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The Grass Is Always Greener: Keystone XL, Transboundary Harms, and Guidelines for Cooperative Environmental-Impact Assessment

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ABSTRACT

While general understanding of environmental harms has become more geographically sophisticated, environmental-impact assessment (EIA) law has lagged behind. Although nations now understand complex environmental processes and relationships that extend well beyond their borders, EIA law remains trapped in a domestic structure that is ill-prepared to assess harms outside its jurisdiction. By looking at the U.S. environmental assessment of the Keystone XL pipeline, this Note recasts the problem of transboundary environmental harms in EIA using recent, remarkable events. Key assumptions made in the Keystone XL assessment illustrate that the typical domestic structure of EIA law does not allow adequate assessment of transboundary harms and, thus, undermines the entire purpose of the EIA process. After identifying this problem, this Note suggests a number of guidelines for developing binding, cooperative environmental-assessment agreements between states that would bridge that gap and bring transboundary harms into domestic EIA law.

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I. INTRODUCTION

When Professor Robert Socolow was describing major barriers to a sustainable energy future in the United States, he suggested that the country recognize a planetary identity.[1] Ever the provocative thinker, Professor Socolow assigned a daunting name to a relatively simple concept: that the United States should recognize the costs that its energy decisions impose outside its borders.[2] According to Professor Socolow, internalizing the international cost, particularly the environmental cost, of extracting, shipping, producing, and maintaining the immense energy resources necessary to power the United States is essential to realizing the true cost of the nation's energy decisions and to moving towards a sustainable future.[3] This Note is about how to internalize the transboundary costs of a country's energy decisions.

Internalizing the environmental cost of policy decisions has long been the mandate of environmental impact assessments (EIAs).[4] But

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1. Robert Socolow, Co-Director, The Carbon Mitigation Initiative, Director, Siebel Energy Grand Challenge, Princeton Envtl. Inst., Keynote Address at the Vanderbilt Law Review Symposium: Supply and Demand: Barriers to a New Energy Future (Feb. 24, 2012).

2. Professor Socolow used the example of the social cost of carbon calculated by the Department of Energy; he criticized the characterization of the number as a reflection of the cost of carbon to the *United States*, explaining that the global nature of climate change requires that the number reflect the cost of carbon to the *whole world* in order to be accurate. *Id.*

3. *Id.*

4. *See, e.g.*, Stephen Jay et al., *Environmental Impact Assessment: Retrospect and Prospect*, 27 ENVTL. IMPACT ASSESSMENT REV. 287, 287 (2007) ("[Environmental

nearly all EIA law is domestic law that is fundamentally limited by its jurisdiction's borders; at best the law is unprepared to address environmental costs on the other side of the border, and at worst it is incapable of addressing these costs.[5] International law has also been slow to fill the gap in EIA law between domestic jurisdictions. An international convention on the subject received only limited acceptance[6] and achieved limited success.[7] And when EIA law cannot account for transboundary harms, environmental assessments do not reflect the true environmental cost of the decisions and fail to fully inform the decision maker. As such, the problem of transboundary harms remains a well-recognized and persistent problem in EIA law.[8]

This Note is the first to illustrate the transboundary problem using the U.S environmental assessment of the Presidential Permit for the Keystone XL pipeline, a decision that would permit the construction of an oil pipeline across Alberta, through the Midwest United States, and down to the Gulf Coast of Texas to increase the production of Canadian oil sands crude.[9] Political controversy framed the Keystone XL decision as a fundamental indicator of U.S. energy policy and as an excellent example of a decision that defines Professor Socolow's planetary identity.[10] By critically examining the decision's

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impact assessment] is a systematic process for considering possible [environmental] impacts prior to a decision being taken on whether or not a proposal should be given approval to proceed.").

5. *See infra* Part III (asserting that the Keystone XL pipeline exemplifies a failure of domestic EIA to capture transboundary concerns).

6. Convention on Environmental Impact Analysis in a Transboundary Context, Feb. 25, 1991, 1989 U.N.T.S. 309 [hereinafter Espoo Convention] (listing the forty-five parties to the convention).

7. *See infra* Part III.B.3 (discussing generally Canada's failure to account for transboundary harms of the Keystone XL pipeline, despite being a party to the Espoo Convention).

8. *See infra* Part II.C (detailing international recognition of the transboundary problem).

9. *See generally Keystone XL Pipeline Project*, TRANSCANADA, http://www.transcanada.com/keystone.html (last visited Oct. 24, 2012).

10. *Compare Upton Statement on President's Actions To Block Congressional Approval of Keystone XL Pipeline*, REPUBLICAN MAIN STREET PARTNERSHIP, http://www.republicanmainstreet.org/2012/03/upton-statement-on-president%E2%80%99s-actions-to-block-congressional-approval-of-keystone-xl-pipeline/ (last visited Oct. 24, 2012), *with* Christa Marshall, *Hansen Says Obama Will Be 'Greenwashing' About Climate Change if He Approves Keystone XL Pipeline*, N.Y. TIMES (Aug. 26, 2011), http://www.nytimes.com/cwire/2011/08/26/26climatewire-hansen-says-obama-will-be-greenwashing-about-72041.html ("[NASA climatologist and environmentalist leader] Hansen has [said] that [access to the] oil sands could mean 'game over' for the planet when combined with greenhouse gases from coal."). Responding to President Barack Obama's efforts to block the Keystone XL pipeline, Energy and Commerce Committee Chairman Fred Upton stated:

> A majority of the U.S. Senate voted today in favor of the job-creating Keystone XL pipeline, but this energy project was once again stymied by President Obama's personal rejection. . . . As America's largest trading partner,

environmental assessment, this Note explains how the domestic structure of the U.S. EIA law artificially discounted the transboundary costs of the Keystone XL pipeline.[11] In particular, this Note focuses on a set of assumptions made in the U.S. assessment that illustrate broadly how the domestic structure of EIA law can lead to inaccurate and incomplete information regarding environmental costs. Having identified the failure of EIA law, this Note argues that a structural change to EIA law is the most effective way to solve the transboundary problem.[12]

To accomplish this structural change, this Note proposes that states enter into cooperative EIA agreements.[13] Drawing from existing international agreements, the final section of this Note lays out essential elements of an effective cooperative EIA agreement, touching on the scope, structure, and goals of the agreement itself, the content of the environmental assessment that should result from the agreement, and the benefits of adopting such agreements.[14]

This Note cannot singlehandedly solve the problem of transboundary harms in EIA law, but it makes an effort to increase dialogue on the issue and move towards a solution. Countries must begin to understand the true environmental impact of their decisions beyond their own borders in order to move towards a sustainable energy future.[15] While the transboundary problem in EIA law is well recognized, reframing the issue in terms of a recent energy-policy decision with clear transboundary effects should breathe new life into the issue and focus the problem at hand. President Barack Obama eventually denied the Presidential Permit for the Keystone XL pipeline because of political concerns, not necessarily substantive concerns about the environmental cost of the project.[16] As such, the

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> Canada's vast energy supplies present an opportunity to forge a stronger bond with a close ally and reduce our dependence on oil imports from hostile regions of the world. We know President Obama will continue to say no to these jobs and energy supplies, but Congress will continue fighting to say yes . . . .

Keystone XL Pipeline Project, *supra*.

11. *See infra* Part III.B (claiming that the Department of State discounted transboundary harms by making certain unfounded assumptions).

12. *See infra* Part IV.B (arguing that an effective cooperative agreement should contain three structural elements).

13. *See generally infra* Part IV.

14. *See infra* Part IV (arguing for certain structural elements in international cooperative EIA agreements and explaining the benefits of adopting an international cooperative EIA scheme).

15. *See* Socolow, *supra* note 1.

16. [T]he Secretary of State has recommended that the application be denied. And after reviewing the State Department's report, I agree.

> This announcement is not a judgment on the merits of the pipeline, but the arbitrary nature of a deadline that prevented the

President's denial is certainly not the end of the Keystone XL pipeline or the many similar international energy projects that will follow it.[17] Now more than ever, the problem of transboundary harms in environmental assessment law is ripe for discussion and in dire need of a step forward.

II. THE DYNAMICS OF ENVIRONMENTAL-IMPACT ASSESSMENT (EIA)

EIA is generally defined as the "process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made."[18] This Part seeks to provide background on the principles and dynamics of EIA, and define the problem of transboundary harms within current EIA regimes. To do so, Part II.A discusses the widespread codification of the EIA process into domestic law through an examination of U.S. EIA law and its broad influence. Part II.B explains how the purpose of domestic EIA has been limited to providing complete and accurate information to the decision maker rather than serving as a substantive check on government actions that implicate the environment. To frame the policy issue at hand, Part II.C discusses

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> State Department from gathering the information necessary to approve the project and protect the American people.

Statement of the President on the Keystone XL Pipeline (Jan. 18, 2012), *available at* http://www.whitehouse.gov/the-press-office/2012/01/18/statement-president-keystone-xl-pipeline.

17. For example, TransCanada has indicated its plans to continue working on the Keystone XL pipeline:

> TransCanada Corp said on Monday it will build the southern leg of its $7 billion Keystone XL oil pipeline first, skirting a full-blown U.S. review . . . .
>
> . . . .
>
> The company also wrote to the U.S. State Department on Monday detailing plans to refile an application shortly for the remainder of line running . . . from the Canada-U.S. border, reminding officials that much of the environmental assessment work is already done.

Jeffrey Jones & Roberta Rampton, *TransCanada Chops Up Keystone To Push It Ahead*, REUTERS, Feb. 27, 2012, http://www.reuters.com/article/2012/02/27/us-keystone-idUSTRE81Q1II20120227; *see also U.S. Leg of Keystone XL Gets Final Nod*, UNITED PRESS INT'L, July 27, 2012, *available at* http://www.upi.com/Business_News/ Energy-Resources/2012/07/27/US-leg-of-Keystone-XL-gets-final-nod/UPI-77551343396176/ ("TransCanada received the last of three permits needed from the U.S. Army Corps of Engineers to advance its 485-mile Gulf Coast Project. The company said Friday it's in a position to start construction [on] the project in the coming weeks.").

