> Compare *Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 237 (1907) ("[the state] has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe the pure air") with *Missouri v. Illinois*, 200 U.S. 496, 525-26 (1906) (declining to impose liability on the source state based on uncertain evidence of causation and harm).

ance these competing principles, historically through adjudication of interstate nuisance liability,<sup>15</sup> and in more recent decades through statutes addressing specific types of interstate pollution.<sup>16</sup> Yet while all three branches of the federal government<sup>17</sup> have grappled with the problem of interstate environmental harms, results have been inconsistent at best.<sup>18</sup> Of course, states can also negotiate with each other to address interstate environmental harms and enter into compacts and other interstate agreements.<sup>19</sup> But the transaction costs and political challenges of interstate compacts explain why this solution is rarely employed.<sup>20</sup>

This article proposes a new approach — interstate environmental impact assessment — that respects state sovereignty while directly addressing the causes of inefficient interstate environmental harms. The centerpiece of this approach is a process conducted by the source state to gather information and public views from the affected state and its citizens. Interstate environmental impact assessment would correct the lack of information and public accountability biases at the state level that produce interstate environmental harms. While only procedural, it would also produce detailed information that could be used within the federal adjudicatory and regulatory legal regime to resolve disputes that continued following the state process. This approach builds on a foundation of environmental law, NEPA, and the many state statutes modeled after NEPA.<sup>21</sup> States would individually enact an interstate environmental impact assessment policy, using a model uni-

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<sup>15</sup> See, e.g., 206 U.S. at 239; 200 U.S. 496.

<sup>16</sup> Most notably, both the federal CAA and the federal CWA contain provisions intended to address interstate air and water pollution, respectively. See CAA §§ 110(a)(2)(D), 126(b), 42 U.S.C. §§ 7410(a)(2)(D), 7426(b) (2000); CWA § 402(b)(3)(5), 33 U.S.C. § 1342(b)(3)(5) (2000).

<sup>17</sup> In addition to the adjudicative function of the federal courts and the legislative function of Congress, the federal government has attempted to address interstate pollution through executive interpretation and enforcement by EPA. See 40 C.F.R. § 122.4(d) (2007) (interpreting the CWA to prohibit issuance of a permit to a point source “[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States”); see also *Arkansas v. Oklahoma*, 503 U.S. 91 (1992) (upholding EPA’s interpretation of the CWA).

<sup>18</sup> See Adler, *supra* note 1, at 162-63 (criticizing the minimal attention paid to interstate externalities under congressional environmental statutes, the limitations of the federal courts in the application of interstate nuisance, and EPA’s poor record in addressing interstate harms). See also Revesz, *supra* note 1, at 2346 (noting that the problem of interstate externalities “has not been effectively redressed in the current [federal] pollution-control scheme”); Merrill, *supra* note 2, at 947, 959-61, 965-67; Rena I. Steinzor, *EPA and Its Sisters at 30: Devolution, Revolution, or Reform?*, 31 ENVTL. L. REP. 11086, 11092 (2001) (noting that the “EPA has not done a very good job of addressing transboundary pollution”).

<sup>19</sup> See Hall, *supra* note 6, at 410-11.

<sup>20</sup> See Revesz, *supra* note 1, at 2375. See also Hall, *supra* note 6, at 454 (“For a compact to be enacted, it requires uniform ratification by each state’s legislative body and approval by a simple majority in both houses of Congress, which can modify the terms of the compact to protect national interests. The process for enacting a compact is thus a political obstacle course.”).

<sup>21</sup> A recent survey indicated that thirty-two states have some form of an environmental impact assessment policy modeled after NEPA. See Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553, 617-18 (2001).

form act or amending existing state environmental impact assessment laws. To create an incentive for individual states to enact such a policy, the interstate environmental impact assessment obligation would only apply to affected states that have also enacted a similar policy.

This article is organized in three parts. Part I first provides a theoretical explanation of the problem of interstate environmental harms as political externalities. Viewing interstate environmental harms as simply an extension of economic externalities ignores the complexity of state regulatory and political decisions, which are important to finding a state-based solution. Part II examines the federal and regional responses to interstate environmental harms, focusing on the roles of both vertical and horizontal federalism. While interstate environmental harms are a primary justification for federal and regional regulation, in practice these efforts have had only limited success. Further, the political investment needed to overcome the transaction costs inherent in a federal or regional solution is only justified in limited circumstances of interstate environmental harms. This leads to revisiting the role that individual states can play in addressing interstate environmental harms. Part III proposes adoption of interstate environmental impact assessment policies at the state level as a mechanism to directly address the political externalities that lead to interstate environmental harms. While officials of the source state cannot be made electorally accountable to the citizens of the affected state, information and public process are other valid forms of political influence and accountability. From this perspective, the key elements of a pragmatic interstate environmental impact assessment policy are outlined and discussed. Potential criticisms of the proposal, and responses to those criticisms, are also considered in Part III.

## I. INTERSTATE ENVIRONMENTAL HARMS AS POLITICAL EXTERNALITIES

The first step in developing and evaluating legal and policy solutions to interstate environmental harms is to understand the problem these solutions seek to address. This Part first explains the many forms that interstate environmental harms can take, including but not limited to interstate pollution. Several basic examples are provided to give a context for the problem. This Part then examines the conceptual causes of these harms — notably economic externalities, public process biases, and lack of information regarding impacts in the affected state. Taken together, these conceptual causes of interstate environmental harms can be described as political externalities.

### A. *The Problem of Interstate Environmental Harms*

Almost by definition, environmental impacts cross boundaries and affect locations other than their source. Most environmental laws address harms that cross property boundaries and negatively impact the property of another. An activity on B's property results in an environmental harm that

crosses the property boundary line and affects A's property. This basic scenario is illustrated in the classic English case from the early seventeenth century, Aldred's Case.<sup>22</sup> Thomas Benton (B) operated a pig sty that polluted the air across the property boundary, affecting the home of William Aldred (A).<sup>23</sup> In this setting, as in most conventional environmental disputes, the environmental harm crosses a property boundary, which is an economic demarcation.

Environmental harms that affect persons and property other than the source of the harm are a basic example of an economic externality. Externalities are simply costs and benefits that are not directly priced by the market system, and thus not necessarily considered by a market actor.<sup>24</sup> Returning to the classic example from English law, Benton receives the economic benefit of his pig farming operation (presumably through the use or sale of pork), while Aldred bears at least some of the economic costs (depreciation in his property value from odor and air pollution).<sup>25</sup> While there is considerable debate about how to best address environmental economic externalities,<sup>26</sup> this article is not concerned with environmental externalities that are generated and imposed within the same legal and political jurisdiction. Rather, the focus here is on environmental externalities that are generated in one state but imposed on another state.

There are several types of interstate environmental externalities. This article is concerned primarily with physical interstate environmental harms generated in one state and affecting another state. The most obvious form of this type of interstate environmental externality is transboundary air and water pollution. Transboundary air and water pollution occur when a facility or activity in state A creates pollution that moves through an air or water medium and affects the environment of state B. While some amount of air and water pollution will inevitably affect states beyond the source,<sup>27</sup> decisions regarding both the design and the location of polluting facilities can maximize or minimize the impact of the pollution on other states.<sup>28</sup>

The importance of design and location decisions for interstate pollution is illustrated with a few basic examples. In the context of air pollution,

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<sup>22</sup> William Aldred's Case, 77 Eng. Rep. 816 (K.B. 1611).

<sup>23</sup> *Id.* at 817.

<sup>24</sup> See Butler & Macey, *supra* note 13, at 29.

<sup>25</sup> Benton tried unsuccessfully to use a social utility defense, stating that "the building of the house for hogs was necessary for the sustenance of man." *William Aldred's Case*, 77 Eng. Rep. at 817, 821-22. Essentially this argument is based on the premise that Benton's activities have positive externalities for society that outweigh the negative externalities to Aldred.

<sup>26</sup> For the primary works on the efficiency and distributive justice of addressing externalities, see Ronald H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960) and Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972). For a thorough (but still partial) list of the subsequent academic discussion of pollution in the law and economics tradition, see Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965, 966 n.2 (2004).

<sup>27</sup> See discussion of inevitable interstate environmental harms at Part I.B., *infra*.

<sup>28</sup> See Revesz, *supra* note 1, at 2351.

higher smokestacks reduce the pollution impacts close to the source and increase the pollution impacts farther from the source.<sup>29</sup> States could require higher smokestacks as a way to minimize the environmental harms of air pollution within their state and shift the air pollution harms to neighboring states.<sup>30</sup> Similarly, the location of facilities directly impacts the proportion of pollution harms felt in the source state versus a downwind or downstream state. For example, if a river runs west to east through state A, water pollution discharged at a location in the western part of the state will primarily harm state A, while water pollution discharged at a point in the eastern part of the state will cause more harm in state B. So, a state seeking to minimize the environmental harms of water pollution on its portion of a river and shift the water pollution harms to a neighboring state's portion of the river could restrict pollution upstream while encouraging siting of facilities downstream.<sup>31</sup>

While interstate air and water pollution are the most obvious forms of physical interstate environmental harms, there are other significant environmental problems analogous to interstate pollution. For example, states tend to locate landfills and other waste disposal facilities near their borders, externalizing the environmental impacts of these facilities on neighboring states.<sup>32</sup> This occurs so commonly that it has been termed "state line syndrome."<sup>33</sup> Locating waste disposal facilities near a state line externalizes some of the potential harms from leakage of waste and water contamination at the facility.<sup>34</sup> It also puts communities in the neighboring state along the roadways and railroads used to transport waste to the facility at risk, effectively externalizing the monitoring and emergency response costs.<sup>35</sup>

Other forms of physical interstate environmental harms are less obvious but no less significant. One example is urban sprawl, the "dispersed, usually car-dependent forms of urban growth that typically overlap multiple local government jurisdictions."<sup>36</sup> Decisions made in one state can impose the environmental and economic costs of urban sprawl on another state.<sup>37</sup> While sprawl is often considered a local government issue, it creates regional and

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<sup>29</sup> See SAMUEL J. WILLIAMSON, *FUNDAMENTALS OF AIR POLLUTION* 219-25 (1973).

<sup>30</sup> See Revesz, *supra* note 1, at 2351.

<sup>31</sup> The upstream/downstream siting incentives may also apply in the air pollution context, especially in locations where prevailing winds consistently blow in one direction. States may have an incentive to induce air pollution sources to locate close to their downwind borders to externalize the air pollution harms, although direct evidence of states providing such incentives is lacking. See Revesz, *supra* note 1, at 2351, 2353.

<sup>32</sup> See Daniel E. Ingberman, *Siting Noxious Facilities: Are Markets Efficient?*, 29 J. ENVTL. ECON. & MGMT. S-20, S-23 (1995). See also Bradford C. Mank, *Environmental Justice and Discriminatory Siting: Risk-Based Representation and Equitable Compensation*, 56 OHIO ST. L.J. 329, 421 (1995).

<sup>33</sup> Robert B. Wiygul & Sharon C. Harrington, *Environmental Justice in Rural Communities Part One: RCRA, Communities, and Environmental Justice*, 96 W. VA. L. REV. 405, 437-38 (1993).

<sup>34</sup> See *id.* at 409.

<sup>35</sup> See *id.* at 410.

<sup>36</sup> Buzbee, *supra* note 9, at 10.

<sup>37</sup> See *id.*



national harms.<sup>38</sup> Many metropolitan areas have sprawled across state lines. For example, according to 2000 Census figures, over thirty of the largest metropolitan areas in the United States extend across state lines, including those containing New York City, Chicago, Washington/Baltimore, Philadelphia, Boston, St. Louis, Portland (OR), Cincinnati, Kansas City (KS & MO), Norfolk/Virginia Beach, and Las Vegas.<sup>39</sup> These eleven metropolitan regions are home to almost 62 million people, or approximately twenty percent of the U.S. population.<sup>40</sup>

While this article is concerned primarily with physical interstate environmental harms generated in one state and affecting another state, it is important to briefly describe three other types of interstate environmental externalities. The first and most closely related is physical harm to common resources which transcend multiple state boundaries. An obvious example of this type of externality is the emission of greenhouse gases. Greenhouse gas emissions from one state do not physically invade and directly harm another state, but rather impact the common atmosphere with resulting harms felt by all beneficiaries and users of that common resource (including to some extent the source state). Like interstate pollution and other physical interstate environmental harms, harm to common resources involves a physical harm produced by one state and impacting another state. However, the key distinction is that harm to a commons implicates large numbers of states — perhaps all fifty, such as in the greenhouse gas emissions example. Thus physical harm to a commons presents very different legal and political challenges than physical interstate harms imposed by one state on one of its neighbors.<sup>41</sup> While this article is not intended to address protection and management of interstate commons, some of the analysis and recommendations may be applicable.<sup>42</sup>

The other two types of interstate environmental externalities are easy to distinguish because the interstate harm is not physical, but pecuniary or psy-

<sup>38</sup> See *id.* See also Lincoln L. Davies, *Just a Big, 'Hot Fuss'? Assessing the Value of Connecting Suburban Sprawl, Land Use, and Water Rights Through Assured Supply Laws*, 34 *ECOLOGICAL L.Q.* \_\_ (forthcoming 2008).

<sup>39</sup> These cities are included in the following Metropolitan Statistical Areas ("MSAs") and Consolidated Metropolitan Statistical Areas ("CMSAs"): New York - Northern New Jersey - Long Island (NY, NJ, CT, PA CMSA), ranking 1; Chicago - Gary - Kenosha (IL, IN, WI CMSA), ranking 3; Washington - Baltimore (DC, MD, VA, WV CMSA), ranking 4; Philadelphia - Wilmington - Atlantic City (PA, NJ, DE, MD CMSA), ranking 6; Boston - Worcester - Lawrence (MA, NH, ME, CT CMSA), ranking 7; St. Louis (MO, IL MSA), ranking 18; Portland - Salem (OR, WA CMSA), ranking 23; Cincinnati - Hamilton (OH, KY, IN CMSA), ranking 24; Kansas City (MO, KS MSA), ranking 26; Norfolk - Virginia Beach - Newport News (VA, NC MSA), ranking 31; Las Vegas (NV, AZ MSA), ranking 32. *CENSUS 2000 PHC-T-3. Ranking Tables for Metropolitan Areas: 1990 and 2000*, tbl. 3: Metropolitan Areas Ranked by Population: 2000 (U.S. Census Bureau, 2000).

<sup>40</sup> *Id.*

<sup>41</sup> See Merrill, *supra* note 2, at 970.

<sup>42</sup> For an excellent analysis of the problem of protecting a multi-jurisdictional commons, see generally Buzbee, *supra* note 9.

chological.<sup>43</sup> Pecuniary interstate environmental externalities occur through interstate regulatory competition.<sup>44</sup> If one state were to lower its environmental standards, regulated businesses in other states may relocate or threaten to relocate, setting off a “race to the bottom” between states competing for the businesses.<sup>45</sup> The merits of this theory and whether it is a problem that justifies federal regulation are hotly debated in academic literature,<sup>46</sup> and this article will not cover that well-worn ground. The key point regarding this discussion is that the resulting harm to the other states would be a loss of economic activity, or perhaps a lowering of their own environmental standards. Professor Merrill distinguishes this “pecuniary spillover” from “physical spillovers involved with transboundary pollution.”<sup>47</sup> Part III addresses the merits of requiring consideration of pecuniary spillovers in an interstate environmental impact assessment, but this is a general problem that should be treated separately from the physical interstate environmental externalities that are the focus of this article.

Psychological interstate environmental externalities occur when one state allows damage or harm to a resource within its territory that is valued by the public in other states.<sup>48</sup> The source state is not physically affecting the citizens of another state with pollution or another environmental harm.<sup>49</sup> Instead, the harm is psychological, as citizens of other states would be deprived of the enjoyment of visiting the unique resource or simply knowing that it exists.<sup>50</sup> For example, decisions to allow intense resource use in a state park may upset citizens of another state that appreciate the park.<sup>51</sup> Again, Part III briefly discusses the merits of requiring consideration of psychological spillovers in an interstate environmental impact assessment, but without a physical harm to another state, the sovereign interests of a state in management of its public lands and resources caution against such application.

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<sup>43</sup> I do not mean to suggest that pecuniary and psychological interstate harms “are somehow less ‘real’ than physical spillovers.” Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 594 (1996). However, these problems are different in nature and warrant different legal and policy solutions.

<sup>44</sup> See Merrill, *supra* note 2, at 968-70.

<sup>45</sup> *Id.* at 969.

<sup>46</sup> Compare Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the “Race-to-the-Bottom” Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210 (1992) with Esty, *supra* note 43.

<sup>47</sup> Merrill, *supra* note 2, at 969.

<sup>48</sup> Professor Esty considers this problem a “choice of public” issue. See Esty, *supra* note 43, at 594.

<sup>49</sup> See Merrill, *supra* note 2, at 968 n.184.

<sup>50</sup> See *id.*

<sup>51</sup> See, e.g., Cindi Lash, *Lumber Firm Wants Use of Blackwater Falls State Park’s Trail*, PITTSBURGH POST-GAZETTE, Nov. 5, 2006, available at <http://www.post-gazette.com/pg/06309/735778-85.stm> (describing a dispute over a logging company’s attempts to turn a trail through Blackwater State Park, located in West Virginia, about three hours south of Pittsburgh, into a logging road; the park and its environs are “a popular recreation and vacation area for families and outdoors enthusiasts from West Virginia, Maryland, Pennsylvania and Washington, D.C.”).

### *B. The Conceptual Bases for Interstate Environmental Harms*

Understanding the causes that lead to inefficient interstate environmental harms is critical to finding new solutions to this problem. These causes can be categorized into four conceptual bases for interstate environmental harms. First, some activities have environmental impacts which by their nature disperse over a larger geographic area than a single state. These interstate environmental harms are essentially inevitable based on the geography of the state and nature of the activity, and may not result from any decision-making inefficiencies or incentives. Second, the concept of economic externalities plays out at the state level, as state decision-makers (including both political leaders and agency staff) may seek to improve the economic interests of their citizens and industries but impose the economic costs of environmental harms onto other states. Third, there is a public participation and process bias that may cause state decision-makers to favor a project or activity that avoids public opposition from their constituents, even if the project generates significant opposition in other states. Finally, there is an information bias as most state decision-makers have better knowledge of their state resources, and thus tend to better estimate and appreciate potential environmental impacts within their state than impacts on other states. To best address the problem of interstate environmental harms, it is important to appreciate these separate but related conceptual bases in designing a potential solution.

Wherever there are state boundaries, there will be environmental harms that cross those boundaries. Even if the state boundaries had no legal or political importance, the nature of environmental harms would lead to trans-boundary impacts. To demonstrate this point, consider that the U.S. Environmental Protection Agency ("EPA") uses a rule of thumb that a source of air pollution may cause air quality impacts up to fifty kilometers (approximately thirty-one miles) away.<sup>52</sup> Rhode Island (admittedly the smallest state in the union and perhaps an unfair subject to pick on for this geography lesson) is only about forty miles long and thirty miles wide.<sup>53</sup> Even if a major air pollution source were located in the geographic center of the state, it would almost inevitably impact air quality in other states. This illustrates that to some extent interstate harms are inevitable based on the geography of the states and the nature of the activity and harm, and would occur even without any economic, legal, or political inefficiencies. These inevitable impacts could be considered in a policy response to interstate environmental harms, but they should not be the focus.

While the nature of environmental harms makes some interstate impacts inevitable, the concept of externalities creates an obvious risk for exac-

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<sup>52</sup> See National Emission Standards for Hazardous Air Pollutants, 43 Fed. Reg. 26,388, 26,398 (June 19, 1978).

<sup>53</sup> See The Geography of Rhode Island, [http://www.netstate.com/states/geography/ri\\_geography.htm](http://www.netstate.com/states/geography/ri_geography.htm) (last visited Oct. 16, 2007) (on file with the Harvard Environmental Law Review).

erminating the problem. Dean Richard Revesz has applied the economic view of environmental externalities to interstate pollution incentives as follows: the source state "obtains the labor and fiscal benefits of the economic activity that generates the pollution but does not suffer the full costs of the activity. Under these conditions, economic theory maintains that an undesirably large amount of pollution will cross state lines."<sup>54</sup> The state decision-makers are essentially taking on the economic interests of their constituents, seeking to maximize internalized economic benefits and minimize internalized economic costs. In doing so, states may engage in or permit activities that are not economically justified from a total interstate economic perspective, creating an inefficiency based on the economic externality.

This economic perspective certainly illustrates an important aspect of the problem, but it is incomplete. The costs being externalized by the source state are not just economic. Public concern, negative media attention, even demonstrations and protests often result from interstate pollution and environmental harm.<sup>55</sup> State decision-makers are motivated by these factors as well as the internalized economic interests of their constituents and industries. Both elected officials and agency staff would typically prefer to avoid the costs and risks associated with upset constituents, bad press, lengthy meetings, and public protests.

Further, not all environmental harms (both intrastate and interstate) are the result of economic externalities. Some environmental harms result from inefficiencies or mistakes due to lack of information or path dependency.<sup>56</sup> While there is considerable debate about how often lack of information and path dependency occurs in the private sector, the political nature of governmental decision-making makes it a greater possibility.<sup>57</sup> Even technically proficient agency staff may be relatively uninformed about the internalized and externalized costs of their decisions, particularly when those costs relate

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<sup>54</sup> See Revesz, *supra* note 1, at 2343.

<sup>55</sup> See, e.g., Dan Shine, *Groups to Fight Garbage Imports*, DETROIT FREE PRESS, Feb. 10, 2003, at B1 (reporting that nearly two dozen environmental, religious, and neighborhood groups launched a campaign to stop dumping of out-of-state trash in Michigan); Jane Gordon, *Our Air, Their Air: Most of It Is Bad*, N.Y. TIMES, Nov. 10, 2002, § 14CN, at 1 (reporting that Connecticut residents protested construction of a cement plant in Greenport, New York, whose emissions would impact New England states). Professor Davies provides an excellent case study of these issues in the context of the dispute between Virginia Governor James S. Gilmore III and New York City Mayor Rudy Giuliani over trash importation. See Lincoln L. Davies, *If You Give the Court a Commerce Clause: An Environmental Justice Critique of Supreme Court Interstate Waste Jurisprudence*, 11 FORDHAM ENVTL. L. REV. 207, 280-89 (1999).

<sup>56</sup> See Esty, *supra* note 12, at 154 ("In broad terms, 'path dependence' means that an outcome or decision is shaped in specific and systematic ways by the historical path leading to it."); Oona A. Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 IOWA L. REV. 601, 603-04 (2001).

<sup>57</sup> Compare Michael E. Porter & Claas van der Linde, *Toward a New Conception of the Environment-Competitiveness Relationship*, 9 J. ECON. PERSP. 97 (Autumn 1995) (supporting the notion of improving both economic and environmental outcomes through the use of innovation) with Noah Walley & Bradley Whitehead, *It's Not Easy Being Green*, HARV. BUS. REV., May-June 1994, at 46 (arguing that there are very limited opportunities for improving environmental outcomes without incurring economic costs).

to matters beyond their expertise. For example, while a state highway department may do an excellent job accounting for costs associated with construction and maintenance of a project, it may lack the expertise necessary to understand the associated impacts on water quality or wildlife. Or, a state agency may make a decision that benefits its interests, but harms interests represented by other state agencies. Road salt presents a classic example of such conflicting agency interests. State highway departments pay relatively little for and get considerable benefits from ice-free roads.<sup>58</sup> However, the true costs of road salting are externalized in the form of corrosion to vehicles, damage to utility infrastructure, harm to surrounding vegetation, and contamination of water supplies.<sup>59</sup>

The likelihood of reducing both internalized and externalized costs with better information is particularly strong in the context of actions with interstate impacts. Even a state that desires to minimize the environmental harms of a project may grossly underestimate environmental harm in another state. Awareness of potential environmental impacts depends upon knowledge of the potentially affected resource. A state forester working for a state agency may know her state forests intimately, providing a ready foundation for anticipating potential environmental impacts from proposed projects. However, she would lack the same intimate knowledge of the forests in a neighboring state (especially if the state has different ecosystem characteristics), and may thus not fully account for potential environmental impacts in the other jurisdiction. Similarly, the 'greenest' state politicians' (those most politically committed to environmental protection and stewardship) love of their state's natural resources may well be grounded in knowledge of those same resources. A lack of knowledge about the natural resources in another state may result in less attention to potential interstate environmental harms.

Putting aside incidental interstate environmental harms, interstate impacts are externalized for financial, public process, and informational reasons. These conceptual causes of interstate environmental harms — financial externalities, public participation and process bias, and lack of information — can be described in summary as "political externalities." As used in this article, the concept of political externalities relates to the combined financial, public process, and information gathering costs associated with decisions to conduct or allow an activity in one state that causes environmental harms in another state.<sup>60</sup> Thus, this article's concept of political

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<sup>58</sup> See ZYGMUNT J.B. PLATER, ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 36-37 (2004) (citing Charles Wurster, Op-Ed, *Of Salt* . . . , N.Y. TIMES, Mar. 4, 1978, at A21).

<sup>59</sup> *Id.*

<sup>60</sup> It should be noted that this use of the term "political externality" differs substantively from the term's usage in public choice theory scholarship, in which the term describes the costs imposed on a dissident minority by the collective decisions of the majority within one political system. See JAMES M. BUCHANAN & GORDON TULLOCK, THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF A CONSTITUTIONAL DEMOCRACY 89 (1965) ("The member of the dissident minority suffers external effects of collective decisions enforced on him . . . ."). This concept has been applied to environmental policymaking by Professor Zywicki in describing

externalities builds on the basic premise described by Professor Richard Stewart in the international setting that “nations will often fail to adopt appropriate environmental standards because of a political externality; the costs of more stringent standards will be borne by the nation adopting them, whereas a significant portion of the benefits will go to those in other countries.”<sup>61</sup> Other scholars have referred to this concept with the terms “super externality”<sup>62</sup> or simply “interstate spillovers.”<sup>63</sup>

Understanding interstate environmental harms as a political externality is important in evaluating potential solutions to the problem. Because the problem is not just economic, establishing liability and compensation schemes would not provide a complete solution. Instead, a policy solution to interstate environmental harm must address the economic, public process, and informational failures that lead to state decisions with unjustified (i.e., inefficient) interstate environmental impacts. These legal and policy responses are the subject of Parts II and III of this article.

## II. RESPONSES TO POLITICAL EXTERNALITIES IN A FEDERALIST SYSTEM

An internalization of the political externalities of interstate environmental harms could be most fully accomplished by holding elected officials of the source state accountable to the public of the receiving state. Obviously that is not possible, so a more modest approach to bring political cost internalization to the source state is needed. The United States’ federalist system has been challenged by interstate environmental harms for over a century. This Part first describes how all three branches of the federal government have sought to address the problem through liability and regulatory regimes. While these responses have provided some relief, the federal government has achieved only limited success in addressing this problem.<sup>64</sup> This Part then details how regional interstate efforts have fared no better than the fed-

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the rent-seeking behavior of environmental advocacy groups that use their political power in governmental lobbying to pursue their preferences while imposing the costs of those preferences on other individuals and firms. See Todd J. Zywicki, *Environmental Externalities and Political Externalities: The Political Economy of Environmental Regulation and Reform*, 73 TUL. L. REV. 845, 856-74 (1999). See also Todd J. Zywicki, *Baptists?: The Political Economy of Environmental Interest Groups*, 53 CASE W. RES. L. REV. 315, 318 (2002). The term “political externality” has also been used to describe the positive political and societal benefits of civil disobedience. See Eric Neisser, *Charging for Free Speech: User Fees and Insurance in the Marketplace of Ideas*, 74 GEO. L.J. 257, 334 (1985). Most recently, the term “horizontal political externalities” has been used to describe the situation when “political decisions impact the electoral outcome or approval ratings of other political actors or levels of government that were not involved in the decisionmaking.” Ben Depoorter, *Horizontal Political Externalities: The Supply and Demand of Disaster Management*, 56 DUKE L.J. 101, 109 (2006).

<sup>61</sup> Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2054 (1993).

<sup>62</sup> ANDRÉ DUA & DANIEL C. ESTY, *SUSTAINING THE ASIA PACIFIC MIRACLE: ENVIRONMENTAL PROTECTION AND ECONOMIC INTEGRATION* 59-60 (2d ed. 1997).

<sup>63</sup> See Adler, *supra* note 1, at 140.

<sup>64</sup> *Id.* at 160 (“The federal government is relatively absent when it comes to addressing interstate spillovers”).

eral efforts. Despite a few compacts and agreements that seek to address the problem, the political transaction costs of interstate compacts and agreements are rarely overcome.

### A. Federal Adjudication of Interstate Environmental Harms

The United States Supreme Court's first forays into environmental law were to resolve interstate pollution disputes,<sup>65</sup> and before the development of modern statutory environmental law in the 1970s, the federal government's primary tool for addressing interstate environmental harms was adjudication of disputes between states. Pursuant to Article III of the United States Constitution, the Supreme Court has original jurisdiction over disputes between states.<sup>66</sup> The Court has invoked this jurisdiction several times over the past century to resolve interstate disputes over transboundary pollution and allocation of transboundary waters, producing fact-specific rulings based on vague and competing legal principles.<sup>67</sup> In recent decades, the Court has become reluctant to exercise its jurisdiction over these technical and time-consuming disputes.<sup>68</sup> When it has exercised its jurisdiction, the Court's decisions have focused on the preemption of federal common law by federal regulatory statutes<sup>69</sup> and the applicability of state common law to interstate transboundary pollution.<sup>70</sup> This Section briefly explores the difficulty and challenges of the Supreme Court's adjudication of interstate environmental disputes to demonstrate the need for additional legal solutions to this problem.<sup>71</sup>

The *Missouri v. Illinois*<sup>72</sup> cases gave the Supreme Court its first opportunity to consider a dispute over interstate environmental harms. Prior to 1900, Chicago's considerable sewerage, stockyard, and industrial wastes were discharged into Lake Michigan via the Chicago River.<sup>73</sup> In 1889, the

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<sup>65</sup> See, e.g., *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907); *Missouri v. Illinois*, 200 U.S. 496 (1906) ("*Missouri I*").