18. INT'L ASS'N FOR IMPACT ASSESSMENT, PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT BEST PRACTICE pt. 2.1 (1999).

international recognition of domestic EIA's failure to account for transboundary harms.

A. *From U.S. Law to International Law*

EIA is most often integrated into domestic legislation, as is exemplified by the U.S. National Environmental Policy Act of 1969 (NEPA).[19] Due to NEPA's remarkable influence on global EIA policy,[20] as well as its importance in the Keystone XL assessment,[21] the U.S. law is a good starting point for discussion of EIA generally.

NEPA codified Congress's recognition of "the profound impact of man's activity on the interrelations of all components of the natural environment" and the "critical importance of restoring and maintaining environmental quality to the overall welfare and development of man."[22] As such, NEPA expressed "the continuing policy of the Federal Government . . . to use all practicable means and measures . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."[23] Congress sought to fulfill these goals with EIAs, integrating "natural and social sciences and the environmental design arts in planning and decision-making which may have an impact on man's environment," thus ensuring "that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations."[24]

To formally integrate environmental concerns into decision making, NEPA requires an environmental impact statement (EIS) for any "major Federal action significantly affecting the quality of the human environment."[25] An EIS must discuss the environmental impact of the proposed action, potential alternatives to the proposed action, "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity," and "any irreversible and irretrievable commitments of resources."[26] To help implement these mandates, NEPA set up the

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19. *See generally* 42 U.S.C §§ 4321–4347 (2006).

20. *See, e.g.*, Jay et al., *supra* note 3, at 288 ("It is now over 35 years since EIA was first enshrined in legislation in the United States.").

21. *See infra* Part III.B (explaining how the domestic focus of NEPA allowed the Department of State to make crucial assumptions regarding the Keystone XL assessment).

22. 42 U.S.C. § 4331(a).

23. *Id.*

24. *Id.* § 4332(A)–(B).

25. *Id.* § 4332(C).

26. *Id.* § 4332(C)(iv)–(v).

executive Council on Environmental Quality.[27] Both the Council on Environmental Quality and other executive agencies that regularly interact with NEPA promulgate regulations on how to best implement NEPA into their specific decision processes.[28] For example, such regulations require that a draft of an EIS be available for public and interagency comment, thus facilitating the participation of all stakeholders in the decision-making process.[29]

Since NEPA was codified in 1969, over 150 countries have legislated similar domestic EIA requirements.[30] NEPA has served as a model, and most approaches abroad reflect the same core elements that are found in the U.S. law.[31] For example, most EIA statutes require detailed environmental-impact analysis, strict consideration of alternatives, proposed mitigation measures, public participation throughout the EIA process, and public availability of the final decision.[32] In recent years, EIA practice has become so widespread and commonly understood that a "strong argument could be made that the duty to assess environmental impacts has become a part of customary [international] law."[33]

B. *From Substance to Procedure*

Although the mandate to engage in EIA is often clear, domestic law generally limits the assessments themselves to a procedural and informational purpose rather than allow the assessments to have a substantive influence on the decision maker.[34] In effect, typical EIA law only requires that the decision maker have adequate information on the environmental costs of the decision. The decision maker can decide to disregard those costs, but must do so with full knowledge

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27. *Id.* §§ 4342, 4344.

28. *See, e.g.*, 40 C.F.R §§ 1500–1517 (2011) (Council on Environmental Quality's regulations regarding NEPA); 22 C.F.R. § 161 (2011) (Department of State's regulations regarding NEPA obligations).

29. 40 C.F.R. § 1503.1.

30. DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 500 (4th ed. 2011).

31. *See, e.g.*, Jay et al., *supra* note 4, at 288 ("Although it has been adapted to different contexts and circumstances, its basic intentions and core elements are widely agreed."); *see also* ALAN GILPIN, ENVIRONMENTAL IMPACT ASSESSMENT: CUTTING EDGE FOR THE TWENTY-FIRST CENTURY 2 (1995) ("Since the passage of [NEPA] . . . the concept of environmental impact has spread throughout many countries . . . . Many other countries have followed the US lead from the outset, creating separate EIA legislation in the first instance.").

32. *See, e.g.*, GILPIN, *supra* note 31, at 4 (compiling characteristics of the EIA process in Checklist 1.3).

33. HUNTER, SALZMAN & ZAELKE, *supra* note 30, at 500.

34. *See, e.g.*, Jay et al., *supra* note 4, at 290 ("[The] specific regulatory aim of [EIA is] ensuring that environmental considerations are taken into account in decision making. This is frequently stated to be the purpose of EIA, in legislation, guidance and academic literature." (internal citations omitted)).

and be open to public scrutiny. This subpart explains that, because of EIA law's limited purpose, it is crucial that the EIA process results in accurate and complete information regarding environmental costs. This focus is, again, best exemplified by the U.S. experience with NEPA.

Almost immediately after NEPA became law, agencies began questioning whether the environmental assessment process had any substantive sway on their decisions, or whether it was a purely procedural burden that could be filed and forgotten. In 1971, this question came before the U.S. Court of Appeals for the D.C. Circuit, where Judge Skelly Wright strongly asserted that NEPA gave courts a tool to critique agency decisions with regard to environmental impacts.[35] Leaning on the broad commitments to environmental quality laid out in NEPA, the court held that NEPA's EIA requirement, though procedural, "was meant to do more than regulate the flow of papers in the federal bureaucracy."[36] Judge Wright noted that, given NEPA's bold language, "[i]t is hard to imagine a clearer or stronger mandate to the Courts."[37]

But Judge Wright's opinion did not guide the U.S. Supreme Court, which read through the strong language and repudiated any substantive use of NEPA to critique agency decisions.[38] In 1978, the Court held that "NEPA does set forth significant substantive goals for the Nation, but its mandate to agencies is essentially procedural."[39] Writing for the Court, Justice Rehnquist clarified that NEPA only requires "a fully informed and well-considered decision, not necessarily a decision the judges of the Court of Appeals or this Court would have reached had they been members of the decisionmaking unit of the agency."[40] Later courts have maintained this deference, fully embracing a procedural role for NEPA and U.S. EIA law.[41]

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35. The Atomic Energy Commission, for example, had continually asserted, prior to NEPA, that it had no statutory authority to concern itself with the adverse environmental effects of its actions. Now, however, its hands are no longer tied. It is not only permitted, but compelled, to take environmental values into account.

Calvert Cliffs Coordinating Comm. v. U.S. Atomic Energy Comm'n, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

36. *Id.* at 1117.

37. *Id.* at 1115 (quotation marks omitted).

38. Vt. Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 558 (1978).

39. *Id.*

40. *Id.*

41. *See, e.g.*, Stryker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227 (1980) ("[T]he only role for a court is to insure that the agency has considered the environmental consequences; it cannot 'interject itself within the area of discretion of the executive [agency] . . . .'" (quoting Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976))). Intriguingly, later study revealed that Justice Rehnquist also authored the *Stryker's Bay* opinion, and that the Court approved the opinion with virtually no

As NEPA goes, so goes the world. As the first of its kind, NEPA served as a bellwether for the proper purpose, or perhaps limit, of EIA law in the modern regulatory structure.[42] Thus, "the introduction of EIA outside the United States has not been heralded with the same ambitious pronouncements as NEPA, and reflects a narrower interpretation of environmental protection than implied in NEPA."[43] Stripped of any substantive influence over policy decisions, EIA's remaining value is in complete and accurate information reflecting the environmental costs of a decision. It is only with complete and accurate information that the public can be reassured that the decision maker fully considered environmental costs and fulfilled the purpose of the EIA legislation.[44] In other words, completeness and accuracy are the only means of judging the effectiveness of EIA regimes given their limited purposes. Thus, where an EIA process results in inaccurate or incomplete information, the purpose of the tool is undermined and the policy is truly just another piece of paperwork.

C. *International Recognition of the Transboundary Problem*

Inaccurate and incomplete analysis of transboundary environmental harms is a notorious problem in EIA policy.[45] The Convention on Environmental Impact Assessment in a Transboundary Context, also known as the Espoo Convention, defines a transboundary impact as "any impact, not exclusively of a global nature, within an area under the jurisdiction of a [state] caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another [state]."[46] The problem is straightforward: EIA is primarily required by domestic statutes to inform domestic political actors, yet many environmental problems neither limit their harms to a single jurisdiction nor find their cause within a single state. The problem is also reflexive: an

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debate. *See* Robert V. Percival, *Environmental Law in the Supreme Court: Highlights from the Marshall Papers*, 23 ENVTL. L. REP. 10,606, 10,611 (1993).

42. *See supra* Part II.A (discussing NEPA's influence on global EIA policy).

43. Jay et al., *supra* note 4, at 289–90.

44. *Id.* at 290.

45. Many international bodies have recognized and drawn attention to the problem of transboundary harms in EIA. *See, e.g.*, Espoo Convention, *supra* note 6, art. 2.2 (creating an obligation for the signing parties to engage in EIA where there is a risk of transboundary harm); Rep. of the Int'l Law Comm'n, 53d Sess., Apr. 23–June 1, July 2–Aug. 10 2001, art. 7, U.N. Doc. A/56/10; GAOR, 53d Sess. Supp. No. 10 (2001) (requiring that any decision within the scope of the agreement be subject to EIA that considers transboundary harms); UNITED NATIONS ENVTL. PROGRAMME, PRINCIPLES ON SHARED NATURAL RESOURCES, principle 4 (1978) (endorsing a state's responsibility to complete an EIA for any action that "may create a risk of significantly affecting the environment of another state").

46. Espoo Convention, *supra* note 6, art. 1(viii).

EIA that limits its scope to a domestic jurisdiction may not take into account transboundary environmental harms that a domestic decision could cause; similarly, a limited domestic EIA would not assess transboundary causes of a domestic harm that could be mitigated or otherwise affected by the proposed decision. Increasing recognition among policy makers that most natural systems are interconnected, and that most environmental harms require cooperative international solutions, highlights the transboundary problem.[47]

An EIA that fails to assess transboundary impacts is neither complete nor accurate, and fails to fulfill its purpose of fully informing the decision maker on environmental concerns. The Espoo Convention illustrates that the international community is fully aware of this problem;[48] even the International Court of Justice has recognized a state's obligations to undergo EIA where transboundary harms could occur.[49] However, the international community has not yet found a meaningful way to import international EIA guidelines for transboundary issues into domestic processes, leaving individual states full control over the content of their EIA processes and perpetuating a domestic focus in EIA law.

The *Case Concerning Pulp Mills on the River Uruguay* exemplifies this tension. Here, Argentina challenged Uruguay's environmental assessment of an industrial pulp mill that discharged waste into a border river shared by both nations.[50] Argentina alleged (1) that Uruguay did not conduct an environmental assessment prior to permitting the mill, and (2) that the assessment Uruguay

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47. *See, e.g.*, HUNTER, SALZMAN & ZAELKE, *supra* note 30, at 459 (defining the Common Concern of Humankind international environmental law principle as the consensus that "because the planet is ecologically interdependent, humanity may have a collective interest in certain activities that take place . . . wholly within State boundaries"); Mostaf K. Tolba, *The Implications of the "Common Concern of Mankind" Concept on Global Environmental Issues*, 13 REVISTA IIDH 237, 238–46, (discussing the Common Concern of Mankind, and detailing numerous instances where international parties have recognized the interdependence of ecological problems and called for cooperative international solutions).

48. *See* Espoo Convention, *supra* note 6, pmbl. ("*Conscious* of the need to give explicit consideration to environmental factors at an early stage in the decision-making process by applying environmental impact assessment . . . particularly in a transboundary context.").

49. [I]n recent years [EIA] has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.

Pulp Mills on the River Uruguay (Arg. v. Uru.), 2010 I.C.J. 14, ¶ 204 (April 20).

50. *See id.* ¶ 203 ("[Argentina and Uruguay] disagree . . . with regard to the scope and content of the environmental impact assessment that Uruguay should have carried out.").

eventually did create was inadequate because it failed to assess alternative sites, improperly assessed the environmental impact of the mills, and failed to adequately consult affected parties.[51]

The International Court of Justice held that Uruguay was under an obligation to conduct an EIA of the pulp mill on the River Uruguay, *both* because of an international custom of conducting EIAs where transboundary environmental harm may occur and also as a result of bilateral agreements between the two parties regarding the river.[52] However, the court held that international law does not define the content or scope of a state's EIA.[53] Here, neither country was a party to the Espoo Convention and its guidelines for transboundary EIA.[54] Furthermore, applicable principles promulgated by the UN Environment Programme were not binding on states.[55] So while the court comfortably mandated a state obligation to conduct an EIA where transboundary harms exist, just how to implement transboundary harms into the EIA process remained within the discretion of a state.[56] As such, the court deferred to Uruguay's preferred procedure, and refused to declare the challenged EIA as inadequate despite the assessment's nearly nonexistent analysis of transboundary harms.[57]

With regards to Argentina's other claim, the court held that an EIA must be conducted before a project is permitted to move forward, and that Uruguay was at fault because it permitted construction of the mill before an assessment was complete.[58] However, the court noted that Uruguay's obligation to create an EIA for the mill was only

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51. *Id.* ¶¶ 203, 207, 215, 231.

52. *See id.* ¶ 204 (confirming that there is an obligation to conduct an EIA imposed by a 1975 bilateral treaty between Argentina and Uruguay and also by "a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law").

53. *Id.* ¶ 205.

54. *Id.*

55. *Id.*

56. Consequently, it is the view of the Court that it is for each State to determine in its domestic legislation or in the authorization process for the project, the specific content of the environmental impact assessment required in each case, having regard to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment.

Id.

57. *See id.* ¶ 265 ("[T]here is no conclusive evidence in the record to show that Uruguay has not acted with the requisite degree of due diligence.").

58. *See id.* ¶ 205 ("The Court also considers that an environmental impact assessment must be conducted prior to the implementation of a project."); *id.* ¶ 275 ("The Court has however observed that construction of that mill began before negotiations had come to an end, in breach of the procedural obligations laid down in the 1975 Statute.").

a procedural requirement under the law, and that violation of a mere procedural rather than substantive right did not merit Argentina's desired relief of reversing Uruguay's decision to build the mill.[59] As goes NEPA, so goes the rest of the world.[60]

In sum, the obligation to assess the environmental impact of government decisions is well accepted both domestically and internationally.[61] Through time, EIA law has been limited to a procedural role in government administration, with EIA law's purpose exclusively defined as providing the decision maker with complete and accurate information regarding the environmental cost of the decision at hand.[62] As such, where a nation's EIA process results in an inaccurate or incomplete reflection of the environmental harm caused by the pertinent decision, that process is ineffective and its legislative mandate is undermined.[63] Transboundary environmental harms are a well-recognized problem facing effective EIA.[64] International authorities recognize that environmental harms often span multiple jurisdictions and should be brought to the attention of multiple domestic decision makers.[65] As a result, the need to undergo EIA where transboundary harms could occur is well accepted in international law.[66] The problem is that the content of the EIA process is left to the individual states, whose diverse and domestically focused EIA law will not necessary capture transboundary concerns. Thus, where a state does not explicitly determine a way to account for transboundary harms in EIAs, the EIA process is incomplete and is at risk of a well-recognized and fundamental failure.

III. THE KEYSTONE XL PROBLEM

The following Part uses the U.S. Department of State's environmental impact analysis of the Keystone XL pipeline to demonstrate a failure of domestic EIA to capture transboundary concerns. The Keystone XL example illustrates that the

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59. *Id.* ¶¶ 275–76.

60. *See supra* Part II.B (discussing the United States' judicial characterization of NEPA, and thus EIA generally, as a purely procedural burden with no substantive implications).

61. *See supra* Part II.A (discussing the codification of EIS requirements in the United States and the international adoption of similar EIA requirements that followed).

62. *See supra* Part II.B (discussing the limited role EIA law has had in government administration).

63. *Supra* Part II.B.

64. *See supra* note 45 and accompanying text.

65. *See supra* notes 45–49 and accompanying text.

66. *See supra* notes 45–49 and accompanying text.

transboundary problem plagues even the exemplary and sophisticated EIA law of the United States.[67]

Part III.A will explain unique aspects of the procedure that led up to the Department of State's assessment of the Keystone pipeline. In particular, the subpart focuses on communications between the Environmental Protection Agency (EPA) and the Department of State to highlight three transboundary problems identified early in the EIA process. Part III.B traces those same three transboundary concerns through the Department of State's final environmental assessment, and explains how the domestic focus of NEPA allowed the Department of State to make crucial assumptions about Canadian policy decisions that significantly discounted the gravity of these transboundary harms. Those three assumptions are the Oil Demand Assumption, the Extraction Efficiency Assumption, and the Land Use Governance Assumption. Finally, Part III.C distinguishes between structural problems in EIAs and the issue of agency capture, explaining that the domestic focus of most EIA law, rather than agency actors acting in bad faith, is the primary obstacle to considering transboundary harms.

A. *Explanation of the Keystone XL Process*

Numerous regulations augment the basic NEPA assessment for international pipeline projects involving the United States, and some explanation of the process is useful to understand the context of the Department of State's final environmental impact assessment.

1. Understanding the Procedure

All oil pipelines that cross the border of the United States require a Presidential Permit to begin construction.[68] In 2004, the President delegated the responsibility for receiving Presidential Permit applications for international oil pipelines to the Department of State.[69] As such, the company seeking to build the Keystone XL pipeline applied for a Presidential Permit through the Department of State on September 19, 2008.[70]

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67. *See supra* Part I.A (discussing the long history and influence of NEPA law on other nations' EIA regimes).

68. *See* Exec. Order No. 11,423, 3 C.F.R § 742 (1970) ("Whereas the proper conduct of the foreign relations of the United States requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities connecting the United States with a foreign country.").

69. *See* Exec. Order No. 13,337, 69 Fed. Reg. 25,299, 25,299 (2004) (designating and empowering the Secretary of State to receive all applications for Presidential Permits).

70. U.S. DEPT. OF STATE, FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSTONE XL PROJECT, EXECUTIVE SUMMARY ES-1 & fig.ES-1 (Aug. 26,

As a U.S. federal agency, the Department of State is subject to NEPA regulations.[71] The agency determined that the Presidential Permit process was a major federal action that may significantly affect the environment and, thus, began the EIS process as required by NEPA.[72] Modern EIA under NEPA is a cooperative process involving consultation of multiple agencies.[73] The Department of State was the lead agency in the Keystone XL assessment and retained primary responsibility for fulfilling NEPA obligations.[74] Additionally, the EPA is charged with critically reviewing all EIAs.[75] In conjunction with this duty, the EPA has developed a rating system by which the agency assesses the adequacy of an EIS and makes suggestions for improvement.[76]

2. The EPA's Transboundary Concerns

On April 16, 2010, the Department of State released a Draft EIS for public comment and agency review.[77] The EPA reviewed the Draft EIS as required and gave the assessment its lowest rating: "Category 3-Inadequate Information."[78] The EPA listed numerous critiques, but this subpart focuses specifically on a set of transboundary issues that

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2011) [hereinafter KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY], *available at* http://keystonepipeline-xl.state.gov/documents/organization/182010.pdf.

71. *See* 40 C.F.R. § 1500.1 (2012) (applying and implementing § 4332 of NEPA to federal agencies).

72. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-1.

73. *See, e.g.*, U.S. DEPT. OF STATE, FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSTONE XL PROJECT title p. (Aug. 26, 2011) [hereinafter KEYSTONE XL FINAL EIS], *available at* http://keystonepipeline-xl.state.gov/archive/dos_docs/feis/index.htm (listing the sixteen government actors who cooperated to complete the environmental assessment).

74. *Id.* § 1.0.