<sup>66</sup> See U.S. CONST. art. III, § 2, cl. 2 ("In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be a Party, the supreme Court shall have original Jurisdiction.").

<sup>67</sup> See, e.g., *Wisconsin v. Illinois*, 278 U.S. 367 (1929); *Georgia v. Tenn. Copper Co.*, 206 U.S. 230; *Missouri II*, 200 U.S. 496; *Kansas v. Colorado*, 185 U.S. 125 (1902).

<sup>68</sup> See *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972); *Ohio v. Wyandotte Chems. Corp.*, 401 U.S. 493 (1971).

<sup>69</sup> See *City of Milwaukee v. Illinois*, 451 U.S. 304 (1981).

<sup>70</sup> See *Int'l Paper Co. v. Ouellette*, 479 U.S. 481 (1987).

<sup>71</sup> For excellent analyses of the Supreme Court's transboundary pollution case law, see generally Robert V. Percival, *The CWA and the Demise of the Federal Common Law of Interstate Nuisance*, 55 ALA. L. REV. 717 (2004) and Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931 (1997). For similarly excellent analyses of the Supreme Court's interstate waters equitable apportionment case law, see generally A. Dan Tarlock, *The Law of Equitable Apportionment Revisited, Updated, and Restated*, 56 U. COLO. L. REV. 381, 392 (1985) and, more recently, Robert Haskell Abrams, *Interstate Water Allocation: A Contemporary Primer for Eastern States*, 25 U. ARK. LITTLE ROCK L. REV. 155 (2002).

<sup>72</sup> *Missouri II*, 200 U.S. 496; *Missouri v. Illinois*, 180 U.S. 208 (1901) ("*Missouri I*").

<sup>73</sup> See *Missouri I*, 180 U.S. at 212.

State of Illinois created a Sanitary District which, acting as an agent of the state, subsequently undertook several drainage projects involving the Chicago River.<sup>74</sup> One of these projects involved the construction of an artificial channel, diverting the flow of the south branch of the Chicago River away from its natural drainage into Lake Michigan and toward the Des Plaines River, which in turn emptied into the Mississippi River via the Illinois River.<sup>75</sup>

The State of Missouri, located downriver from the point at which the Illinois River emptied into the Mississippi River, filed suit in the Supreme Court alleging harm to Missouri towns and citizens situated on the Mississippi River, and seeking an injunction against the use of the channel for waste disposal purposes.<sup>76</sup> The suit relied primarily on a common law theory of nuisance, buttressed with a claim that Illinois was also violating riparian principles by diverting water out of its natural watershed.<sup>77</sup> Missouri was primarily concerned that Illinois' waste was causing typhoid fever deaths among Missouri citizens. Illinois responded by filing a demurrer alleging both lack of jurisdiction under the Constitution's Article III "case or controversy" requirement and lack of adequate pleading.<sup>78</sup>

In its initial decision (*Missouri I*), the Court focused primarily on whether it could legitimately exercise jurisdiction over the states' dispute. The *Missouri I* Court engaged in a thorough review of the history, development, and interpretation of Article III of the U.S. Constitution. The Court determined that because partial relinquishment by the individual states of their sovereign powers concerning war and diplomacy was necessary for the establishment of a united and federalist nation, the U.S. Supreme Court must necessarily furnish a forum for the resolution of disputes between states.<sup>79</sup> The Court noted that an alternative method for resolving interstate disputes had previously been described in the Articles of Confederation, but Article III of the Constitution vested this function in the judiciary.<sup>80</sup> The Court's analysis is consistent with an account in the Federalist papers, which noted that while border controversies between the states may have been the primary concern of the Framers, they also recognized that the Court would hear other forms of interstate disputes.<sup>81</sup>

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<sup>74</sup> See *id.* at 210, 241-42.

<sup>75</sup> See *Missouri II*, 200 U.S. at 517; *Missouri I*, 180 U.S. at 208, 212.

<sup>76</sup> See *Missouri II*, 200 U.S. at 510; *Missouri I*, 180 U.S. at 216.

<sup>77</sup> See *Missouri II*, 200 U.S. at 526; *Missouri I*, 180 U.S. at 212. The Court ultimately decided the case on the merits of the nuisance claim, and did not entertain the riparian diversion allegation as a sufficient basis for the suit.

<sup>78</sup> See *Missouri I*, 180 U.S. at 216-18.

<sup>79</sup> *Id.* at 241.

<sup>80</sup> The Ninth Article of the Articles of Confederation had provided for a tribunal method of state-state dispute resolution, whereby the offended state would petition Congress to assemble the functional equivalent of an arbitration panel to hear and decide the controversy. See *id.*, 180 U.S. at 220-21. See also U.S. CONST. art. III, § 2, cl. 1; Judiciary Act of 1789, Ch. 20, §13, 1 Stat. 73, 80.

<sup>81</sup> THE FEDERALIST NO. 80, at 404 (Alexander Hamilton) (Buccaneer Books, 1992) ("[T]here are many other sources, besides interfering claims of boundary, from which bicker-



The Court's constitutional interpretation notwithstanding, it was still wary of having its jurisdiction invoked in circumstances other than those in which "States are in direct antagonism as States."<sup>82</sup> This holding became the first jurisdictional standard for the Supreme Court to hear an interstate environmental dispute. The *Missouri II* court subsequently confirmed the *Missouri I* jurisdictional requirements of state action and direct antagonism, and added two additional requirements. First, the case must "be of serious magnitude, clearly and fully proved."<sup>83</sup> Second, the case must be susceptible to judicial resolution.<sup>84</sup> Harm to any of a state's traditional sovereign interests, such as the property, health, safety, and welfare of its citizens, would provide a sufficient basis for suit against another state.<sup>85</sup> Additionally, indirect action by a state or direct action by a state's entity or subdivision (e.g., the Chicago Sanitary District) would satisfy the state action requirement.<sup>86</sup>

With the Court's jurisdiction established, the *Missouri II* court addressed the substantive merits of Missouri's nuisance claim. Ultimately, as in so many environmental disputes, Missouri's claim was undermined by the lack of technical and scientific certainty regarding its allegations. Writing for the Court, Justice Holmes first noted the technical complexity of this environmental dispute compared to traditional nuisance actions: "There is no pretence that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses — no visible increase of filth, no new smell."<sup>87</sup> Instead, Missouri's case "depends upon an inference of the unseen."<sup>88</sup> The technical complexity of determining causation and harm from a remote source in another state was the key theme of the Court's decision. This theme has been repeated in federal adjudications of interstate environmental disputes over the past century.

Justice Holmes began by assuming Missouri's "now-prevailing scientific explanation of typhoid fever to be correct."<sup>89</sup> He then detailed the two additional key inferences that Missouri's case relied upon. First, that incidents of typhoid fever had increased "considerably" since Illinois' discharge and that any such increases could not be explained by other factors.<sup>90</sup> Second, "that the bacillus of typhoid can and does survive the journey and reach the intake of St. Louis in the Mississippi."<sup>91</sup>

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ings and animosities may spring up among the members of the union . . . . Whatever practices may have a tendency to disturb the harmony between the states, are proper objects of federal superintendence and control.").

<sup>82</sup> *Missouri I*, 180 U.S. at 249 (Fuller, C.J., dissenting).

<sup>83</sup> *Missouri II*, 200 U.S. at 521.

<sup>84</sup> *See id.*

<sup>85</sup> *See Missouri I*, 180 U.S. at 236-37, 241.

<sup>86</sup> *See id.* at 237-38, 241.

<sup>87</sup> *Missouri II*, 200 U.S. at 522.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.* at 523.

<sup>90</sup> *See id.* at 522-23.

<sup>91</sup> *Id.* at 523.

Regarding the alleged increase in typhoid fever, Justice Holmes noted that even the “data upon which an increase in the deaths from typhoid fever in St. Louis is alleged are disputed.”<sup>92</sup> Missouri’s brief listed the deaths from typhoid fever in St. Louis before and after Illinois’ discharges began, but Illinois countered that “the numbers for the later years have been enlarged by carrying over cases which in earlier years would have been put into a miscellaneous column (intermittent, remittent, typho-malaria, etc., etc.).”<sup>93</sup> Further, Illinois claimed that other causes, including waste from within Missouri, were to blame for any actual increase in typhoid-related deaths.<sup>94</sup>

The technical complexity of causation was significantly compounded by uncertainty regarding the effects of the long distance (357 miles) from Chicago to St. Louis.<sup>95</sup> “The experts differ as to the time and distance within which a stream would purify itself. No case of an epidemic caused by infection at so remote a source is brought forward, and the cases which are produced are controverted.”<sup>96</sup> The parties disputed the time for pollutants to travel the distance based on experiments with floats as “varying from eight to eighteen and a half days, with forty-eight hours more from intake to distribution.”<sup>97</sup> Predictably, Missouri’s experts claimed that the typhoid bacillus could nonetheless “keep its power for twenty-five days or more,” while Illinois’ experts opined that a typhoid bacillus could not survive the time and distance.<sup>98</sup>

Ultimately, the Court held that Missouri could not show adequate proof of causation because the scientific evidence presented could not establish Illinois’ discharge of sewage into the Chicago River as the sole or primary source of pollution in the Mississippi River.<sup>99</sup> Justice Holmes’s conclusion relies on two themes repeated throughout the opinion: technical complexity regarding novel scientific issues and the complication of potentially harmful conduct by the plaintiff state itself (cities in Missouri also discharged waste to waterways). While the case is now a century old, the Court’s struggle with technical complexity, scientific uncertainty regarding distant causation, and complicating conduct in the affected state has continued to this day.<sup>100</sup>

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<sup>92</sup> *Id.*

<sup>93</sup> *Id.* at 523-24.

<sup>94</sup> *See id.* at 522-26.

<sup>95</sup> *Id.* at 523.

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 526.

<sup>100</sup> For example, the Court’s difficulty in understanding complex scientific issues involving causation and its reluctance to address environmental claims was humorously displayed in the recent oral argument before the Court in *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007). Justice Scalia referred to the situation in which carbon dioxide “leaves the air and goes up into the stratosphere.” Counsel for petitioners responded: “Respectfully, Your Honor, it is not the stratosphere. It’s the troposphere.” Justice Scalia: “Troposphere, whatever. I told you before I’m not a scientist.” (Laughter.) “That’s why I don’t want to have to deal with global warming, to tell you the truth.” Transcript of Oral Argument at 22-23, *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007) (No. 05-1120).

To be fair, affected states and their citizens can overcome these challenges and prevail in interstate environmental harm disputes before the Supreme Court. For example, the *Georgia v. Tennessee Copper Company and Ducktown Sulphur, Copper & Iron Company*<sup>101</sup> cases followed closely on the heels of the *Missouri* cases with very different results. The state of Georgia, pursuant to direction from the Georgia legislature and Governor, filed suit in the United States Supreme Court to enjoin two copper companies located and operated in the state of Tennessee from discharging noxious gases that were contaminating property located in Georgia.<sup>102</sup> Although the State of Georgia did not actually own much of the property that was harmed by the gases, the Court nonetheless recognized Georgia's standing as sovereign to bring suit:

This is a suit by a State for an injury to it in its capacity of *quasi-sovereign*. In that capacity the State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air. . . . When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining *quasi-sovereign* interests; and the alternative to force is a suit in this court.<sup>103</sup>

The fact that the defendants were private entities who were not governmentally affiliated with the State of Tennessee did not disqualify the suit, because Georgia had previously petitioned the State of Tennessee for relief, and because Georgia's sovereign character was sufficient to meet the jurisdictional requirements of Article III.<sup>104</sup> Neither was Georgia defeated on a theory of laches, as the Court found that Georgia had allowed a reasonable period of time for defendants to pursue efforts to reduce the emissions, or, alternatively, to show that their emissions were not the source of the harm suffered.<sup>105</sup> The Court ultimately granted injunctive relief limiting the defendants' emissions.<sup>106</sup>

The Court has also resolved disputes regarding interstate environmental harms other than those to transboundary waters.<sup>107</sup> One of these disputes,

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<sup>101</sup> *Georgia v. Tenn. Copper Co.*, 237 U.S. 474 (1915) ("*Georgia I*"); *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907).

<sup>102</sup> *Georgia I*, 206 U.S. at 236.

<sup>103</sup> *Id.* at 237.

<sup>104</sup> *See id.* at 236-39.

<sup>105</sup> *See id.* at 239. *See also Georgia II*, 237 U.S. at 475-76.

<sup>106</sup> *See Georgia II*, 237 U.S. at 477-78.

<sup>107</sup> Most notably, the Supreme Court has allocated shared interstate waters under its doctrine of equitable apportionment, which considers the relevant state water use laws and equity concerning the competing states. *See, e.g., Wyoming v. Colorado*, 259 U.S. 419 (1922); *Kansas v. Colorado*, 206 U.S. 46 (1907). *See also Tarlock, supra note 71; Abrams, supra note 71.*

*Wisconsin v. Illinois*,<sup>108</sup> involves the same Chicago diversion that was the subject of litigation in *Missouri v. Illinois*. After Illinois prevailed against Missouri regarding the discharged pollution, Wisconsin, Michigan, New York and other Great Lakes states brought another suit in the Supreme Court against Illinois. These complainant states alleged that the Chicago diversion had lowered levels in Lake Michigan, as well as Lakes Huron, Erie, and Ontario, by more than six inches, harming navigation and causing serious injury to their citizens and property.<sup>109</sup> Illinois again denied that the diversion caused any actual injury.<sup>110</sup>

Recognizing the need for assistance in handling the complex technical issues being raised, the Court appointed former Justice and Secretary of State Charles Evan Hughes to serve as special master.<sup>111</sup> His report found that Chicago's diversion lowered the levels of Lakes Michigan and Huron by six inches and Lakes Erie and Ontario by five inches,<sup>112</sup> causing damage "to navigation and commercial interests, to structures, to the convenience of summer resorts, to fishing and hunting grounds, to public parks and other enterprises, and to riparian property generally."<sup>113</sup> The Court adopted the special master's report, concluding that the reduced lake levels caused the complainant states and their citizens and property owners "great losses."<sup>114</sup> While generally supporting the claims of the complainant states, the Court recognized the public health implications and economic costs that would come with immediately halting the entire Chicago diversion.<sup>115</sup> The Court thus referred the matter back to the special master for determination of the proper relief.<sup>116</sup> The special master's report recommended a phased reduction in the Chicago diversion, allowing the city time to build adequate sewage treatment. The Court again adopted the special master's recommendations to ultimately limit the size of the diversion.<sup>117</sup>

The above cases demonstrate the two major challenges for the Court in adjudicating interstate environmental harm disputes. The first is the legal

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<sup>108</sup> *Wisconsin v. Illinois*, 449 U.S. 48 (1980) ("*Wisconsin VI*"); *Wisconsin v. Illinois*, 388 U.S. 426 (1967) ("*Wisconsin V*"); *Wisconsin v. Illinois*, 289 U.S. 395 (1933) ("*Wisconsin IV*"); *Wisconsin v. Illinois*, 281 U.S. 696 (1930) ("*Wisconsin III*"); *Wisconsin v. Illinois*, 281 U.S. 179 (1930) ("*Wisconsin II*"); *Wisconsin v. Illinois*, 278 U.S. 367 (1929) ("*Wisconsin I*").