75. *See* 42 U.S.C. § 7609(a) (2006) ("The Administrator [of the EPA] shall review and comment in writing on the environmental impact of any matter . . . to which [NEPA] applies . . . ."); 40 C.F.R. § 1503.2 (explaining an agency's duty to comment if the agency has "special expertise" in an environmental impact addressed by an EIS); *see also* Letter from Cynthia Giles, Assistant Adm'r for Enforcement and Compliance Assurance, Envtl. Prot. Agency, to Jose Fernandez, Assistant Sec'y for Econ., Energy and Bus. Affairs, Dept. of State, and Kerri Ann-Jones, Assistant Sec'y for Oceans, Int'l Envtl. & Scientific Affairs, Dept. of State 1 (July 16, 2010) [hereinafter EPA Comments on Draft EIS], *available at* http://www.sierraclub.org/environmentallaw/tarsands/pipeline-keystone-xl/state-dept-permit-process/EPA%20Comments%20on%20DEIS%2010-7-16.pdf ("The [EPA] has reviewed the Draft [EIS] . . . pursuant to our authorities under [NEPA], Council on Environmental Quality NEPA regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.").

76. *Environmental Impact Statement (EIS) Rating System Criteria*, ENVTL. PROTECTION AGENCY, http://www.epa.gov/compliance/nepa/comments/ratings.html (last visited Oct. 24, 2012).

77. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-2 fig.ES-1.

78. EPA Comments on Draft EIS, *supra* note 75, at 7.

were not sufficiently addressed by the Department of State in the early EISs.[79]

First, the EPA asked the Department of State to better assess alternative scenarios to the proposed pipeline, particularly scenarios on how Canadian policy decisions could affect "national energy and climate policy objectives" of the United States.[80] Further, the EPA suggested that the Department of State address "different oil demand scenarios over the fifty year project life" to analyze how access to Canadian crude oil would affect demand for other imported crude oils.[81] Finally, the EPA encouraged the Department of State to discuss the "differences in environmental impacts of non-Canadian crude oil sources and [Canadian] oil sands crude" and emphasize "the national security implications of expanding the Nation's long-term commitment to a relatively high carbon source of oil."[82]

The EPA explained that utilizing Canadian oil sands crude could potentially result in 82 percent more greenhouse gas (GHG) emissions than using comparable foreign crude oils; an increase similar to adding seven coal-fired power plants to yearly U.S. GHG emissions.[83] It is important to note that the EPA's analysis here was "well-to-tank," and implicitly included extraction processes, transportation, construction, and other activities that occur on the Canadian side of the border.[84] The EPA's concern with increased GHG emissions was also tied to its interest in alternative oil demand scenarios; the EPA remarked that there is a "close causal connection" between building Keystone XL and opening new markets to increase extraction and global consumption of the more emissions-heavy Canadian crude oil.[85]

The EPA also shined a light on more tangible transboundary environmental harms, noting, for example, that extraction activities across the Canadian border would likely affect migratory bird populations from the United States.[86] The EPA explained that "30% of North America's landbirds breed in the boreal forests of Canada and Alaska," and that the significant deforestation associated with

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79. *See id.* at 1–6 (outlining the various topics within the Draft EIS on which the EPA believes additional information and analysis is necessary).

80. *See id.* at 1–2 (discussing the need to investigate alternatives and broadly analyze their effect on the United States' "national energy and climate policy objectives").

81. *Id.* at 2.

82. *Id.*

83. *Id.* at 2–3.

84. *Id.* at 2.

85. *Id.* at 3.

86. *Id.* at 6.

extracting Canadian crude would likely harm the populations that reside in the United States.[87]

Aware of these significant inadequacies in the Draft EIS, the Department of State released a Supplemental Draft EIS on April 15, 2011, to help address the EPA and other commenters' concerns.[88] The EPA rated this EIS only one step higher, as category 2 "Insufficient Information," which signified that the EPA "identified significant environmental impacts" that were not addressed to the EPA's satisfaction.[89] The EPA remained critical of the Department of State's analysis, recommending "that the State Department improve . . . the discussion of lifecycle greenhouse gas emissions . . . associated with oil sands crude, and improve the analysis of potential impacts to . . . migratory bird populations."[90]

With regard to GHG emissions, the EPA specifically criticized the Department of State for underestimating the potential comparative increase in emissions caused by extracting and using Canadian crude (rather than other crudes) by about 20 percent.[91] Further, the EPA advised against the Department of State's conclusion that the demand scenario that would likely be created by Keystone XL would not change global GHG emissions.[92] The EPA also recommended that any further discussion regarding the comparative GHG emissions of Canadian crude or the change in global GHG emissions caused by Keystone XL "include a detailed description of efforts ongoing and under consideration by [Canadian] producers, as well as the government of Alberta, to reduce GHG emissions from oil sands production."[93] Additionally, the EPA acknowledged that the Supplemental Draft EIS included "a summary of regulatory and other programs aimed at protecting migratory bird populations that may be affected by oil sands extraction activities in

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87. *See id.* (pointing out that effects on migratory bird forest populations "can be felt throughout the birds' migratory range, including . . . in the United States").

88. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-3 fig.ES-1.

89. Letter from Cynthia Giles, Assistant Adm'r for Enforcement and Compliance Assurance, Envtl. Prot. Agency, to Jose Fernandez, Assistant Sec'y for Econ., Energy and Bus. Affairs, Dept. of State, and Kerri Ann-Jones, Assistant Sec'y for Oceans, Int'l Envtl. & Scientific Affairs, Dept. of State 8–9 (June 6, 2011) [hereinafter EPA Comments on Supplemental Draft EIS], *available at* http://www.eenews.net/assets/2011/06/07/document_gw_02.pdf.

90. *Id.* at 2.

91. *Id.* at 6.

92. *See id.* (noting that the Department of State based its GHG-emission analysis on the impact the project would have on the global emissions level, and suggesting that the Department of State should not have compared the GHG emissions associated with the single project to the global GHG-emission levels).

93. *Id.* at 7.

Canada," but suggested that the Department of State discuss how to mitigate the harms that would occur across the border.[94]

The Department of State released its Final EIS of Keystone XL on August 26, 2011.[95] As illustrated below, the Final EIS still does not sufficiently address the transboundary concerns first highlighted by the EPA in response to the Draft EISs. In these early communications with the Department of State, the EPA laid the groundwork for the three assumptions discussed extensively in the next subpart. The EPA questioned how the Department of State framed potential oil demand scenarios created by Keystone XL, highlighting the Oil-Demand Assumption described in detail below. Similarly, the EPA repeatedly pointed out the potential for significantly higher GHG emissions associated with using Canadian crude rather than other comparable foreign crudes, touching on the Extraction-Efficiency Assumption discussed below. Finally, the EPA identified transboundary land-use harms that could affect the United States yet are beyond NEPA jurisdiction, laying the foundation for the Land-Use Governance Assumption discussed below. These three assumptions show that, even in light of the EPA's candor, the domestic scope of NEPA and the jurisdictional limits of the Department of State's EIA discounted these transboundary harms. As such, the Department of State's Final EIS illustrates the fundamental problem of using domestic EIA law to assess projects with international impacts.

B. *The Department of State's Three Transboundary Assumptions*

The domestic scope of the Department of State's Final EIS allowed the agency to make three key assumptions. First, the Department of State assumed that the Keystone XL pipeline would have no effect on the world demand for Canadian crude oil or the U.S. demand for other foreign heavy crude oils; this is the Oil-Demand Assumption.[96] By assuming inelastic demand, the Department of State could conclude that the pipeline would not affect global GHG emissions. Second, the Department of State assumed that Canadian crude would be extracted using increasingly more efficient and lower-emission technology at a rate and mixture that would fill the pipeline's expected capacity; this is the Extraction-Efficiency Assumption.[97] This assumption allowed the United States to conclude that there was no substantial difference between the overall GHG emissions associated with Canadian crude when compared to other

94. *Id.* at 7–8.
95. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-3 fig.ES-1.
96. *Infra* Part III.B.1.
97. *Infra* Part III.B.2.

foreign heavy crudes. Third, the Department of State assumed that other responsible government agencies would ensure that extraction and pretransport processing of Canadian crude would have no significant effect on the environment; this is the Land-Use Governance Assumption.[98] This assumption allowed the Department of State to ignore any environmental harms to resources across the Canadian border, as well as any harms that could occur across the border but would have effects on U.S. resources.

Each of these assumptions allowed the Department of State to avoid potentially significant transboundary environmental harms, skewing its analysis and undermining the informational purpose of whole assessment. However, each assumption turns on policy decisions of another actor, namely Canada or its provinces. As Part III.C explains, these other state actors could be included in an expanded, cooperative environmental assessment process in which accurate information, rather than speculation, guides the assessment.

1. The Oil-Demand Assumption

To assess the Keystone XL pipeline's effect on demand for various crudes, the Department of State relied on a single report commissioned by the Department of Energy.[99] The government retained petroleum industry consulting firm Ensys "to better understand the potential impacts of the presence or absence of the [Keystone XL] pipeline on U.S. refining and petroleum imports, and also on international markets."[100] Ensys's analysis addressed a primary environmental concern of the project: changes in GHG emissions caused by Keystone XL's effect on supply and demand of crude oil.[101]

Fundamentally, the Ensys report concluded that the Keystone XL pipeline decision, regardless of the outcome, would have no effect on U.S. or global supply and demand of crude oil and no effect on global GHG emissions.[102] Regarding U.S. supply and demand, Ensys

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98. *Infra* Part III.B.3.

99. *See* KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-11 (relying solely on the report commissioned by the Department of Energy when concluding that the pipeline will not affect the demand for crude oil); U.S. DEPT. OF STATE, SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSTONE XL PROJECT 3-188 (Aug. 26, 2011) [hereinafter KEYSTONE XL SUPPLEMENTAL DRAFT EIS] *available at* http://keystonepipeline-xl.state.gov/documents/ organization/182272.pdf (same).

100. ENSYS ENERGY & SYS., INC., KEYSTONE XL ASSESSMENT: FINAL REPORT 10 (Dec. 23, 2010).

101. *See, e.g.*, Marshall, *supra* note 10 (discussing that a major environmental concern of the Keystone XL project is an increased supply of Canadian crude, which releases more carbon dioxide emissions than traditional crude).

102. ENSYS ENERGY & SYS., INC., *supra* note 100, at 116.

noted that refining capacity in the U.S. Gulf Coast would continue to increase, and that both Canadian crude and other traditional foreign crude imports would feed the demand.[103] As such, U.S. demand was simplified dramatically and treated as a constant: adding access to more Canadian crude would only adjust the ratio of Canadian crude refined in the Gulf Coast to other foreign crude oils.[104] Key to this conclusion was Ensys's finding that U.S. demand was so high that alternative routes for Canadian crude to the Gulf Coast would be exploited over time, and demand for traditional foreign crudes would remain constant even if those sources declined in reliability and increased in cost.[105] Thus, Keystone would not affect U.S. supply or demand, but only the respective market shares of Canadian crude in comparison to more traditional Mexican, Venezuelan, or Middle Eastern crudes in the short term.[106]

Similarly, the report noted that where the United States does not take Canadian crude, there is ample demand from Asia.[107] Ensys found that demand in Asian markets would only increase in the near future.[108] The report noted that a number of comparatively low-volume pipelines already bring Canadian crude to the Canadian coast for export to Asia, but higher-volume projects had been proposed to dramatically increase Canada's capacity across the Pacific.[109] Thus, the report concluded that there was an inelastic demand for Canadian crude; it would either be piped to the United States for refining, or ferried to Asian ports for their use.[110]

The Department of State used Ensys's report to conclude that Keystone XL would have no effect on the overall GHG emissions of Canadian crude.[111] The logic was deceptively simple; if the United

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103. *Id.*

104. *See id.* ("[C]hanging [Canadian] crude export routes would not alter . . . U.S. and global product demand . . . [I]f [the Keystone XL pipeline] were not built—there would be market demand to put in place broadly similar capacity, including to the U.S. Gulf Coast.").

105. *See id.* at 62 ("U.S. total crude imports are essentially the same in the scenario in which Canadian exports to the U.S. are the highest and the lowest. U.S. oil demand and domestic production were not changed between pipeline scenarios and, therefore, total crude imports remain unchanged."); *id.* at 99 ("[Changes to] U.S. import volumes of Mexican plus Venezuelan crudes are . . . only minimally affected by availability of pipelines delivering imported [Canadian] crude.").

106. *Id.* at 116–17.

107. *Id.* at 117–18.

108. *Id.* at 117 ("Asia, the region which will constitute 75% of the world's refining capacity growth between now and 2030.").

109. *Id.* at 19 (discussing "The China Factor" as significant pressure to expand transport capabilities to British Columbia and across the Pacific Ocean).

110. *Id.* at 116 (concluding that Keystone XL "would not alter either U.S., Canadian, or total global crude supply . . . or U.S. and global product demand and quality").

111. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-11; KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-196.

States did not import Canadian crude, someone else would. The question was then not whether the United States would impact the environment by exclusively refining the Canadian crude for eventual use, but whether refining Canadian crude would be any more harmful to the environment than refining the other foreign heavy crudes that the United States would import anyway.[112] Either way, Ensys concluded that Canadian crude would be imported, refined, and consumed somewhere in the world and, thus, the U.S. decision to participate would not increase global GHG emissions.[113]

However, the final resting place of Canadian crude is not determined by demand alone, but also by the political choices of Canada's regulators and their vocal electorate.[114] In particular, Ensys's report downplayed two likely alternative scenarios that rely heavily on Canadian political decisions.[115]

First, it is reasonably possible that Canada's proposed high volume connection to China, a pipeline called the Northern Gateway, would be stopped by environmental and socioeconomic concerns similar to those that nip at Keystone XL.[116] The company Enbridge proposed the Northern Gateway, touting significant economic gains and energy security, but it has run into backlash from those populations threatened by the environmental harms associated with the project.[117] Political capital has already been levied against the idea of using tankers to export Canadian crude off the coast of British Columbia—arguably more political capital than the opponents of Keystone XL could muster in the United States.[118] Without either the

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112. *See* KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-196 (discussing how studies gauged "incremental GHG emissions"); *see also* discussion *infra* Part III.B.2.

113. ENSYS ENERGY & SYS., INC., *supra* note 100, at 116.

114. *See id.* at 18 ("Extensive work would be required with various organizations, including the NEB, Port Metro Vancouver and First Nation groups before the projects could go ahead. Permits would be required for expansion. In addition, agreements with landowners along the route may have to be renegotiated.").

115. *See id.* (dismissing the difficulties facing the Northern Gateway as only rendering "timing uncertain").

116. *See, e.g.*, Bill Graveland, *Aboriginal Leader Says Opposition to Northern Gateway Not Just Environmental*, CANADIAN BUS. (Mar. 1, 2012), http://www.canadianbusiness.com/article/73643--aboriginal-leader-says-opposition-to-northern-gateway-not-just-environmental ("Northern Gateway has attracted fierce opposition from First Nations, environmental and other groups who fear oil could be spilled from the pipeline itself or from the tankers sailing through narrow coastal channels and cause grave ecological harm.").

117. *Id. See generally* ENBRIDGE N. GATEWAY PIPELINES, WE'RE BUILDING MORE THAN PIPELINES, *available at* http://www.northerngateway.ca/assets/pdf/Project%20Brochure/ENB_NGP_BrochureOct26.pdf (detailing the Northern Gateway project in the best light possible, highlighting its ability to access growing oil markets and Enbridge's commitment to aboriginal and environmental concerns).

118. *See B.C. Oil Tanker Ban Motion Passes in Commons*, CBC NEWS (Dec. 7, 2010, 6:46 PM), http://www.cbc.ca/news/canada/story/2010/12/07/oil-tanker-motion.html?ref=rss

Northern Gateway or Keystone XL, Canadian crude would be landlocked, bottlenecked by a limited transport infrastructure that has historically made the oil sands commercially unattractive.[119] Without access to either China or the United States, and with there being a very real risk of no development at all, the carbon trapped in Canadian crude would no longer be guaranteed emissions, and the decision to build Keystone XL becomes a key to unlocking a significant source of GHGs that would substantially contribute to global climate change.

With the fortune of hindsight, activity in the oil industry following the denial of the Keystone XL permit emphasizes the possibility of this first scenario. Enbridge, the company behind Canada's high-capacity pipeline to the Pacific, recently purchased significant interest in a pipeline that connects the Gulf Coast refineries to a Midwest pipeline hub in Cushing, Oklahoma.[120] The pipeline, called the Seaway, typically pumps crude *upstream* from the Gulf Coast to the Midwest for storage and further transport.[121] However, Enbridge and the co-owner of the Seaway have announced that they seek regulatory approval to reverse the flow of the pipeline *from* the Midwest *to* the Gulf Coast.[122] Should the Seaway reverse flow, a significant surplus of U.S. oil would be rerouted to the Gulf Coast to fulfill increasing demand in the short term.[123] Perhaps more importantly, reversing the Seaway would complete a series of Enbridge-controlled pipelines from Alberta to the Gulf Coast, opening

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(referring to the relatively significant political pull that environmental causes have in western Canada, particularly in British Columbia).

119. There [have] been instances of capacity restrictions and "allocations" with associated shut-ins of [Canadian crude] production. The bottlenecks were also causing reductions in the prices obtained for Western Canadian crudes, especially the heavy grades . . . . As a consequence, Canadian producers, shippers and government agencies deriving revenue from production were all being adversely affected economically . . . . [This history] reinforces how sensitive WCSB heavy crude discounts are to having sufficient export pipeline capacity in operation and the consequences in lost revenue of periods when capacity is inadequate.

ENSYS ENERGY & SYS., INC., *supra* note 100, at 12.

120. Mike Lee, *Enbridge, Enterprise Join Forces To Alleviate U.S. Crude Glut*, BLOOMBERG BUSINESSWEEK (Nov. 17, 2011, 9:44 AM), http://www.businessweek.com/news/2011-11-17/enbridge-enterprise-join-forces-to-alleviate-u-s-crude-glut.html (reporting on Enbridge purchase of interest in Seaway, intent to reverse flow of pipeline, and the potential to fulfill Gulf Coast refining demand with U.S. and Canadian oil); *see also*, Enbridge, *Enbridge Upsizes Capacity of Gulf Coast Access Projects*, 76 EBRIDGE, http://ebridge.enbridge.com/ eBridge/volume76/article1.php (last visited Oct. 24, 2012) (describing shipping capacity).

121. Lee, *supra* note 120.

122. *Id.*

123. *Id.*

another avenue for Canadian crude into the United States.[124] The Seaway's ability to ease supply of bottlenecked Canadian crude may undercut the need for the Northern Gateway enough that the pipeline succumbs to political pressures. Thus, a scenario where Keystone XL is the *only* serious means of utilizing Canadian crude and its resulting GHG emissions is quite possible.

Second, Canada will probably try to move forward with the Northern Gateway even if Keystone XL is built. The Canadian federal government has long supported expanding the market for Canadian crude.[125] Prime Minister Stephen Harper has declared Canada an "energy superpower" since 2006, relying on the country's wealth of oil in an increasingly unstable global market.[126] The current Minister of Natural Resources has also explained the "fundamental strategic objective of Canada to diversify [its] customer base," citing demonstrated Chinese interest in Canadian oil.[127] Upon President Obama's decision to delay the Keystone XL decision, the Minister called for an expedited approval of Enbridge's Northern Gateway pipeline, expecting a decision by early 2013.[128] Although it is uncertain whether the Northern Gateway will survive the regulatory process, it is clear that the Canadian government will push the Northern Gateway forward, regardless of whether Keystone XL is eventually approved by the U.S. government.[129] Even though the Ensys report acknowledges "that [Canadian] crude volumes into the U.S. are sensitive to the development of pipelines within Canada to the British Columbia coast and thence to markets in Asia,"[130] the

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124. *Id.* Interestingly, Ensys's study noted the potential for reversing the Seaway, but discounted the possibility due to a "continuing need to move crude volumes north." *Keystone XL Assessment: Final Report*, *supra* note 100, at 28.

125. *See* Canwest News Serv., *Harper Calls Canada "Energy Superpower,"* CANADA.COM (July 14, 2006), http://www.canada.com/edmontonjournal/news/story.html?id=59c9a6fd-5d35-4ab4-a1e9-b2de9d507697&k=46557 (describing Prime Minister Stephen Harper's support for a "free exchange of energy products based on competitive market principles").

126. *Id.*

127. *Keystone Pipeline Delays Will Be 'Costly,'* CBC NEWS, http://news.ca.msn.com/top-stories/keystone-pipeline-delays-will-be-costly-3 (last updated Nov. 13, 2011).