<sup>109</sup> See *Wisconsin I*, 278 U.S. at 399-400.

<sup>110</sup> See *id.* at 400.

<sup>111</sup> See *id.* at 399. Hughes was originally appointed to the Supreme Court in 1910, but left the Court in 1916 to make a run for President. From 1921 to 1925, Hughes served as Secretary of State under President Warren G. Harding.

<sup>112</sup> See *id.* at 407.

<sup>113</sup> *Id.* at 408.

<sup>114</sup> *Id.* at 409.

<sup>115</sup> See *id.* at 420-21.

<sup>116</sup> See *id.* at 421.

<sup>117</sup> See *Wisconsin II*, 281 U.S. at 198, 201. See also *Wisconsin III*, 281 U.S. at 697. Subsequent litigation in the Supreme Court continued over several decades regarding Illinois' compliance with the diversion reduction schedule and the amount of water allowed for domestic pumping, with the ultimate result being that the total allowable diversion was increased to 3200 cubic feet per second, the level at which it is now capped. See *Wisconsin VI*, 449 U.S. 48; *Wisconsin V*, 388 U.S. at 427; *Wisconsin IV*, 289 U.S. 395.

challenge of balancing competing interests of state sovereignty. Source states argue for a sovereign right to regulate (or not regulate) polluting or other environmentally harmful activities within their borders as they see fit. Affected states argue for a sovereign right to be free of unwanted and harmful pollution or other negative environmental impacts from another state. The Court's numerous statements recognizing conflicting state sovereignty interests nonetheless leave uncertainty about how to reconcile these in practice.<sup>118</sup>

The Court first set forth the tension of competing interests in state sovereignty in the context of interstate environmental harm disputes in *Kansas v. Colorado*,<sup>119</sup> which involved competing claims to use of a shared water resource:

One cardinal rule, underlying all the relations of the States to each other, is that of equality of right. Each State stands on the same level with all the rest. It can impose its own legislation on no one of the others, and is bound to yield its own views to none. Yet, whenever . . . the action of one State reaches through the agency of natural laws into the territory of another State, the question of the extent and the limitations of the rights of the two States becomes a matter of justiciable dispute between them, and this court is called upon to settle that dispute in such a way as will recognize the equal rights of both and at the same time establish justice between them. In other words, through these successive disputes and decisions this court is practically building up what may not improperly be called interstate common law.<sup>120</sup>

A few cases and decades later, Justice Holmes was not able to offer any clearer statement regarding the competing interests of state sovereignty in *New Jersey v. New York*,<sup>121</sup> another decision involving competing claims to use of a shared water resource:

New York has the physical power to cut off all the water within its jurisdiction. But clearly the exercise of such a power to the destruction of the interest of lower States could not be tolerated. And on the other hand equally little could New Jersey be permitted to require New York to give up its power altogether in order that the river might come down to it undiminished. Both States have real and substantial interests in the River that must be reconciled as best they may be.<sup>122</sup>

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<sup>118</sup> See Merrill, *supra* note 2, at 944-46 (describing the Court's principles in these disputes as elusive).

<sup>119</sup> 206 U.S. 46 (1907).

<sup>120</sup> *Id.* at 97-98.

<sup>121</sup> 283 U.S. 336 (1931).

<sup>122</sup> *Id.* at 342-43.

The law in this area is no clearer now than at the time of these cases. This is due to the second major challenge for the Court in adjudicating interstate environmental harm disputes. These cases are highly fact specific, and often hinge on competing arguments over technical and scientific uncertainty. Perhaps for this reason, the Court has been extremely reluctant to hear interstate environmental disputes<sup>123</sup> and has relied on federal statutory preemption to avoid making substantive decisions on competing state sovereignty interests.<sup>124</sup>

The Court has made clear its lack of interest and competence in deciding interstate environmental disputes. Writing for the majority in *Ohio v. Wyandotte Chemicals Corp.*,<sup>125</sup> which declined to exercise the Court's jurisdiction over Ohio's transboundary pollution claims, Justice Harlan stated that "[h]istory reveals that the course of this Court's prior efforts to settle disputes regarding interstate air and water pollution has been anything but smooth."<sup>126</sup> Justice Harlan further noted that Justice Holmes in *Missouri v. Illinois* was "at pains to underscore the great difficulty that the Court faced in attempting to pronounce a suitable general rule of law to govern such controversies."<sup>127</sup> Justice Harlan also recognized that the legal challenge of interstate environmental cases is complicated and perhaps eclipsed by the technical and scientific challenges:

The nature of the case Ohio brings here is equally disconcerting. It can fairly be said that what is in dispute is not so much the law as the facts. And the factfinding process we are asked to undertake is, to say the least, formidable. . . . Indeed, Ohio is raising factual questions that are essentially ones of first impression to the scientists. The notion that appellate judges, even with the assistance of a most competent Special Master, might appropriately undertake at this time to unravel these complexities is, to say the least, unrealistic. Nor would it suffice to impose on Ohio an unusually high standard of proof. That might serve to mitigate our personal difficulties in seeking a just result that comports with sound judicial administration, but would not lessen the complexity of the task of preparing responsibly to exercise our judgment, or the serious drain on the resources of this Court it would entail.<sup>128</sup>

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<sup>123</sup> See *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972); *Ohio v. Wyandotte Chems. Corp.*, 401 U.S. 493 (1971).

<sup>124</sup> See *City of Milwaukee v. Illinois*, 451 U.S. 304, 317 (1981) ("Congress has not left the formulation of appropriate federal standards to the courts through application of often vague and indeterminate nuisance concepts and maxims of equity jurisprudence, but rather has occupied the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency.").

<sup>125</sup> 401 U.S. 493 (1971).

<sup>126</sup> *Id.* at 501.

<sup>127</sup> *Id.*

<sup>128</sup> *Id.* at 503-04.

Given the technical and scientific questions inherent in an interstate environmental dispute, Justice Harlan made clear that the Supreme Court should not be in the business of deciding such cases. He recognized that "this Court has found even the simplest sort of interstate pollution case an extremely awkward vehicle to manage."<sup>129</sup> Resolving interstate environmental disputes requires a range of skills, including "factfinding, conciliation, detailed coordination with — and perhaps not infrequent deference to — other adjudicatory bodies, and close supervision of the technical performance of local industries."<sup>130</sup> Justice Harlan readily admitted that the Supreme Court has "no claim to such expertise or reason to believe that, were we to adjudicate this case, and others like it, we would not have to reduce drastically our attention to those controversies for which this Court is a proper and necessary forum."<sup>131</sup>

The Supreme Court was envisioned by the Framers as the forum for resolving interstate disputes. Yet Justice Harlan's opinion makes clear that the Court does not want the job, especially when technical and scientific uncertainty dominates these disputes. Justice Scalia's comments at the recent *Massachusetts v. EPA* oral argument demonstrate that this view continues today.<sup>132</sup> The Court has instead encouraged legislative solutions and interstate bargaining to avoid the need for adjudication of interstate environmental disputes.<sup>133</sup> As discussed further in this Part, citizens affected by interstate environmental harms have taken the Court's not-so-subtle hints and looked to other branches of the federal government and interstate compacts and agreements to address these problems. However, both federal legislation and regulation and regional interstate compacts and agreements have provided little relief. If states would address the technical and scientific questions raised in interstate environmental disputes in a publicly accountable forum, the Court would be better able, and as discussed in Part III, perhaps more willing, to use its legal expertise to decide these cases.

### B. Federal Regulation of Interstate Environmental Harms

Even the staunchest scholarly advocates of state primacy and federal devolution for environmental law concede that interstate environmental harms necessitate a regulatory role for the federal government.<sup>134</sup> For these

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<sup>129</sup> *Id.* at 504.

<sup>130</sup> *Id.* at 505.

<sup>131</sup> *Id.* at 505.

<sup>132</sup> See *supra* note 100.

<sup>133</sup> See *Wyandotte Chems.*, 401 U.S. at 502-03. See also *New York v. New Jersey*, 256 U.S. 296, 313 (1921) ("We cannot withhold the suggestion, inspired by the consideration of this case, that the grave problem of sewage disposal presented by the large and growing populations living on the shores of New York Bay is one more likely to be wisely solved by cooperative study and by conference and mutual concession on the part of representatives of the states so vitally interested in it than by proceedings in any court however constituted.").

<sup>134</sup> See *Revesz*, *supra* note 1, at 2346; *Adler*, *supra* note 1, at 140; *Butler & Macey*, *supra* note 13, at 42.

scholars, federal environmental policy should begin, and perhaps end, with addressing interstate environmental harms.<sup>135</sup> This sentiment is reflected to some extent in the actions of federal lawmakers, as the federal environmental regulatory statutes of the 1970s were premised at least in part<sup>136</sup> on the need to address interstate pollution.<sup>137</sup> This Section focuses on the Clean Air Act (“CAA”)<sup>138</sup> and the Clean Water Act (“CWA”),<sup>139</sup> as these are the two federal environmental statutes that most directly relate to interstate pollution.<sup>140</sup> These statutes have certainly reduced total levels of air and water pollution, respectively. However, they have had only limited success in specifically addressing interstate pollution, and in some circumstances may have actually exacerbated the problem.

The federal CAA is “the statute designed to deal with the pollution that gives rise to the most serious problems of interstate externalities.”<sup>141</sup> The CAA begins with Congress’ stated finding “that the predominant part of the Nation’s population is located in its rapidly expanding metropolitan and other urban areas, which generally cross the boundary lines of local jurisdictions and often extend into two or more States.”<sup>142</sup> The centerpieces of the CAA are the National Ambient Air Quality Standards (“NAAQSs”), which are set by EPA to provide nationally uniform maximum concentrations of pollutants in order to protect public health and welfare.<sup>143</sup> The NAAQSs are intended to be met through a combination of federal standards for new stationary sources (e.g., factories and power plants) and mobile sources (e.g., automobiles and trucks) and state implementation plans for existing stationary sources.<sup>144</sup>

The CAA has significantly reduced air pollution from both stationary and mobile sources.<sup>145</sup> However, it might be a mistake to assume that these

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<sup>135</sup> See Revesz, *supra* note 1, at 2346 (arguing that federal regulatory efforts should be focused on the problem of interstate environmental externalities); Adler, *supra* note 1, at 140 (“The strongest case for federal involvement comes in the context of interstate spillovers, such as when pollution crosses state lines and the affected states are unable to resolve the conflict on their own.”); Butler & Macey, *supra* note 13, at 53 (“Interstate externalities are the only area where federal regulation may be superior to local regulation.”).

<sup>136</sup> The other primary rationales for federalization of environmental law address the ‘race-to-the-bottom’ phenomenon and advance public choice theory. See Revesz, *supra* note 46, at 1211-12.

<sup>137</sup> See, e.g., 42 U.S.C. § 7401(a)(1) (2000) (discussed below).

<sup>138</sup> *Id.* § 7401.

<sup>139</sup> 33 U.S.C. § 1251 (2000).

<sup>140</sup> See Merrill, *supra* note 2, at 954.

<sup>141</sup> See Revesz, *supra* note 1, at 2344.

<sup>142</sup> 42 U.S.C. § 7401(a)(1).

<sup>143</sup> See *id.* § 7408.

<sup>144</sup> See *id.* §§ 7410-11, 7521.

<sup>145</sup> By 1990, the CAA had resulted in a 40 percent reduction in sulfur dioxide emissions from electric utilities and a 75 percent reduction in total suspended particulate emissions from industrial and utility smokestacks. In addition, the CAA was largely responsible for a 50 percent reduction in carbon monoxide emissions, a 30 percent reduction in emissions of nitrogen oxides, a 45 percent reduction in emissions of volatile organic compounds, and a near elimination of lead emissions from motor vehicles. These reductions were achieved during a period in which population grew by 22.3 percent and the national economy grew by 70 per-



aggregate reductions in air pollution have resulted in reduced interstate air pollution. The total amount of air pollution is just one of several factors that lead to interstate air pollution. The height of the smokestack (for stationary sources) and the locations of the air pollution emissions relative to state boundaries and prevailing winds are also significant factors.<sup>146</sup> While the CAA contains several provisions intended to address these additional factors, these provisions have not been very effective. For example, the CAA limits reliance on tall smokestacks to achieve the NAAQSs in a region,<sup>147</sup> since tall smokestacks simply disperse the pollution to other regions.<sup>148</sup> However, the CAA's tall-stack provisions have failed to reduce the obvious incentives for states to continue using tall smokestacks to externalize pollution harms on other states and have instead exacerbated such incentives.<sup>149</sup>

The CAA has two other provisions intended to address interstate air pollution. Section 110(a)(2)(D) requires state implementation plans to prohibit "any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to [NAAQSs]".<sup>150</sup> This provision is complemented by section 126(b), which authorizes any state or political subdivision to petition the EPA Administrator "for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of [section 7410(a)(2)(D)(ii)]".<sup>151</sup>

To date, only one instance exists in which section 126 was effectively utilized to address interstate air pollution. In February 1998, eight states petitioned EPA under section 126 for relief from NO<sub>x</sub> emissions originating in southeastern and mid-western states.<sup>152</sup> After the state petitioners filed suit to compel EPA to act, EPA and the state petitioners reached a settlement agreement in March 1998 that set out a timetable for EPA action.<sup>153</sup> EPA eventually responded to the petitions by issuing a rule to control NO<sub>x</sub> emissions. The final version of the rule, issued in January 2000, included the implementation of a NO<sub>x</sub> market-based trading program.<sup>154</sup> The rule was subsequently challenged by upwind power companies and others, but withstood judicial review with only two aspects of the rule remanded for further

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cent. See EPA, FINAL REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF THE CAA, 1970 TO 1990, EPA-410-R-97-002 (1997), at 8, 15, 26, 55.

<sup>146</sup> See Revesz, *supra* note 1, at 2351.

<sup>147</sup> See 42 U.S.C. § 7423(a)(1). See also *Natural Res. Def. Council v. EPA*, 489 F.2d 390, 406-11 (5th Cir. 1974), *rev'd on other grounds sub nom. Train v. Natural Res. Def. Council*, 421 U.S. 60 (1975).

<sup>148</sup> See Revesz, *supra* note 1, at 2351.

<sup>149</sup> See *id.* at 2355-58.

<sup>150</sup> 42 U.S.C. § 7410(a)(2)(D)(i).

<sup>151</sup> *Id.* § 7426(b).

<sup>152</sup> Arnold W. Reitze, Jr., *State and Federal Command-and-Control Regulation of Emissions From Fossil-Fuel Electric Power Generating Plants*, 32 ENVTL. L. 369, 410-11 (2002).

<sup>153</sup> See *id.* at 411; Proposed Settlement Agreement, 63 Fed. Reg. 10,874, 10,875 (March 5, 1998).