128. *See* Gary Park, *Canadian Minister Sees Northern Gateway Approval Process Expedited 1 Year*, PLATTS (Nov. 13, 2011, 1:59 PM), http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Oil/3783938 (quoting the Natural Resources Minister as saying that Canada's government wants to broaden its customer base outside the United States).

129. *See id.* (recognizing that the "Northern Gateway is facing similar environmental opposition to Keystone XL as it prepares to embark on public hearings," despite strong federal support).

130. ENSYS ENERGY & SYS., INC., *supra* note 100, at 117.

limited, economic scope of the Ensys report did not account for significant backing by the Canadian federal government.[131]

As defined by the government agency that commissioned the study, Ensys limited its analysis to U.S. refining capabilities, demand markets, and import dependency, all viewed through a domestic lens, explicitly excluding Canadian economic interests and the effects on Canadian production of oil sands crude.[132] By narrowing the scope of the analysis to avoid Canadian political interests and potential difficulties in expanding access to China, Ensys was able to oversimplify and arrive at a concise conclusion: what was not utilized by the United States would be shipped to China, and, all other things being equal, supply into the United States would not change.[133] These conclusions were the fundamental basis for Ensys's assertion that the Keystone XL pipeline would have no effect on global GHG emissions.[134] Acknowledging the political elements of this equation, the potential that the neither the Northern Gateway nor Keystone XL may go forward, or that the Northern Gateway may go forward and undercut Keystone XL's supply to the United States, makes Ensys's and the Department of State's simple answer very uncertain and unlikely. This reality, in turn, casts doubt upon the Department of State's conclusion that Keystone XL will result in no significant GHG emissions.

2. The Extraction-Efficiency Assumption

Upon concluding that Canadian crude would be refined and utilized somewhere in the world, if not in the United States, the Department of State assessed the next logical GHG question: whether refining and utilizing Canadian crude is more GHG-intensive than burning traditional foreign crudes.[135] A crude oil is more GHG-intensive than another if it results in greater GHG emissions through the entire life cycle of its production, from extraction to consumption. The Department of State concluded that, on average, Canadian crude is more GHG-intensive than traditional foreign crudes, such that importing more Canadian oil could significantly increase the overall U.S. GHG emissions.[136] However, the Department of State mitigated this concern with two observations. First, it noted that the GHG

131. *See id.* at 17–19 (acknowledging the possibility for Chinese development of demand, but concluding that most projects to the coast either have uncertain economic interests or are encountering resistance).

132. *Id.* at 116.

133. *See id.* (stating that this situation would arise because "the same slate of crude oils would have to be refined even if reallocated geographically").

134. *Id.* at 80.

135. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-15.

136. *See id.* (stating that the increase could be in the range of 3 million to 21 million metric tons of carbon dioxide emissions per year).

intensity of Canadian crude varied widely, from 37 percent more intensive than traditional crudes to 2 percent less intensive than traditional crudes, depending upon the kind of technology used to extract the Canadian crude and prepare it for transport.[137] Second, the Department of State noted that traditional foreign crudes were becoming more difficult to extract, requiring more energy and emissions, while technology for extracting Canadian crude was expected to become more efficient over time, narrowing the comparative difference between the crudes.[138] With these mitigating factors in mind, the Department of State seized on the uncertainty and dismissed Canadian crude's comparative increase in GHG emissions, concluding that "on balance, it appears that the gap in greenhouse gas intensity may decrease over time."[139]

To support these two mitigating factors, and eventually dismiss the comparative increase in GHG emissions caused by utilizing Canadian crude, the Department of State relied on two assumptions that implicated Canadian political decisions. First, Albertan extractors would use the lowest-emissions technology and continue to improve that technology over time such that Canadian crude would begin at the low end of the comparative GHG spectrum and continue to get more efficient.[140] Second, Canadian crude would be mixed for transport at an expected ratio because a different mixture could require more energy to pump through the pipeline and could take longer to travel the distance.[141]

The Department of State supported its conclusions with the Ensys report and a report by ICF International.[142] The Department of State used the Ensys report for the conclusion that global GHG emissions would not be affected by the Keystone XL pipeline and subsequent utilization of Canadian oil sands crude in the oil markets.[143] As noted above, acknowledging Canada's political interests and potential difficulties in accessing an Asian oil market casts significant doubts on the study's broad conclusion.[144]

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137. KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-194.

138. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-15.

139. *Id.*

140. *See* KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-199 ("In particular, the results depend on assumptions regarding the use of petroleum coke at oil sands facilities, and upon the weighted-average mix of [Canadian] oil sands crude transported to the United States by the proposed Project or some other transboundary pipeline.").

141. *Id.* at 3-192 to -194.

142. *Id.* at 3-188 (introducing both the Ensys report and the ICF report).

143. *See id.* at 3-196 ("[B]ased on the EnSys (2010) analysis, under most scenarios the proposed Project would not substantially influence the rate or magnitude of oil extraction activities in Canada, or the overall volume of crude oil transported to the U.S. or refined in the U.S.").

144. *See* discussion *supra* Part III.B.1 (reviewing political and business factors).

The ICF report was commissioned "to provide context for understanding the potential indirect, cumulative [greenhouse gas] impact of the proposed Keystone XL pipeline" by synthesizing preexisting studies on the GHG intensity of various crude oils and the extraction processes available to Canadian oil sands crude.[145] The ICF report made the assumptions that underlie its conclusions clear.[146] First, the ICF report hedged the conclusion of the Ensys report: ICF noted that, while global GHG emissions would not change, U.S. GHG emissions would increase if Canadian oil displaces other traditional crudes.[147] ICF then illustrated Canadian crude's comparative range of emissions increases, between 2 percent less GHG-intensive and 37 percent more GHG-intensive than traditional crudes, but clearly listed the variables that supported that analysis: "The incremental increase depends upon (i) the throughput of the pipeline, (ii) the mix of oil sands crudes transported by the pipeline, and (iii) the GHG-intensity of the crudes in the pipeline compared to the crudes they displace."[148]

All three of these variables are controlled by Canadian regulation and policy choices, which are beyond the scope of the assessment and subject to estimation and guessing across the U.S. border.[149] By inviting estimation, the Department of State was able to ignore the potentially significant increase in GHG emissions because of uncertainty; the agency simply could not predict how Canada would regulate the extraction, preparation, and transportation of Canadian oil sand crude without asking Canadian regulators.

There is also significant reason to worry that Canadian extractors will use more inefficient and energy-intensive methods than the Department of State optimistically predicted. There are two primary means of extracting crude from oil sands like those at issue in Canada: conventional strip mining and *in situ* processing, where steam is injected into the soil to increase the viscosity of the desirable crude so that it can flow out.[150] Strip mining is only available if the oil sands are within seventy-five meters of the surface, and *in situ*

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145. ICF INT'L, LIFE CYCLE GREENHOUSE GAS EMISSIONS OF PETROLEUM PRODUCTS FROM WCSB OIL SANDS CRUDES COMPARED WITH REFERENCE CRUDES 1 (2011) [hereinafter ICF Report].

146. *Id.* at 14–26.

147. *Id.* at 48.

148. *Id.*

149. *See, e.g.*, Oil Sands Conservation Act, R.S.A. 2000, c. O-7, § 3(g) (Can. Alta.) ("The purposes of this Act are . . . to ensure the observance, in the public interest, of safe and efficient practices in the exploration for and the recovery, storing, processing and transporting of oil sands, discard, crude bitumen, derivatives of crude bitumen and oil sands products.").

150. ICF Report, *supra* note 145, at 15.

processing is necessary otherwise.[151] *In situ* methods are more GHG-intensive than strip-mining methods.[152] Generally, over 40 percent of Canadian oil sands crude is currently produced using *in situ* extraction.[153] Using averaged GHG emissions of *in situ* extraction and assuming expected flow patterns of the pipeline, it is most likely that Canadian crude will be 9 percent to 17 percent more GHG-intensive at initial pipeline capacity and 11 percent to 21 percent more GHG-intensive at potential pipeline capacity.[154] This narrower and more accurate scale illustrates a more alarming effect on U.S. GHG emissions than the Department of State's broader, less certain scale of 2 percent to 37 percent.[155] Particularly since "*in situ* extraction methods are projected to represent a larger share of the overall oil sands production—increasing from about 45 percent of 2009 oil sands production to an estimated 53 percent by 2030."[156] Further, the longer that Canadian oil sands are mined for crude, the deeper the extraction process required and, thus, the more necessary *in situ* extraction becomes.[157] This will cause a projected increase of *in situ* extraction from 15 percent to 40 percent by 2030 in some regions.[158]

The variables of this calculus, the potential output of Keystone XL, the mixture of crude in the pipeline, and the extraction process used are all Canadian and industry decisions beyond the scope of the Department of State's domestic environmental assessment. By keeping information across the border, the Department of State is able to harness uncertainty that may not really be present and discount potentially significant increases in U.S. GHG emissions caused by the Keystone XL decision.

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151. *Id.*

152. *Id.*

153. *See id.* at 41 n.26 (discussing bitumen production).

154. *Id.* at 45.

155. *See id.* at 48 ("[F]rom the standpoint of the U.S. carbon footprint, on a life cycle basis, displacing reference crudes with oils sands crudes could result in an increase in the footprint."); *see also* KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-194 (describing the effect of extraction methodology on GHG emission).

156. *Id.* at 47.

157. *See id.* ("[I]t will become more energy-intensive to produce reference crudes over time as fields mature and secondary and tertiary recovery techniques, such as CO_2 flooding are required to maintain production levels.").

158. *Id.*

3. The Land-Use Governance Assumption

The Department of State also dodged realization of more concrete and quantifiable environmental harms by assuming that responsible Canadian agencies will ensure that processing of Canadian oil sands crude does not significantly harm the environment. U.S. law does not require the Department of State to address environmental harms across the Canadian border; they are beyond the scope of a domestic environmental assessment.[159] However, "[a]s a matter of policy, and in response to concerns that the proposed Project would contribute to certain continental scale environmental impacts," the Department of State provided a brief assessment of environmental harms across the border.[160] Generally, the Department of State incorporated the Canadian National Energy Board's (the Board) environmental assessment of the Keystone XL project, and repeatedly assured that any extraction project or oil pipeline would be assessed and permitted by federal and provincial Canadian regulators.[161]

With regard to the Board's environmental assessment, the Department of State summarized that "[t]he Board's assessment included evaluations of need, economic feasibility, potential commercial impacts, potential environmental and socioeconomic effects, appropriateness of the general route of the pipeline, potential impacts on Aboriginal interests, and other issues."[162] As such, the U.S. agency was comfortable deferring to the Board's judgment that no significant environmental harm would occur in Canada as a result of the Keystone XL decision. The Board, however, also narrowed its analysis to avoid environmental effects of the pipeline in the United

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159. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-22.

160. KEYSTONE XL SUPPLEMENTAL DRAFT EIS, *supra* note 99, at 3-200.

161. For example, § 3.14.4 of the *Supplemental Draft Environmental Impact Statement for the Proposed Keystone XL Project* states:

> This section addresses (1) the Canadian National Energy Board (NEB) environmental analysis of the Keystone XL Project in Canada, (2) the potential influence of the proposed Project on oil sands development in Canada, (3) a summary of environmental impacts of oil sands development in Alberta, and (4) protections for Canadian and U.S. shared Migratory Bird and Threatened and Endangered Species resources.

Id. at 3-201; *see also id.* at 3-202 (stating, in response to worries of environmental impacts of oil sand extraction, that "[g]overnment regulators of oil sands activities in Canada are working to manage and provide regional standards for air quality, land impact, and water quality and consumption based on a cumulative effects approach"); *id.* at 3-204 (stating, in response to worries about harm to migratory birds and other wildlife, that "[o]il sands projects and oil transportation pipelines are evaluated and permitted by Canadian federal and provincial Canadian governments").

162. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-23.

States and in the province of Alberta.[163] According to the Board, the "Keystone XL Pipeline commences at the Hardisty, AB hub, which receives various types of oil from numerous upstream sources [in Alberta]. The Applicant is not applying to produce or supply the product it proposes to ship."[164] As such, the "upstream and downstream facilities [in Alberta and the United States] . . . are not part of the applied-for project, [and] are . . . not properly part of the scope of the project or the scope of the environmental assessment."[165] The Board applied a similarly deferential rationale to its narrow scope, reminding that "upstream facilities [in Alberta] are or will be regulated by other governments and operated by numerous corporate entities. Similar circumstances apply downstream where the project could deliver crudes to several refineries, in Texas and Louisiana."[166] In sum, either side of the border was able to explicitly avoid assessing environmental effects outside of their jurisdiction by assuming that another government would undergo an adequate analysis.

The Department of State recognized that Alberta's provincial government would complete an environmental assessment of the oil sands extraction as well, deferring to their judgment just as the Board did.[167] However, the transboundary jurisdictional problem persists despite deference to other governments. Alberta's environmental assessment is ineffective if it is not taken into consideration by the parties who maintain jurisdiction over land that would be affected by the extraction activities in Alberta. For example, where the pipeline crosses into Saskatchewan, the Board is the only party with the correct scope to assess the impacts of Keystone XL on that land, but upstream activities in Alberta could have extraordinary influence. Similarly, once the pipeline crosses into the United States, the Department of State is the only party with the correct jurisdiction to assess the project's impact on those lands; without correctly accounting for the prior two jurisdictions and their impacts, the Department of State's assessment is incomplete and fails to fully provide the information sought by NEPA and environmental assessment statutes generally.

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163. *See* CAN. NAT'L ENERGY BD., OH-1-2009, REASONS FOR DECISION: TRANSCANADA KEYSTONE PIPELINE GP LTD. 74 (2010) ("[T]he Board is not convinced that there are sufficient grounds for it to include a consideration of the upstream or downstream facilities.").

164. *Id.*

165. *Id.*

166. *Id.*

167. KEYSTONE XL FINAL EIS EXECUTIVE SUMMARY, *supra* note 70, at ES-23 ("Government regulators of oil sands activities in Canada are working to manage and provide regional standards for air quality, land impact, and water quality and consumption based on a cumulative effects approach.").

C. *Differentiating Structural Failures from Bad-Faith Agency Actors*

As noted above, the EPA challenged the Department of State early on, demanding that it fully and adequately assess the three transboundary problems discussed by this Part.[168] Throughout the EIS process, the EPA urged the Department of State to reassess its conclusions on global oil-demand structures,[169] the comparative GHG intensity of Canadian crude,[170] and the effect of Canadian extraction and land-use regulation on both Canadian and U.S. environmental resources.[171] Yet the Department of State's final EIS continued to maintain an inelastic demand scenario that discounted any change in global GHG emissions caused by Keystone XL,[172] made assumptions that shrunk the comparative difference between GHG emissions of Canadian and other foreign crude oils,[173] and had a narrow domestic focus that refused to take a hard look at transboundary environmental harms.[174]

One explanation for the agency's failure could be that special interests captured the agency, or that the agency was acting in bad faith to neglect the goals of EIA for its own purposes. Regardless of whether this explanation has any merit, this Note cannot solve the problem of bad faith agency actors and need not solve the problem to still be constructive.[175] Regardless of the agency's intent, the analysis above emphasizes that the domestic focus of U.S. EIA law is what allowed the Department of State to make the crucial assumptions that discounted transboundary harms. Even assuming the Department of State acted in bad faith to skew the environmental assessment, changing the domestic structural bias and expanding the scope of U.S. EIA law would necessarily force a bad faith agency into accounting for transboundary harms and creating a more complete environmental impact assessment.

To achieve such structural reform, a solution must simply create communication and cooperative assessment across borders, ensuring that neither party can make assumptions regarding transboundary harms. To illustrate this point, each of the transboundary harms described above shared a common reliance on assumptions regarding Canadian policy choices. As such, this Note proposes a model for bilateral or multilateral environmental-assessment agreements that

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168. *See supra* Part III.A.2.
169. EPA Comments on Draft EIS, *supra* note 75, at 3–4.
170. EPA Comments on Supplemental Draft EIS, *supra* note 89, at 6.
171. *Id.* at 7.
172. *See supra* Part III.B.1.
173. *See supra* Part III.B.2.
174. *See supra* Part III.B.3.
175. *But see infra* Part IV.E (explaining how cooperative EIA will likely lead to more transparent review).

seeks to solve the domestic structural bias of EIA law by inducing cooperation and cross-border communication to control such assumptions, all while fulfilling the obligations of existing domestic EIA law.

IV. ELEMENTS OF COOPERATIVE INTERNATIONAL EIA

To address domestic EIA law's inability to account for transboundary environmental harms, this Note proposes that states engage in a cooperative, international EIA. Building off of existing international agreements, this Part lays out essential elements of an effective bilateral or multilateral EIA process.

This Note relies heavily on two existing, relevant international agreements: the Espoo Convention[176] and the Canada–Alberta Agreement on Cooperative Environmental Assessment (Canada–Alberta Agreement).[177]

First, the Espoo Convention provides general guidelines for engaging in effective transboundary EIA.[178] Originally adopted and signed by a number of nations in 1991, the Espoo Convention finally entered into force on September 10, 1997.[179] Notable signatories to the treaty include the United States, Canada, the European Union, the United Kingdom, and Russia; equally notable is the absence of Mexico, China, and a number of Middle Eastern oil-producing countries.[180] Of the forty-eight nations who have accepted the Espoo Convention, only Iceland, the United States, and Russia have not ratified it and are not directly bound by its contents.[181]

The Canada–Alberta Agreement is an intergovernmental agreement between the Canadian federal government and the provincial government of Alberta.[182] Most recently renewed in 2005, its purpose is to make the EIA process more effective and efficient by collapsing both parties' EIA obligations into one process when their

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176. Espoo Convention, *supra* note 6.

177. Canada-Alberta Agreement on Cooperative Environmental Assessment, Can.-Alta., July 22, 2005 [hereinafter Can.–Alta. Agreement], *available at* http://www.ceaa.gc.ca/default.asp?lang=En&n=F93B8BF6-1. Interestingly, the authors assumes there is a Canada-Alberta joint EIA for Keystone, but has yet to find it.

178. Espoo Convention, *supra* note 6, pmbl.

179. *See Convention on Environmental Impact Assessment in a Transboundary Context*, UNITED NATIONS TREATY COLLECTION, http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4&chapter=27&lang=en (last visited Oct. 25, 2012) [hereinafter *Espoo Convention Status*].

180. *See* Espoo Convention, *supra* note 6, pmbl. n.1.

181. *See Espoo Convention Status*, *supra* note 179 (providing both signing and ratification dates for each signatory).

182. Can.–Alta. Agreement, *supra* note 177, pmbl. ("Canada and Alberta are committed to undertake cooperative environmental assessments under this bilateral Agreement . . . .").

responsibilities overlap.[183] The Canada–Alberta Agreement has been lauded as importing cooperative environmental assessment from international law into a binding, domestic obligation, albeit limited to the jurisdiction of Canada.[184]

Together, both the Espoo Convention and the Canada–Alberta Agreement provide structural tools and content guidelines that can be used to build an effective bilateral or multilateral cooperative EIA process. The purpose of this Part is to collect some of these tools and guidelines into a nonexhaustive list, suggesting essential elements of a basic model that can be expounded upon and individualized. The first subpart of this Part refines the scope and applicability of the guidelines offered by this Note. Parts IV.B, IV.C, and IV.D address crucial structural elements for an international cooperative EIA agreement. Finally, Part IV.E explains the benefits of adopting an international cooperative EIA scheme.

A. *Scope of the Agreement*

The model suggested by this Part is meant to be a flexible model that could be applied (1) broadly as a multilateral agreement between many implicated countries, (2) narrowly as a detailed, bilateral agreement between two countries, or even (3) as a specific condition to a single international project. Flexibility is necessary since different situations will merit different structured agreements. For example, permitting a smog-inducing industrial park in a part of Europe where many jurisdictions are clustered closely together would necessitate a multilateral agreement since the smog would likely cross many jurisdictional boundaries. Conversely, permitting a logging project in Ukraine that affects wildlife in Poland may only require a project-specific, bilateral agreement to effectively account for all transboundary harms caused by the decision.