<sup>154</sup> *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1036, 1039 (D.C. Cir. 2001).

justification by EPA.<sup>155</sup> This success, however, should be viewed in light of other failed attempts by states to use the CAA to address interstate air pollution.<sup>156</sup>

Efforts to address interstate water pollution under the CWA have not fared much better. The CWA seeks to create a partnership between the states and the federal government “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>157</sup> To achieve this goal, the CWA relies primarily on two regulatory mechanisms. “Effluent limitations” are promulgated by EPA and use technological standards to restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources.<sup>158</sup> To supplement the effluent limitations, “water quality standards” are typically promulgated by the states and establish the desired condition of a waterway.<sup>159</sup> The water quality standards are needed because “numerous point sources, despite individual compliance with effluent limitations, may [require] further regulat[ion] to prevent water quality from falling below acceptable levels.”<sup>160</sup> In addition, water quality standards consider the cumulative impact of non-point sources, such as agricultural run-off and erosion from timber harvesting.<sup>161</sup> These mechanisms are enforced primarily through National Pollutant Discharge Elimination System (“NPDES”) permits, which are generally required for any point source discharge of pollution into a navigable body of water.<sup>162</sup>

The CWA authorizes each state to establish “its own permit program for discharges into navigable waters within its jurisdiction.”<sup>163</sup> These state permit programs should provide an opportunity to address interstate water pollution. EPA can refuse to authorize state permit programs that do not insure that other states with potentially affected waters, as well as the public, “receive notice of each application for a permit and . . . opportunity for public hearing before a ruling on each such application.”<sup>164</sup> State permit programs must further “insure that any State . . . whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State” and to the EPA Administrator.<sup>165</sup> Finally, “if any part of such written recommendations are not accepted by the permitting State . . . the permitting State will notify such affected State (and the Administra-

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<sup>155</sup> *Id.* at 1067-68.

<sup>156</sup> See Revesz, *supra* note 1, at 2362-74; *New York v. EPA*, 852 F.2d 574, 581 (D.C. Cir. 1988) (Ginsburg, J., concurring). See also Merrill, *supra* note 2, at 960 (“The consistent losing streak of plaintiff states . . . under the CAA suggests that even express statutory causes of action for transboundary pollution are of limited utility.”).

<sup>157</sup> 33 U.S.C. § 1251(a) (2000).

<sup>158</sup> See *id.* §§ 1311, 1314.

<sup>159</sup> See *id.* § 1313.

<sup>160</sup> *EPA v. California ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 n.12 (1976).

<sup>161</sup> See *Pronsolino v. Nastro*, 291 F.3d 1123 (9th Cir. 2002).

<sup>162</sup> See 33 U.S.C. §§ 1311(a), 1342, 1362(12).

<sup>163</sup> *Id.* § 1342(b).

<sup>164</sup> *Id.* § 1342(b)(3).

<sup>165</sup> *Id.* § 1342(b)(5).

tor) in writing of its failure to so accept such recommendations together with its reasons for so doing.”<sup>166</sup>

The CWA thus provides a consultative process which, in theory, would resolve many interstate water pollution disputes. The Supreme Court has recognized that “[a]lthough these provisions do not authorize the downstream State to veto the issuance of a permit for a new point source in another State, the Administrator retains authority to block the issuance of any state-issued permit that is ‘outside the guidelines and requirements’ of the Act.”<sup>167</sup> In effect, EPA should act as an arbitrator of interstate disputes. This process was described by the Supreme Court in *International Paper Co. v. Ouellette*:

While source States have a strong voice in regulating their own pollution, the [CWA] contemplates a much lesser role for States that share an interstate waterway with the source (the affected States). Even though it may be harmed by the discharges, an affected State only has an advisory role in regulating pollution that originates beyond its borders. Before a federal permit may be issued, each affected State is given notice and the opportunity to object to the proposed standards at a public hearing. An affected State has similar rights to be consulted before the source State issues its own permit; the source State must send notification, and must consider the objections and recommendations submitted by other States before taking action. Significantly, however, an affected State does not have the authority to block the issuance of the permit if it is dissatisfied with the proposed standards. An affected State’s only recourse is to apply to the [EPA] Administrator, who then has the discretion to disapprove the permit if he concludes that the discharges will have an undue impact on interstate waters.<sup>168</sup>

If an impasse develops between EPA and a source state with an approved permit program, EPA can retake jurisdiction and issue its own permit.<sup>169</sup> Affected states are given additional power over discharges in source states by a federal regulation that prohibits the issuance of a discharge permit “when the imposition of conditions cannot ensure compliance with the applicable water quality standards [including antidegradation policies] of all affected states.”<sup>170</sup> This regulation was upheld by the Supreme Court in *Arkansas v. Oklahoma*<sup>171</sup> on the ground that federally approved water quality standards become federal law that preempts conflicting state regulations. The Court stated that “[l]imits on an affected State’s direct participation in

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<sup>166</sup> *Id.*

<sup>167</sup> *Arkansas v. Oklahoma*, 503 U.S. 91, 102 (1992) (citing 33 U.S.C. § 1342(d)(2)).

<sup>168</sup> 679 U.S. 481, 490-91 (citations omitted).

<sup>169</sup> 33 U.S.C. § 1342(d)(4).

<sup>170</sup> 40 C.F.R. § 122.4(d) (2007).

<sup>171</sup> 503 U.S. at 92.

permitting decisions . . . do not in any way constrain the EPA's authority to require a point source to comply with downstream water quality standards."<sup>172</sup>

The interstate water pollution scheme provided by the CWA thus appears to thoroughly address the problem while respecting state sovereignty. Unfortunately, this is a leading example of the "law in books" differing from the "law in action."<sup>173</sup> As described by Professor Merrill, "[w]hen we look beneath the surface of . . . domestic statutes, the 'law in action' with respect to transboundary pollution reflects something considerably less impressive."<sup>174</sup> EPA has rarely taken formal action on interstate water pollution pursuant to the CWA.<sup>175</sup> This is likely because "the Environmental Protection Agency, like other federal agencies, is reluctant to take on heated interstate controversies."<sup>176</sup> This suggests that relying on the federal government, and specifically on federal agencies, to resolve contentious interstate environmental impact disputes may not be the most politically realistic solution, regardless of statutory authority.<sup>177</sup>

### C. *Bargained Internalization Through Interstate Compacts*

Neither federal adjudication nor federal regulation have provided a consistent and reliable mechanism to force internalization of interstate environmental harms. The failure to address the problem through vertical federalism (with the federal government imposing a solution on the states) has been mirrored by a failure to address the problem through horizontal federalism (with states imposing a solution on themselves). States certainly have the constitutional authority to regulate interstate environmental harms between themselves through interstate compacts approved by Congress. However, the nature of interstate environmental harms and the political

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<sup>172</sup> *Id.* at 106.

<sup>173</sup> See Merrill, *supra* note 2, at 937 (citing Roscoe Pound, *Law in Books and Law in Action*, 44 AM. L. REV. 12, 15 (1910)).

<sup>174</sup> *Id.* at 957-58.

<sup>175</sup> While rare, EPA has on occasion objected to a state-issued permit to protect another state's water quality pursuant to the CWA. See *Champion Int'l Corp. v. EPA*, 648 F. Supp. 1390, 1394 (W.D.N.C. 1986) (permitting EPA to object to a permit issued to a paper mill by North Carolina to protect water quality in Tennessee), *rev'd, vacated and remanded*, 850 F.2d 182 (4th Cir. 1988); *City of Albuquerque v. Browner*, 865 F. Supp. 733, 736 (D.N.M. 1993) (upholding EPA approval of the water quality standards of an Indian tribe (recognized as state under the CWA) that had imposed limitations on discharges by an upstream state and municipality).

<sup>176</sup> Richard B. Stewart, *Interstate Resource Conflicts: The Role of the Federal Courts*, 6 HARV. ENVTL. L. REV. 241, 260-61 (1982). Professor Merrill further argues that the failure of EPA to use the CWA to address interstate water pollution is a function of the statute's unrealistic strict liability regime. See Merrill, *supra* note 2, at 960-61, 992-97.

<sup>177</sup> For more evidence that reliance on federal regulation to resolve interstate environmental disputes is misplaced, we can look to our neighbors to the north, as federal regulatory efforts in Canada have also failed to address interprovincial environmental impacts. See DAVID R. BOYD, *UNNATURAL LAW: RETHINKING CANADIAN ENVIRONMENTAL LAW AND POLICY* 232 (2003).

transaction costs of negotiating and enacting compacts explains why this solution is rarely employed.

Interstate compacts are essentially contracts between states entered into through state legislation.<sup>178</sup> When interstate compacts increase the power of the states at the expense of the federal government, they are subject to congressional approval.<sup>179</sup> Once an interstate compact has been approved by Congress, it has the full force and supremacy of federal law.<sup>180</sup> The terms of a federally-approved compact can be enforced in federal court if a state ignores its compact duties.<sup>181</sup>

Future Supreme Court Justice Felix Frankfurter and James Landis suggested using compacts to conserve interstate natural resources over eighty years ago.<sup>182</sup> Since most interstate environmental harms are regional rather than national in scope, compacts between the few interested and affected states make more sense than federal involvement.<sup>183</sup> Compacts could be used to create and enforce almost any type of interstate environmental harm prevention regime, or simply provide a mechanism for "Coasean-type negotiations"<sup>184</sup> to resolve interstate environmental harm disputes. The theoretical possibilities are endless; unfortunately the political realities are much dimmer.

There are some notable examples of interstate compacts used to address interstate environmental harms. At the most basic level are interstate compacts that essentially provide for general information sharing and coordination of efforts regarding a shared resource. For example, the Great Lakes Basin Compact,<sup>185</sup> approved by Congress in 1968, includes each of the eight Great Lakes states<sup>186</sup> as members and creates a Great Lakes Commission comprised of representatives from the member states.<sup>187</sup> The purpose of the Great Lakes Basin Compact and the Great Lakes Commission is to gather data and make non-binding advisory recommendations regarding research and cooperative programs for the Great Lakes.<sup>188</sup> Professor Dellapenna describes this as a "we'll keep in touch" approach to interstate water management that rarely achieves the lofty goals set forth in such agreements.<sup>189</sup>

<sup>178</sup> See *Texas v. New Mexico*, 482 U.S. 124, 128 (1987).

<sup>179</sup> See U.S. CONST. art. I, § 10, cl. 3. See also *Virginia v. Tennessee*, 148 U.S. 503, 519 (1893).

<sup>180</sup> See *Culyer v. Adams*, 449 U.S. 433, 438 (1981) (congressional consent "transforms an interstate compact . . . into a law of the United States").

<sup>181</sup> See *Texas v. New Mexico*, 482 U.S. at 128 (allowing prospective equitable relief as well as a legal remedy for past breaches).

<sup>182</sup> See Felix Frankfurter & James M. Landis, *The Compact Clause of the Constitution—A Study in Interstate Adjustments*, 34 YALE L.J. 685, 699 (1925).

<sup>183</sup> See Adler, *supra* note 1, at 141.

<sup>184</sup> Wallace E. Oates, *A Reconsideration of Environmental Federalism*, in RECENT ADVANCES IN ENVIRONMENTAL ECONOMICS 4 (John A. List & Aart de Zeeuw eds., 2002).

<sup>185</sup> Great Lakes Basin Compact, Pub. L. No. 90-419, 82 Stat. 414 (1968).

<sup>186</sup> Illinois, Indiana, Michigan, Minnesota, Ohio, Pennsylvania, New York, and Wisconsin.

<sup>187</sup> Great Lakes Basin Compact, art. II, IV, Pub. L. No. 90-419, 82 Stat. 414-16 (1968).

<sup>188</sup> *Id.*, art. VI(G),(N), 82 Stat. at 417-18. See also Hall, *supra* note 6, at 423-24.

<sup>189</sup> Joseph W. Dellapenna, *Interstate Struggles Over Rivers: The Southeastern States and the Struggle Over the 'Hooch*, 12 N.Y.U. ENVTL. L.J. 828, 838-39 (2005).

Other compacts provide more substantive solutions to interstate environmental harms resulting from use of shared interstate waters. Western water compacts, such as the Colorado River Compact<sup>190</sup> and the Rio Grande Compact,<sup>191</sup> simply divide and allocate rights to a shared river among the party states. These compacts seek to manage interstate environmental harms by limiting the amount of water that can be diverted from a shared water body.<sup>192</sup> Eastern water compacts, notably the Delaware River Basin Compact<sup>193</sup> and the Susquehanna River Basin Compact,<sup>194</sup> use a more regulatory approach. These compacts establish centralized interstate commissions, comprised of the party states and the federal government, with regulatory powers over water withdrawals that could have interstate environmental impacts.<sup>195</sup> Some interstate water compacts are focused exclusively on pollution control, such as the Ohio River Valley Water Sanitation Commission.<sup>196</sup> This eight state compact, enacted in 1948, requires sewage treatment by all municipalities within the Ohio River basin, backed by a collective enforcement provision.<sup>197</sup>

The most recent development in the use of compacts to address interstate environmental harms is the proposed Great Lakes-St. Lawrence River Basin Water Resources Compact.<sup>198</sup> This proposed compact uses a new “co-operative horizontal federalism” model to create common state environmental standards to protect interstate natural resources.<sup>199</sup> Under this approach, states “jointly develop common minimum legal standards (substantive and/or procedural) to manage a shared resource, but leave the individual states with the flexibility and autonomy to administer those standards under state law.”<sup>200</sup> An individual state’s discretion is limited by programmatic review and enforcement by its peers, not the federal government.<sup>201</sup>

Despite the above examples, compacts have proven to be an elusive mechanism for addressing interstate environmental harms. This is due to both the nature of interstate environmental harms and the political transaction costs of negotiating and enacting an interstate compact. First, there are some situations of interstate environmental harms in which the state that is the source of the harm will not have any incentive to negotiate or enact a compact with the affected state. Absent pressure from federal adjudication or regulation, an upstream state will not desire to enter into a compact with a

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<sup>190</sup> 70 CONG. REC. 324 (1928)

<sup>191</sup> 53 Stat. 785 (1939).

<sup>192</sup> See Hall, *supra* note 6, at 411-12.

<sup>193</sup> Pub. L. No. 87-328, 75 Stat. 688 (1961).

<sup>194</sup> Pub. L. No. 91-575, 84 Stat. 1509 (1970).

<sup>195</sup> See Dellapenna, *supra* note 189, at 837-50.

<sup>196</sup> 54 Stat. 752 (1940).

<sup>197</sup> See *id.*

<sup>198</sup> Council of Great Lakes Governors, Great Lakes-St. Lawrence River Basin Water Resources Compact (Dec. 13, 2005), available at [http://www.cglg.org/projects/water/docs/12-13-05/Great\\_Lakes-St\\_Lawrence\\_River\\_Basin\\_Water\\_Resources\\_Compact.pdf](http://www.cglg.org/projects/water/docs/12-13-05/Great_Lakes-St_Lawrence_River_Basin_Water_Resources_Compact.pdf).

<sup>199</sup> See generally Hall, *supra* note 6.

<sup>200</sup> *Id.* at 406.

<sup>201</sup> See *id.* at 406-07.

downstream state that limits discharge of water pollution. At times states remain reluctant to enter into binding compacts even when there is a legitimate threat of interstate litigation.<sup>202</sup>

Second, even when states have a shared incentive to enter into a compact, the political transaction costs make negotiating and enacting compacts very difficult. The transaction costs for bargaining are only justified for ongoing issues, not discrete problems. A single instance of interstate water pollution or the siting of a waste facility near a state border would simply not justify the time, resources, and expertise necessary to negotiate a compact. Negotiating a compact only makes sense when there are repeated transactions between the states in the form of multiple instances of interstate environmental harms or reliance on a significant shared natural resource. Thus, states would not even propose addressing many interstate environmental harms through a compact.

Third, when state leaders choose to risk the political resources necessary to negotiate a compact, the process of enactment makes success a long-shot at best. Enactment of a compact requires a high level of political will and collective action, as compacts must be uniformly ratified by each state's legislative body and approved by both houses of Congress. The process is a political obstacle course, especially for compacts between numerous states that share a large regional resource such as a major airshed. Further, the compact process challenges the traditional role of state legislatures, since the negotiations occur up front and no individual state can unilaterally modify the terms of the compact during ratification.

While the compact process is undermined by high political transaction costs, other forms of state action to address interstate environmental harms could avoid these costs. Individual state legislation aided by model uniform acts or simply reciprocity for substantive similar state laws could accomplish many of the goals of an interstate compact without the collective action problems. This is particularly true when the legal regime is premised on information gathering and public process, rather than liability or adjudication rules. As discussed in the next Part, individual state legislation for interstate environmental impact assessment, predicated on reciprocity with other states, is a more politically viable alternative to formal compacts and a more effective tool for addressing political externalities.

### III. A PROPOSAL FOR INTERSTATE ENVIRONMENTAL IMPACT ASSESSMENT

As described in Part I of this article, interstate environmental harms can be viewed as political externalities. Lack of information regarding harms in another jurisdiction, lack of public process and accountability, and traditional economic externalization combine to produce inefficient interstate environmental harms. The failure of federal adjudications, federal regulations,

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<sup>202</sup> See generally J.B. Ruhl, *Equitable Apportionment of Ecosystem Services: New Water Law for a New Water Age*, 19 J. LAND USE & ENVTL. L. 47 (2003); Abrams, *supra* note 71.

and interstate compacts to address interstate environmental harms (described in Part II) is not surprising, since none of these mechanisms have recognized the underlying causes encompassed in the concept of political externalities. This Part proposes a new mechanism — interstate environmental impact assessment — to directly address the causes of interstate environmental harms. Interstate environmental impact assessment builds on both domestic and transboundary environmental impact assessment law. Thus, this Part first describes these laws with a focus on their applicability to an interstate environmental impact assessment proposal. This Part then proposes the key elements of an interstate environmental impact assessment necessary to address political externalities.

### A. *Environmental Impact Assessment Law*

A discussion of environmental impact assessment law should begin with the National Environmental Policy Act (“NEPA”).<sup>203</sup> Passed in 1969, NEPA “launched the ‘environmental decade’ of the 1970s [and] has been hailed as one of the nation’s most important environmental laws.”<sup>204</sup> NEPA was intended to “promote environmentally sensitive decision-making without prescribing any substantive standards.”<sup>205</sup> It accomplishes this goal by requiring information exchange and public processes. NEPA “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision making process and the implementation of that decision.”<sup>206</sup>

NEPA’s central legal requirement is that federal agencies prepare an Environmental Impact Statement (“EIS”) whenever a proposed major federal action will significantly affect the quality of the human environment.<sup>207</sup> “[T]his simple information disclosure mandate forces agency managers to identify and confront the environmental consequences of their actions, about which they otherwise would remain ignorant. It also opens governmental

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<sup>203</sup> Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321–4347 (2000)).

<sup>204</sup> See Bradley C. Karkkainen, *Toward a Smarter NEPA: Monitoring and Managing Environmental Performance*, 102 COLUM. L. REV. 903, 904, 904 n.1 (2002) (citing COUNCIL ON ENVIRONMENTAL QUALITY, *THE NATIONAL ENVIRONMENTAL POLICY ACT: A STUDY OF ITS EFFECTIVENESS AFTER TWENTY-FIVE YEARS* 3 (1997); Lynton K. Caldwell, *Implementing NEPA: A Non-Technical Political Task*, in *ENVIRONMENTAL POLICY AND NEPA: PAST, PRESENT AND FUTURE* 25, 26 (Ray Clark & Larry Canter eds., 1997); Ray Clark, *NEPA: The Rational Approach to Change*, in *ENVIRONMENTAL POLICY AND NEPA: PAST, PRESENT AND FUTURE* 15-16 (Ray Clark & Larry Canter eds., 1997); DANIEL R. MANDELKER, *NEPA LAW & LITIGATION* § 1.01 (2d ed. 1992); Michael C. Blumm, *A Primer on Environmental Law and Some Directions for the Future*, 11 VA. ENVTL. L.J. 381, 382 (1992); William H. Rogers, Jr., *The Most Creative Moments in the History of Environmental Law: “The Whats,”* 2000 U. ILL. L. REV. 1, 31)).

<sup>205</sup> *Anderson v. Evans*, 314 F.3d 1006, 1016 (9th Cir. 2002).

<sup>206</sup> *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

<sup>207</sup> *Sierra Club v. Peterson*, 717 F.2d 1409, 1412 (D.C. Cir. 1983). See also 42 U.S.C. § 4332(2)(C).



decisions to an unprecedented level of public scrutiny, with consequent political implications that decisionmakers ignore only at their peril."<sup>208</sup> At its best, NEPA's EIS process provides a "combustible blend of information, transparency, and political accountability [which] creates powerful pressures on agency decisionmakers to avoid the most environmentally damaging courses of action, and to mitigate environmental harms when it is cost effective to do so."<sup>209</sup>

NEPA uses information exchange and public process to create accountability for federal agencies which are not directly accountable to an electorate. Not only must the EIS be provided to the public,<sup>210</sup> but federal regulations implementing NEPA further require public notice and comment when the scope of the EIS is determined, after a draft has been prepared, and at other key stages of EIS preparation.<sup>211</sup> By "open[ing] government decisionmaking to public scrutiny" NEPA "exerts a powerful prophylactic influence on the course of agency action."<sup>212</sup> As discussed below, this model could similarly be used to create accountability for state decision-makers not accountable to the electorate of another state.

The statutory language of NEPA is silent regarding its applicability to externalized environmental harms imposed outside of the United States. However, the Council on Environmental Quality<sup>213</sup> has issued "Guidance on NEPA Analyses for Transboundary Impacts."<sup>214</sup> The guidance recognized that as a policy matter, NEPA's environmental impact assessment procedures should apply to projects within the United States that have externalized impacts imposed on other countries.<sup>215</sup> In addition to the Council on Environmental Quality's guidance, numerous federal court decisions have interpreted NEPA to apply to actions within the United States with externalized environmental impacts in other countries.<sup>216</sup> Thus, while NEPA is primarily intended to address intra-jurisdictional environmental harms, it is

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<sup>208</sup> Karkkainen, *supra* note 204, at 904-05 & nn.4-5 (citing SERGE TAYLOR, MAKING BUREAUCRACIES THINK: THE ENVIRONMENTAL IMPACT STATEMENT STRATEGY OF ADMINISTRATIVE REFORM 251 (1984); Jonathan Poisner, *A Civic Republican Perspective on the National Environmental Policy Act's Process for Citizen Participation*, 26 ENVTL. L. 53, 54-55 (1996); Sidney A. Shapiro, *Administrative Law After the Counter-Reformation: Restoring Faith in Pragmatic Government*, 48 U. KAN. L. REV. 689, 693-96 (2000)).

<sup>209</sup> *Id.* at 905.

<sup>210</sup> See 42 U.S.C. § 4332(2)(C).

<sup>211</sup> See 40 C.F.R. §§ 1501.7, 1502.9, 1503 (2007).

<sup>212</sup> Karkkainen, *supra* note 204, at 913.

<sup>213</sup> The Council on Environmental Quality was established by NEPA as an agency within the Executive Office of the President charged with the task of ensuring that federal agencies meet their obligations under NEPA. See generally 42 U.S.C. §§ 4342, 4344.

<sup>214</sup> COUNCIL ON ENVIRONMENTAL QUALITY GUIDANCE ON NEPA ANALYSES FOR TRANSBOUNDARY IMPACTS (July 1, 1997), available at <http://ceq.eh.doe.gov/nepa/regs/transguide.html>.

<sup>215</sup> *Id.* ("NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects . . .").

<sup>216</sup> See, e.g., *Wilderness Soc'y v. Morton*, 463 F.2d 1261 (D.C. Cir. 1972); *Swinomish Tribal Cmty. v. Fed. Energy Regulatory Comm'n*, 627 F.2d 499 (D.C. Cir. 1980); *Manitoba v. Norton*, 398 F. Supp. 2d 41 (D.D.C. 2005).

certainly an applicable (but perhaps not ideal) model for a new policy to address inter-jurisdictional environmental harms at the state level.

NEPA has already served as a model for advancing the general concept of environmental impact assessment under state law.<sup>217</sup> A recent survey indicated that thirty-two states have some form of environmental impact assessment policy modeled after NEPA.<sup>218</sup> Not only do these state laws provide for environmental impact assessment of state projects and permit decisions, but many of these NEPA-inspired state laws offer improvements over the original federal act.<sup>219</sup> Two key differences between some of the state laws and NEPA are worth noting for purposes of this discussion.

First, while NEPA is purely procedural and does not require a specific outcome based on the EIS, a few states have established substantive requirements in their environmental impact assessment laws that require mitigation of environmental impacts.<sup>220</sup> As discussed in the next Section of this Part, states that impose substantive obligations based on environmental impact assessments may decide not to extend the substantive obligations to interstate environmental impacts, unless the affected state would do the same. Second, in addition to covering state projects and decisions, some of the state laws also apply to local governments.<sup>221</sup> This is particularly important in addressing interstate environmental harms from sprawl, since most land use decisions are made by local governments.<sup>222</sup> Thus, as discussed in the next Section, an interstate environmental impact assessment policy should follow the legal model of states such as California, New York, and Minnesota, and include local government actions and decisions.

The concept of environmental impact assessment first provided by NEPA has not only spread to state law, but also to other countries. Since NEPA was enacted in the United States, over one hundred countries have

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<sup>217</sup> See Karkkainen, *supra* note 204, at 905.

<sup>218</sup> See Revesz, *supra* note 21, at 617-18.

<sup>219</sup> See *id.* at 617-20. For a listing of state environmental impact assessment laws, see MANDELKER, *supra* note 204, § 12.02[1].

<sup>220</sup> The states that have a substantive requirement to reduce or mitigate negative environmental impacts identified in the environmental impact assessment are California, New York, Minnesota, Massachusetts, and the District of Columbia. See CAL. PUB. RES. CODE § 21,002.1(b) (2007); N.Y. ENVTL. CONSERV. LAW § 8-0109(1) (2007); MINN. STAT. § 116D.04(6) (2007); MASS. GEN. LAWS ch. 30, § 61 (2007); and D.C. CODE ANN. § 6-981 (2007). See also Revesz, *supra* note 21, at 618-20.

<sup>221</sup> The states that subject local governments to environmental impacts assessment requirements are California, New York, Minnesota, Massachusetts, and the state of Washington. See CAL. PUB. RES. CODE §§ 21,003(a), 21,063, 21,151 (defining “public agency” to include “any county, city and county, city, regional agency, public district, redevelopment agency, or other political subdivision”); N.Y. ENVTL. CONSERV. LAW § 8-0105 (defining covered “state agencies,” as “any . . . public authority or commission” and further defining “local agency” as “[a]ny local agency, board, district, commission or governing body, including any city, county, and other political subdivision of the state); MINN. STAT. § 116D.04(1)(a); MASS. GEN. LAWS ch. 30, § 62 (defining as an “agency” subject to the statute “any authority of any political subdivision which is specifically created as an authority under special or general law”); WASH. ADMIN. CODE § 43.21C.020 (2007). See also *Barrie v. Kitsap County*, 613 P.2d 1148 (Wash. 1980).

<sup>222</sup> See Buzbee, *supra* note 9, at 10.

established some form of domestic environmental impact assessment law.<sup>223</sup> The widespread adoption of domestic environmental impact assessment law has facilitated growth of the concept of transboundary environmental impact assessment under international law.<sup>224</sup> But international transboundary environmental impact assessment law should not be viewed as merely an extension of domestic environmental impact assessment law. It is also a necessary set of procedures related to preventing transboundary pollution harms,<sup>225</sup> and in this way can serve as a useful model for addressing interstate environmental harms.

International transboundary environmental impact assessment is a logically required first step to prevent international transboundary pollution, since addressing a harm requires knowing something about it.<sup>226</sup> The importance of transboundary environmental impact assessment under international law is evident in the United Nations Conference on Environment and Development Rio Declaration of 1992:

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.<sup>227</sup>

Despite the widespread adoption of domestic environmental impact assessment laws and the Rio Declaration's support of the principle of transboundary environmental impact assessment, there is still no global treaty on transboundary environmental impact assessment.<sup>228</sup> There are, however, several regional models worth noting.<sup>229</sup> The Convention on Environmental Impact in a Transboundary Context,<sup>230</sup> known as the Espoo Convention, was signed by primarily European countries in 1991.<sup>231</sup> It requires parties to perform an environmental impact assessment for any activity that is likely to cause a significant transboundary environmental impact.<sup>232</sup> The Espoo Con-

<sup>223</sup> See Lois J. Schiffer, *The National Environmental Policy Act Today, with an Emphasis on its Application Across U.S. Borders*, 14 DUKE ENVTL. L. & POL'Y F. 325, 327 (2004).

<sup>224</sup> See John H. Knox, *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT'L L. 291, 294 (2002).

<sup>225</sup> See *id.*

<sup>226</sup> See *id.* at 295-96.

<sup>227</sup> See Rio Declaration on Environment and Development, U.N. Doc. A/Conf. 151/26, 31 I.L.M. 874, 879 (Principle 19) (1992), available at <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>.

<sup>228</sup> See John H. Knox, *Assessing the Candidates for a Global Treaty on Transboundary Environmental Impact Assessment*, 12 N.Y.U. ENVTL. L. J. 153, 155 (2003).

<sup>229</sup> See *id.* at 158.

<sup>230</sup> Convention on Environmental Impact in a Transboundary Context, Feb. 25, 1991, 30 I.L.M. 800 (1991) [hereinafter Espoo Convention], available at <http://www.unece.org/env/eia/documents/conventiontextenglish.pdf>.

<sup>231</sup> The United States and Canada also signed the Espoo Convention, although the United States has not ratified it. See UNECE, List of Participants for Convention on Environmental Impact Assessment in a Transboundary Context, <http://www.unece.org/env/eia/convratif.html> (last visited Dec. 17, 2007) (on file with the Harvard Environmental Law Review).

<sup>232</sup> Espoo Convention, *supra* note 230, art. 2(2), 30 I.L.M. at 803.

vention also provides a significant role for public participation<sup>233</sup> in an effort “to improve the quality of information presented to decision makers so that environmentally sound decisions can be made.”<sup>234</sup>

A second potential model is the International Law Commission’s<sup>235</sup> Draft Articles on Prevention of Transboundary Harm from Hazardous Activities.<sup>236</sup> The draft articles “apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences,”<sup>237</sup> a problem analogous to interstate environmental harms. Environmental impact assessment with extensive public participation is an important component of the draft articles.<sup>238</sup> Most notably, article 13 provides that “[s]tates concerned shall, by such means as are appropriate, provide the public likely to be affected by an activity within the scope of the present articles with relevant information relating to that activity, the risk involved and the harm which might result and ascertain their views.”<sup>239</sup> One commentator has described this combination of information and public participation as a potential solution to transboundary environmental impacts in the international context:

In the transboundary context, where externalities are all but inevitable, public access to environmental information may be one useful mechanism to force States to take into account the views of all those who are impacted by actions taken within their borders, whether the affected persons are voting citizens or residents of other States. Information can help affected populations shine light on governmental decisions and rally political support in favor of

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<sup>233</sup> See *id.* at art. 2(6), 30 I.L.M. at 804 (“The Party of origin shall provide, in accordance with the provisions of this Convention, an opportunity to the public in the areas likely to be affected to participate in relevant environmental impact assessment procedures regarding proposed activities and shall ensure that the opportunity provided to the public of the affected Party is equivalent to that provided to the public of the Party of origin.”); *id.* at art. 3(8), 30 I.L.M. at 806 (“The concerned Parties shall ensure that the public of the affected Party in the areas likely to be affected be informed of, and be provided with possibilities for making comments or objections on, the proposed activity, and for the transmittal of these comments or objections to the competent authority of the Party of origin, either directly to this authority or, where appropriate, through the Party of origin.”); *id.* at art. 4(2), 30 I.L.M. at 806 (“The Party of origin shall furnish the affected Party, as appropriate through a joint body where one exists, with the environmental impact assessment documentation. The concerned Parties shall arrange for distribution of the documentation to the authorities and the public of the affected Party in the areas likely to be affected and for the submission of comments to the competent authority of the Party of origin, either directly to this authority or, where appropriate, through the Party of origin within a reasonable time before the final decision is taken on the proposed activity.”).

<sup>234</sup> *Id.* at preamble, 30 I.L.M. 802.

<sup>235</sup> The International Law Commission is the United Nations body charged with codification and development of public international law. See G.A. Res. 174. U.N. GAOR, 2nd Sess., at 105-10, U.N. Doc. A/519 (1947).

<sup>236</sup> See *Report of the International Law Commission*, U.N. GAOR, 53rd Sess., Supp. No. 10, at 366-436, U.N. Doc. No. A/56/10 (2001). The draft articles are available at [http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/9\\_7\\_2001.pdf](http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/9_7_2001.pdf).

<sup>237</sup> *Id.* at 371.

<sup>238</sup> See *id.* art. 7, 13, at 373, 375.

<sup>239</sup> *Id.* at 375.

their interests, even when the political entities making the decisions are not directly accountable to them.<sup>240</sup>

Information and public participation could similarly be used to directly address the underlying political externality causes of interstate environmental harms. In some respects, interstate environmental impact assessment is more promising than the international proposals, as the systems of law and principles of non-discrimination are more firmly established among the American states than among the many nations of the world. Further, as even this brief review of environmental impact assessment law makes clear, there is a tremendous legal tradition for use of information and public process to minimize environmental impacts. The concept of environmental impact assessment, first established in the United States, spread relatively quickly to over a hundred other legal systems. This facilitated the use of transboundary environmental impact assessment as a way to address the challenge of transboundary environmental harms under international law. Now the domestic legal system should "rediscover" the concept and apply it to the century-old problem of interstate environmental harms in the United States.

### *B. Crafting an Interstate Environmental Impact Assessment Policy*

This Section provides some guidance on the key aspects of an interstate environmental impact assessment policy. The specific statutory language and drafting of such a proposal should be left for another day and a more collaborative process involving state decision-makers. The best policies are developed with the input of numerous stakeholders, especially those with knowledge and perspectives unique to their experiences and interests. Furthermore, a specific model statute should come from the geographically and politically diverse state policy makers themselves. However, to begin the discussion and frame the issues, it is important to establish the fundamental principles of an interstate environmental impact assessment policy. This can be organized by the basic questions of who, when, what, where, and why?<sup>241</sup>

The key aspects of an interstate environmental impact assessment policy can be summarized as follows: a state would be required by its own state law to provide a public process for the exchange of information regarding interstate environmental impacts. Either the government or the citizens of a potentially affected state could petition the source state to engage in the interstate environmental impact assessment. However, the source state would only be obligated to consider petitions from the government or citizens of a

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<sup>240</sup> Carrie Noteboom, *Addressing the External Effects of Internal Environmental Decisions: Public Access to Environmental Information in the International Law Commission's Draft Articles on Prevention of Transboundary Harm*, 12 N.Y.U. ENVTL. L.J. 245, 248 (2003).

<sup>241</sup> The "where" is, for purposes of this article, limited to the continental United States, although the principles and concepts may apply on a broader scale. The "why" is hopefully answered in the analysis of interstate environmental harms as political externalities (*supra* Part I) and the failure to address such harms in our federalist system (*supra* Part II). Thus, this Part focuses on "who, when, and what?"

state that also provides interstate environmental impact assessment. This creates the necessary incentive for states to impose the statutory obligation on themselves. The interstate environmental impact assessment duty would apply to both state actions and state decisions allowing private actions. The assessment itself would contain not only environmental impact information but also a cost-benefit analysis that includes costs externalized on other states. The interstate environmental impact assessment duty is merely procedural and does not dictate a specific outcome, even if alternatives with less impact are clearly identified. As discussed in the Conclusion of this article, a procedural interstate environmental impact assessment duty would nonetheless affect decision-maker choices and could be used to complement substantive legal obligations.

Who would enact an interstate environmental impact assessment policy? To avoid the political transaction costs and challenges of an interstate compact, interstate environmental impact assessment laws should be enacted by states individually. This could be accomplished either by incorporating an interstate environmental impact assessment duty into existing state environmental impact assessment law<sup>242</sup> or adopting a new model statute. Either way, non-discrimination and reciprocity provide the underlying foundation and incentive for adoption of an interstate environmental impact assessment duty by individual states. States would only have an interstate environmental impact assessment duty to those states that also have a similar law. This could be implemented either by requiring some minimum standards for adequacy of an interstate environmental impact assessment policy, or by the source state only providing what would be provided to it by the affected state if the roles were reversed.

Admittedly, this does create a risk of free riders. Some interstate environmental harms affect multiple states, and it is possible that one of the affected states would not have adopted an interstate environmental impact assessment policy but would be able to free ride off of the duty owed to another affected state that has adopted such a policy. This concern is minimized, however, as the free riding state would not have the benefits of public hearings in its jurisdiction and other measures described in this Section. The reciprocity approach is also a potential way of addressing the issue of substantive versus purely procedural state environmental impact assessment laws. As discussed in the previous Section, some state environmental impact assessment laws create a substantive duty to minimize environmental impacts.<sup>243</sup> Using a reciprocity approach, these states would only extend a substantive duty to mitigate interstate environmental impacts to projects affecting states that also have enacted a substantive duty law. As New York

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<sup>242</sup> Thirty-two states already have some form of an environmental impact assessment policy which could be amended to incorporate an interstate duty. See Revesz, *supra* note 21, at 617-18.

<sup>243</sup> See *supra* note 220.

and Massachusetts are currently the only neighboring states with substantive environmental impact assessment laws, this would be relatively rare.

Premising the interstate environmental impact assessment duty on reciprocity addresses a major challenge of interstate environmental harms. On any given interstate environmental problem, there is a source (i.e., upwind or upstream) state, and at least one affected (i.e., downwind or downstream) state. On the basis of individual "transactions," source states would not have any incentive to provide even procedural relief to affected states. However, all states (excluding Alaska and Hawaii) are potentially affected states on an aggregate basis. This point was made in an *amici* brief filed by over thirty states in *Rapanos v. United States*:<sup>244</sup>

[W]ater flows downhill, and each of the lower 48 States has water bodies that are downstream of one or more other States. As set forth in the Appendix to this brief, every State in the continental United States has at least one traditional navigable water with a portion of that river or lake within one or more other States; many have several such waters.<sup>245</sup>

All states recognize that they face potential risks from interstate environmental harms, and would want the procedural rights afforded by an interstate environmental impact assessment policy. Further, citizens and environmental NGOs would have little trouble identifying specific interstate environmental harm risks to drive home this point with their respective legislators. And unlike an interstate compact, an interstate environmental impact policy would not be doomed, but rather would only be limited in its applicability, by a decision by some states not to enact a policy. Thus, individual state action premised on reciprocity and non-discrimination provides the incentives and benefits of collective action without the political and transaction costs.

Second, when would an interstate environmental impact assessment need to be prepared? This is essentially a question of triggering. Borrowing (with slight modification) from NEPA, an interstate environmental impact assessment would be required for any major state action with potential to significantly affect the quality of the human environment in another state.<sup>246</sup> The source state, the affected state, or the citizens of either state could request an interstate environmental impact assessment when this standard is met (assuming that both the source and affected states have enacted an interstate environmental impact assessment policy). While this standard may appear vague or ambiguous, there is a massive body of case law under both NEPA and state environmental impact assessment laws to provide gui-

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<sup>244</sup> 126 S.Ct. 2208 (2006) (concerning federal jurisdiction over "isolated" wetlands under the federal CWA).

<sup>245</sup> Brief of the States of New York et al. as Amici Curae Supporting Respondents, at 2, *Rapanos v. United States*, 126 S.Ct. 2208 (2006) (Nos. 04-1034, 04-1384), 2006 WL 139208.

<sup>246</sup> See *Sierra Club v. Peterson*, 717 F.2d 1409, 1412-13 (D.C. Cir. 1983). See also 42 U.S.C. § 4332(2)(C) (2000).

dance.<sup>247</sup> Again borrowing from both NEPA and state law, state action should be defined to include not only projects funded or constructed by the state, but also decisions by the state to permit or approve a private action.

To address the interstate environmental harms from sprawl, it is critical that local governments be subject to an interstate environmental impact assessment policy. Most land use decisions are made by local governments,<sup>248</sup> and these decisions may have impacts in other states. As noted in Part I, over thirty of the largest metropolitan areas in the United States extend across state lines.<sup>249</sup> An interstate environmental impact assessment policy should build on the examples set by California, New York, Minnesota, Massachusetts, and the state of Washington<sup>250</sup> and apply to local as well as state government.

Because an interstate environmental impact assessment policy is intended to address only physical interstate environmental harms, neither pecuniary nor psychological harms should trigger the assessment duty. As discussed in Part I, pecuniary harms occur when interstate regulatory competition causes a loss of economic activity, or perhaps a lowering of environmental standards, as regulated businesses relocate or threaten to relocate.<sup>251</sup> Psychological interstate environmental externalities occur when a state allows harm to a resource within its territory (such as a state park) that has existence value for citizens of other states.<sup>252</sup> Pecuniary and psychological harms pose a political issue distinct from physical interstate environmental harms, and an interstate environmental impact assessment policy is simply not the best legal tool to solve the problem.

Finally, what should be required of an interstate environmental impact assessment? First, public participation throughout the process is necessary to inform the interstate environmental impact assessment. As noted above, public participation could produce a better knowledge base to inform decisions. Equally important, public participation is itself an important element in addressing the underlying political externalities that cause inefficient interstate environmental harms. At a minimum, public hearings should be held in the communities affected by the potential interstate environmental harm, forcing the decision-makers to visit such locations and hear the concerns of citizens.

Ideally, an interstate environmental impact assessment policy would go beyond traditional public participation, which is often characterized by “relatively infrequent and superficial opportunities for consultation,” often limited to “peak-level moments” such as when an EIS is issued.<sup>253</sup> Instead,

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<sup>247</sup> See generally MANDELKER, *supra* note 204.

<sup>248</sup> See Buzbee, *supra* note 9, at 10.

<sup>249</sup> See *supra* note 39.

<sup>250</sup> See *supra* note 221.

<sup>251</sup> See Merrill, *supra* note 2, at 968-70.

<sup>252</sup> See *id.* at 968 n.184.

<sup>253</sup> Jody Freeman & Daniel A. Farber, *Modular Environmental Regulation*, 54 DUKE L.J. 795, 896 (2005).



public participation in the interstate environmental impact assessment process should support the “modular” approach to environmental decision-making advanced by Professors Jody Freeman and Daniel Farber.<sup>254</sup> Under this approach, stakeholders play a diversity of roles, including generating policy ideas and “perform[ing] an accountability function.”<sup>255</sup> Because “state agencies have no monopoly on the scientific and technological knowledge required to address complex environmental problems,” meaningful involvement by “sophisticated local institutions or interest groups” can produce demonstrable improvements in environmental decisions.<sup>256</sup>

The modularity approach should be further used to incorporate social learning and adaptive management into the interstate environmental impact assessment process.<sup>257</sup> While retaining flexibility is critical, some basic elements may be required of an assessment. First, to overcome the economic externalities that bias state decisions, a cost-benefit analysis should be performed that incorporates information from the affected state. While the source state would not be required to avoid costs that are not justified by the project’s benefits, the exchange and learning of this information could influence decisions. Second, an alternatives analysis is a basic element of most environmental impact assessments that should be used in the interstate context as well. Combined with a modular approach to information exchange and social learning, a genuine discussion of alternatives may provide solutions that meet the source state’s objectives with reduced impacts on the affected state.

A new interstate environmental impact assessment policy also provides an opportunity to improve on NEPA and craft a “smarter” environmental impact assessment law.<sup>258</sup> Specifically, an interstate environmental impact assessment policy should incorporate Professor Karkkainen’s recommendations and “require monitoring, ongoing policy and project reassessment, [and] adaptive mitigation.”<sup>259</sup> While NEPA is based on a “1960s-style faith in comprehensive bureaucratic rationality,”<sup>260</sup> three decades of post-NEPA experience with environmental decision-making has produced valuable lessons to incorporate into a new interstate environmental impact assessment policy. Most importantly, NEPA’s “naive faith in the predictive capacities of rational bureaucrats” should be modernized with “‘post project assessment,’ that is, ongoing monitoring, reevaluation, or project adjustments or adaptations in response to new information or changing conditions.”<sup>261</sup>

Why is it so important that an interstate environmental impact assessment policy incorporate post-project assessment? Because pre-project as-

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<sup>254</sup> See *id.* at 894-95.

<sup>255</sup> *Id.* at 894.

<sup>256</sup> *Id.* at 895.

<sup>257</sup> See *id.* at 883-84.

<sup>258</sup> See generally Karkkainen, *supra* note 204.

<sup>259</sup> *Id.* at 908.

<sup>260</sup> *Id.* at 925.

<sup>261</sup> *Id.* at 927.

assessments, the central feature of NEPA and most other environmental impact assessment laws, are often wrong. According to one recent study of EISs performed pursuant to NEPA, “fewer than one out of three verifiable predictions correctly forecast both the direction and the approximate magnitude of the environmental impact.”<sup>262</sup> This should not be taken as a criticism of predictive environmental impact assessments, but as a recognition of their limitations. Predictions are simply that, and environmental decisions should be based on both predictions of anticipated impacts and information learned after the initial decision has been made.

This leads to two of Professor Karkkainen’s specific recommendations that should be incorporated into an interstate environmental impact assessment policy. First, post-decision monitoring is necessary to “gauge the actual environmental consequences” of the state project or decision.<sup>263</sup> This information would be shared with the affected state and public consistent with the public participation principles discussed above. Second, using the information learned through post-decision monitoring, the source state should use adaptive management to avoid unpredicted harms. While this may seem to create an additional burden, it could actually make the initial assessment less costly and difficult, since less up-front certainty and conservatism in predictions would be needed.<sup>264</sup> These concepts are not new, as they are used in other environmental impact assessment policies. For example, the Canadian Environmental Assessment Act uses “follow-up programs” as a form of post-decision monitoring.<sup>265</sup> Domestically, the California Environmental Quality Act uses post-decision monitoring and reporting to verify mitigation measures.<sup>266</sup> An interstate environmental impact assessment policy should build on these leading examples.

Finally, as with any administrative decision, enforcement and judicial review would be essential. For this, no new legal or policy ground needs to be broken. A source state’s failure to perform an interstate environmental impact assessment and the adequacy of an interstate environmental impact assessment would be reviewable in the source state’s courts pursuant to either the source state’s environmental impact assessment law or the source state’s administrative procedure act. States would only need to provide a right for citizens in affected states that have adopted an interstate environmental impact assessment policy to participate in administrative and judicial proceedings pursuant to the source state’s interstate environmental impact assessment law. This could simply be effected through a provision in the interstate environmental impact assessment statute. Alternatively, states could adopt the Uniform Transboundary Pollution Reciprocal Access Act,

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<sup>262</sup> *Id.* at 928 (citing PAUL J. CULHANE ET AL., FORECASTS AND ENVIRONMENTAL DECISIONMAKING: THE CONTENT AND PREDICTIVE ACCURACY OF ENVIRONMENTAL IMPACT STATEMENTS 111-112 (1987)).

<sup>263</sup> *Id.* at 938.

<sup>264</sup> *See id.* at 941.

<sup>265</sup> Canadian Environmental Assessment Act, 1992 S.C., ch. 37 §§ 2(1), 14, 16(2)(c).

<sup>266</sup> *See* CAL. PUB. RES. CODE, §§ 21,100, 21,081.6 (2007).

which provides citizens of other states with equal access to state judicial and administrative systems to address transboundary pollution.<sup>267</sup> The Uniform Transboundary Pollution Reciprocal Access Act only grants reciprocal access to citizens of states that have also enacted the model law.<sup>268</sup> As it has been enacted by only eight U.S. states,<sup>269</sup> more widespread adoption would be necessary.

This discussion of the key elements of an interstate environmental impact assessment policy is not intended to be either complete or definitive. It is only meant to address the major substantive issues needed to understand the concept of interstate environmental impact assessment. If state policy makers are persuaded that the concept has merit, then the next step is to gather their ideas and expertise and move forward collaboratively. Given the above discussion regarding the benefits of incorporating public participation, modular environmental decision-making, and adaptive management in an interstate environmental impact assessment policy, it would be hypocritical to suggest that the policy itself would not also benefit from these tools.

### C. *Evaluating the Necessity and Effectiveness of an Interstate Environmental Impact Assessment Policy*

As a practical matter, it is important to evaluate the proposed interstate environmental impact assessment policy with three questions: why is it needed, will it do any good, and would states actually pass it into law? To begin to answer these questions, it is useful to take an in-depth look at a recent interstate environmental dispute.

In June 2007, the state of Indiana proposed issuance of a permit pursuant to the federal CWA<sup>270</sup> to the oil company BP authorizing the release of 1,584 pounds of ammonia and 4,925 pounds of suspended solids daily into Lake Michigan from BP's Whiting, Indiana refinery.<sup>271</sup> BP sought the permit as part of a \$3 billion expansion of its Whiting facility's capacity to refine heavy crude oil from Alberta, Canada.<sup>272</sup> The BP Whiting refinery, originally built in 1889 by John D. Rockefeller, is now the fourth largest refinery in the country.<sup>273</sup> The permit was issued by Indiana in August 2007, with

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<sup>267</sup> Uniform Transboundary Pollution Reciprocal Access Act §§ 1-10, 9C U.L.A. 392-98 (1982), available at <http://www.ulcc.ca/en/us/index.cfm?sec=1&sub=1t4>.

<sup>268</sup> See *id.* §§ 1-3.

<sup>269</sup> See Uniform Law Conference of Canada, *Table of Uniform Statutes Listed by Statute*, [http://www.ulcc.ca/en/us/Table\\_3\\_En.pdf](http://www.ulcc.ca/en/us/Table_3_En.pdf) (last visited Jan. 8, 2008). The states are Connecticut, Colorado, Michigan, Minnesota, Montana, New Jersey, Oregon, and Wisconsin.

<sup>270</sup> Like most states, the state of Indiana has authority from the EPA to issue National Pollutant Discharge Elimination System permits. See *Env'tl. Council of the States, State Delegations — CWA*, [http://www.ecos.org/section/states/enviro\\_actlist/states\\_enviro\\_actlist\\_cwa](http://www.ecos.org/section/states/enviro_actlist/states_enviro_actlist_cwa) (last visited Dec. 17, 2007) (on file with the Harvard Environmental Law Review).

<sup>271</sup> Kari Lydersen, *Pollution Fight Pits Illinois vs. BP, Indiana*, WASH. POST, Aug. 23, 2007, at A11.

<sup>272</sup> *Id.*

<sup>273</sup> *Id.*

almost no opposition from within the state.<sup>274</sup> Indiana Governor Mitch Daniels supported the refinery expansion and permit issuance, lauding it as “another huge step in Indiana’s economic comeback.”<sup>275</sup>

However, once news of the refinery expansion and permit issuance spread to neighboring Illinois, public and political opposition was dramatic.<sup>276</sup> Chicago Mayor Richard M. Daley and Illinois Governor Rod Blagojevich harshly criticized both BP and Indiana.<sup>277</sup> One Republican lawmaker from Chicago attacked BP’s marketing claims of “beyond petroleum” as really standing for “bad polluter.”<sup>278</sup> Over 50,000 citizens signed petitions opposing the plant expansion and permit.<sup>279</sup> Opponents initially sought action and oversight from EPA, but the agency made clear early on that it would not stop Indiana from issuing the permit.<sup>280</sup>

After the permit was issued and public opposition mounted, Indiana politicians held a hearing to explore the issue.<sup>281</sup> However, due to the way in which it was conducted, the hearing only exacerbated the conflict.<sup>282</sup> Chicago Mayor Daley sent two top city officials to the hearing, but the Indiana lawmaker chairing the hearing would not allow the Chicago officials to testify.<sup>283</sup> The resulting war-of-words demonstrates the level of conflict that can arise in interstate environmental disputes. The Chicago Park Superintendent, one of the Chicago officials that intended to testify, was “insulted” by the snub and stated: “They can keep their pollution on their side of the lake. This is ridiculous.”<sup>284</sup> The Indiana lawmaker who called the hearing was unapologetic. While claiming that time constraints prevented him from allowing the Chicago officials to testify, he also stated that “this is an Indiana hearing,” and “[w]e here in Indiana know what the issues are.”<sup>285</sup>

Unfortunately, what was lost in the political fighting was the opportunity to exchange information that could have minimized the conflict. The city of Chicago commissioned a report showing that BP could upgrade its wastewater treatment for less than \$40 million (a significant sum, but only an increase of about one percent for the total project cost of over \$3 billion).<sup>286</sup> Equally important, the state of Indiana missed an opportunity to

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<sup>274</sup> *Id.*

<sup>275</sup> *Id.*

<sup>276</sup> *Id.*

<sup>277</sup> *Id.*

<sup>278</sup> Dan Egan, *BP Backpedals on Increasing Lake Pollution*, MILWAUKEE J. SENTINEL, Aug. 23, 2007, at A1.

<sup>279</sup> Michael Hawthorne, *EPA Will Ask BP to Offset Pollution*, CHI. TRIB., Aug. 15, 2007, at 1.

<sup>280</sup> *Id.* The EPA did, however, suggest efforts BP could make, such as restoring wetlands along the Lake Michigan shore near the discharge site.

<sup>281</sup> See Andrew Herrmann, *Chicago Gagged at Hearing on BP*, CHI. SUN-TIMES, Aug. 23, 2007, at 1.

<sup>282</sup> See *id.*

<sup>283</sup> See *id.*

<sup>284</sup> *Id.*

<sup>285</sup> *Id.*

<sup>286</sup> Tim Evans, *BP Can Upgrade Plant for \$40M, Report Concludes*, INDIANAPOLIS STAR, Sept. 4, 2007, at 1.

educate the concerned public in Illinois. The deputy water administrator for the Wisconsin Department of Natural Resources, who was not involved in the dispute (even though Wisconsin also shares Lake Michigan waters), concluded that there would not be “a problem [locally or lake-wide] as a result of this discharge.”<sup>287</sup> A University of Wisconsin scientist noted that the additional ammonia that would be discharged is “less than one-7 millionth of the amount already in the lake.”<sup>288</sup>

Because there was no process to allow both the Indiana decision-makers and the potentially affected Illinois public to educate each other and share concerns, the environmental impact of the discharge is not well understood. Instead, the dispute quickly devolved into a political shouting match that failed to address the concerns of either state. After intense public and political pressure, BP announced that it would not take advantage of its new permit to increase discharges.<sup>289</sup> However, the permit remains in effect, so opponents in Illinois have no legal certainty that discharges will not increase in the future.<sup>290</sup>

This recent dispute helps explain why an interstate environmental impact assessment policy is needed, despite the federal regulatory system. While debate regarding the legal authority of EPA in this matter may continue, as a practical matter EPA showed little willingness to take a proactive role in either substantively limiting the discharge or in any other way resolving the dispute. Illinois was clearly surprised and disappointed by the lack of federal oversight, as were many concerned citizens. Coverage of the dispute in the international periodical *The Economist* noted that “despite the common desire to keep the [Great L]akes clean, there is confusion over who is in charge of doing so.”<sup>291</sup>

The dispute also shows the good that could come from an interstate environmental impact assessment policy. There is tremendous value in having an adequate process to address public concerns. Simply having an established policy for conducting interstate environmental impact assessment hearings might have prevented the “snub” to the Illinois officials that escalated the fight. The interstate environmental impact assessment policy would only be procedural in most applications, so it might not provide the legal certainty lacking in the Illinois-Indiana dispute. Yet a process-based approach would likely reduce interstate environmental harms in several ways. First, the process itself provides a mechanism to overcome the informational and public participation biases that give rise to interstate political externalities. Better information, more educated and engaged citizens, and the pressures of public participation can affect the choices of state decision-makers. An affected state’s elected officials, agency staff, and citizens may have useful information to improve proposed projects and reduce environ-

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<sup>287</sup> Egan, *supra* note 278.

<sup>288</sup> *Id.*

<sup>289</sup> *Id.*

<sup>290</sup> *See id.*

<sup>291</sup> *Muddy Waters*, *ECONOMIST*, Sept. 8, 2007, at 83.

mental impacts.<sup>292</sup> The information produced to the public could empower citizens and spur community activism.<sup>293</sup> A cost-benefit accounting of the project that includes costs externalized on other states would prevent state decision-makers from operating under “fiscal illusions,”<sup>294</sup> forcing them to confront the true costs of their decisions.

Second, the interstate environmental impact assessment process and informational outcome would complement existing substantive duties under both federal and state law that restrict excessive interstate environmental harms. Interstate environmental impact assessment should thus be viewed as an addition to the current interstate environmental harm prevention and liability regime described in Part II, not as a substitute. For example, the information gathered and produced in an interstate environmental impact assessment would be tremendously valuable to a federal court adjudicating an interstate nuisance claim, especially a claim involving complex technical and scientific issues. As discussed in Part II, the Supreme Court has expressly stated its reluctance to adjudicate complex technical environmental disputes between states,<sup>295</sup> and would likely view a comprehensive interstate environmental impact assessment as a valuable source of information, especially if it carries the additional legitimacy of public participation.

The information produced in an interstate environmental impact assessment could also complement federal statutory duties regarding interstate pollution.<sup>296</sup> Further, it could help overcome the transaction costs of interstate agreements identified in Part II. A reciprocal interstate environmental impact assessment policy would also counter the lack of incentives for states to gather information and learn more about commonly shared interstate resources.<sup>297</sup>

The Illinois-Indiana Lake Michigan pollution dispute also helps demonstrate that state lawmakers may be willing to enact an environmental impact assessment policy. In the wake of the dispute, the Midwestern Legislative Conference of the Council of State Governments held its annual meeting in Traverse City, Michigan, a few hundred miles up the Lake Michigan shoreline from the BP Whiting refinery. At the meeting, the state lawmakers in attendance unanimously adopted a resolution recognizing that resources such as the Great Lakes are a shared responsibility of neighboring states, and urging the states and Congress to consider new policies to better meet their

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<sup>292</sup> See Frances Irwin & Carl Bruch, *Information, Public Participation, and Justice*, 32 ENVTL. L. REP., 10,784, 10,788 (2002); Jim Rossi, *Participation Run Amok: The Cost of Mass Participation for Deliberative Agency Decisionmaking*, 92 Nw. U. L. REV. 173, 185-87 (1997).

<sup>293</sup> Noteboom, *supra* note 240, at 278.

<sup>294</sup> Ammon Lehari, *Intergovernmental Liability Rules*, 92 VA. L. REV. 929, 942 (2006).

<sup>295</sup> See *Ohio v. Wyandotte Chems. Corp.*, 401 U.S. 493, 504-05 (1970).

<sup>296</sup> See CAA §§ 110(a)(2)(D), 126(b), 42 U.S.C. §§ 7410(a)(2)(D), 7426(b) (2000), CWA §§ 402(b)(3), (5), 33 U.S.C. § 1342(b)(3), (5) (2000).

<sup>297</sup> See Carol M. Rose, *Scientific Innovation and Environmental Protection: Some Ethical Considerations*, 32 ENVTL. L. 755, 761 (2002) (“Just as no one in particular is rewarded for preserving open-access common resources, no one is rewarded for *learning* about them either . . .”).

shared environmental goals. After disputes such as this, it becomes even more clear that management of interstate environmental harms (as well as multi-billion dollar investments) should not be based on a political war-of-words or state rivalries, but instead should utilize an open process of public participation and information exchange.

#### CONCLUSION

Solving a policy problem requires first understanding its causes. The problem of interstate environmental harms can be understood as a problem of political externalities — a combination of inadequate information, public process bias, and traditional economic externalities. Addressing interstate environmental harms through federal adjudication or regulation is at best a rough method to respond to these underlying factors. An interstate environmental impact assessment policy, adopted by individual states but premised on reciprocity, directly addresses the political externality problem. Because this policy is only procedural and does not substantively alter states' rights, it is politically viable and potentially appealing to politicians with diverse ideologies. An interstate environmental impact assessment policy would provide both a new solution in itself and an improvement to the existing legal regime. It is an effective and pragmatic policy solution that deserves the consideration of state leaders.