In light of this necessary flexibility, two principles are important to keep in mind when determining the scope of a cooperative EIA agreement. First, the agreement must be binding. One of the most crucial roles of this model is that it forces the parties to engage in cooperative EIA rather than just providing an option that a state can

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183. *Id.* (striving for "greater efficiency and the most effective use of public and private resources, where assessment processes involving both parties are required by law, through a single environmental assessment and review process for each proposed project"). Other versions of the agreement seem to have existed since as early as 1993. *See* Steven A. Kennett, *Hard Law, Soft Law, and Diplomacy: The Emerging Paradigm for Intergovernmental Cooperation in Environmental Assessment*, 31 ALTA. L. REV. 644, 653 n.55 (1993).

184. *See generally* Kennett, *supra* note 183, at 653 (using the Canada–Alberta Agreement, and Canadian EIA law generally, as an example of where "soft" international norms are "hardened" into binding domestic law).

ignore.[185] As this Note explains below, this is a crucial element of the Canada–Alberta Agreement, a recognized element of the Espoo Convention, and an essential element to solving the structural bias in current domestic EIA law.[186] Second, the agreement must be feasible. Forcing two bureaucracies to work together will likely increase administrative costs.[187] The more parties that are added to the agreement, and the further these parties are geographically apart, the greater this cost will likely be. As such, effective cooperative agreements must be tempered by feasibility concerns. As this Note explains below, parts of the Canada–Alberta Agreement explicitly seek to streamline administrative burdens;[188] but where the agreement cannot be designed to overcome transaction costs between numerous parties, the agreement will lose effect.

Such a result must be avoided, but not to the point of crippling the concept. Even piecemeal bilateral adoption of the cooperative EIA model could dramatically increase awareness of transboundary environmental harms and result in other significant benefits outlined below.[189] As a result, this Note strongly urges adoption of cooperative EIA agreements at whatever level is most feasible, and seeks to preserve as much flexibility as possible by suggesting elements of an effective agreement rather than a rigid form agreement.

B. *Structure of the Agreement*

Regardless of the number of parties, an effective cooperative agreement should contain three structural elements: a commitment to assess beyond their jurisdictional borders, a low and mutual threshold for triggering cooperative review, and a means for determining a lead party for the cooperative EIA process. Of primary importance is a commitment by all parties to look beyond their own jurisdictional lines when assessing environmental harms, similar to the commitment found in § 11.1 of the Canada–Alberta Agreement.[190] This is the foundational first step of the cooperative EIA agreement.

Next, there should be a low, mutual threshold for triggering cooperative review. Both the Espoo Convention and the Canada–

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185. *See supra* Part III.A.2 (discussing the Department of State's refusal to fully assess Keystone XL's transboundary harms pointed out by the EPA); *see also supra* Part III.B.3 (noting the Department of State's voluntary inclusion of Canada's environmental assessment of land-use harms and its problems).

186. *See supra* Parts IV.B, IV.E.

187. *See, e.g.*, *supra* Part III.A.2 (offering an example of the potential disagreement and process involved in agency cooperation).

188. *See infra* Part III.D.

189. *See infra* Part III.E.

190. Can.–Alta. Agreement, *supra* note 177, § 11.1 ("The Parties agree that the environmental effects of a project must be assessed regardless of the location of jurisdictional boundaries.").

Alberta Agreement contemplate such a low threshold. In the Canada–Alberta Agreement, cooperative EIA begins once a proponent triggers a federal action that could "potentially" require cooperative environmental review.[191] This "potentially" trigger is extremely low, and both parties to the agreement bear significant responsibility to notify each other, share all documents, and begin the cooperative assessment process once the threshold is tripped.[192] Similarly, the Canada–Alberta Agreement creates a mutual responsibility that triggers cooperative assessment where *either party* has an environmental-assessment responsibility under their domestic law.[193] The Espoo Convention also endorses a similar mutual responsibility by placing the burden to reduce and control transboundary environmental harms on each party "either individually or jointly."[194]

A low, mutual threshold for triggering cooperative EIA ensures that a single party to the agreement cannot undermine the cooperative EIA process by either downplaying the environmental effect of its decision or by structuring its domestic laws to avoid triggering environmental review. With a low, mutual threshold, *either* party's obligation to begin cooperative review is triggered when an action could *potentially* cause transboundary harms within *either* party's jurisdiction. This creates a very dependent web of responsibilities that neither party can avoid. While admittedly over-inclusive, this trigger is a threshold to reaching the EIA process in the first place and, thus, an over-inclusive structure is helpful to structurally ensure that states account for all transboundary harms. After all, an assessment can still determine that the risk of a transboundary harm is low, and states can fulfill their obligation at little cost; the trick is ensuring that the assessment begins in the first place.

The Canada–Alberta Agreement also provides the third useful structural tool: the designation of a lead party that will organize the cooperative EIS process.[195] In the Canada–Alberta Agreement, the lead party is designated based on which party is "best situated," using factors such as the size and scope of the assessment with regard to the relevant jurisdictions, scientific expertise of the parties, physical proximity of the administering government offices, and other efficiency considerations.[196] A lead party in a cooperative EIA, like a

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191. *Id.* § 3.2 ("Once a proponent has filed provincial public disclosure documents or a federal project description document for a project potentially subject to a cooperative environmental assessment, the Parties will . . . commence the cooperative environmental assessment.").

192. *Id.* § 3.1–.2.

193. *Id.* § 6.1.

194. Espoo Convention, *supra* note 6, art. 2.1.

195. Can.–Alta. Agreement, *supra* note 177, § 5.1.

196. *Id.* § 5.6.3.

lead agency in NEPA, would be particularly useful to help keep administrative costs down and make cooperative assessments more feasible by allocating work to the most sophisticated party.

However, the lead party determination should be guarded against capture to ensure that a party strongly interested in skewing outcome of the assessment cannot take control. Each agreement could ensure protection either substantively, by ensuring that all parties author and contribute to the assessment collectively, or procedurally, by limiting the power of the lead party to control the focus and outcome of the assessment.

In addition to the three specific structural tools discussed above, both the Espoo Convention and the Canada–Alberta Agreement offer useful guidelines that a cooperative assessment should consider. For example, the Espoo Convention lists general guidelines for effective bilateral or multilateral EIA cooperation, such as communicating party responsibilities up front, harmonizing methodologies, sharing responsibilities on a reciprocal basis, and defining essential environmental data, including threshold transboundary harms and critical loads of transboundary pollution.[197] These elements and guidelines provide an excellent foundation for a cooperative EIA agreement that can be augmented by procedural sections from the Canada–Alberta Agreement. Specific additions from the Canada–Alberta Agreement's sections on Analysis of Environmental Assessment Information,[198] the Determination of the Need for a Public Hearing,[199] the Coordination of Decisions,[200] and Issue Management Between Parties[201] address the logistical issues of having multiple parties conferring on a single document, and could be very helpful in crafting an effective agreement regardless of that agreement's size.

C. *Goals of the Agreement*

A cooperative EIA should have at least two explicit goals. First, the cooperative EIA should seek to fulfill the goals of environmental assessment, both as understood domestically and internationally. Earlier Parts of this Note discuss the domestic understanding of EIA, emphasizing its limited, informational purpose and the essential need

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197. Espoo Convention, *supra* note 6, app. VI, ¶ 2.

198. Can.–Alta. Agreement, *supra* note 177, § 6.14–.17 (providing a means of identifying and assigning responsibility inadequacies in a cooperatively created assessment).

199. *Id.* § 7.0–.3.

200. *Id.* § 8.0–.2.

201. *Id.* § 14.0–.6 (describing, among other things, an escalating structure of dispute resolution between the parties of the agreement).

for accuracy and completeness.[202] Similarly, the Espoo Convention offers an informational goal for EIA in the international context, namely "to improve the quality of information presented to decision makers so that environmentally sound decisions can be made paying careful attention to minimizing significant adverse impact, particularly in a transboundary context."[203] As such, the first goal of cooperative EIA agreements must be to ensure complete and accurate information of environmental harms in order to best inform the decision maker.

Second, cooperative EIA agreements should ensure that the resulting document fulfills the parties' domestic EIA obligations. This goal is grounded in the Canada–Alberta Agreement, which explicitly provides that the result of its cooperative EIA process should fulfill the domestic EIA obligations of each party.[204] Ensuring this goal will have two impacts. First, fulfilling domestic obligations will make the model more feasible and prevent needless duplication. Second, incorporating the cooperative document into domestic law will allow judicial review under a state's existing EIA jurisprudence. As exemplified by NEPA jurisprudence, judicial review of the EIA process preserves public trust and administrative accountability in EIA law.[205] Even with judicial review limited to procedural protections rather than substantive critiques,[206] the process of the cooperative review is its greatest asset and is thus worth protecting. By folding in domestic litigation as an accountability tool, cooperative EIA agreements operate within the best of both worlds: the agreements maintain the necessary flexibility and transboundary scope of an international agreement, yet are held accountable to the procedural standards and enforceability of domestic law.

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202. *See supra* Part II.B.

203. Espoo Convention, supra note 6, pmbl.

204. Can.–Alta. Agreement, *supra* note 177, § 6.14 ("Each Party agrees to review the information generated by the cooperative environmental assessment to ensure its [sic] meets the requirements of the terms of reference for the environmental assessment report and th[e] Party's respective environmental assessment requirements.").

205. For example, the Second Circuit has stated:

> Enforcement of NEPA requires that the responsible agencies be compelled to prepare a[n] . . . EIS . . . based on adequately compiled information, analyzed in a reasonable fashion. Only if such a document is forthcoming can the public be appropriately informed and have any confidence that the decisionmakers have in fact considered the relevant factors and not merely swept difficult problems under the rug.

Sierra Club v. U.S. Army Corp of Eng'rs, 701 F.2d 1011, 1034 (2d Cir. 1983).

206. *See supra* Part II.B.

D. *Content of the Cooperative Assessment*

The Espoo Convention lists essential elements of an EIS document that could serve as the skeleton of what is required by any cooperative assessment report.[207] These include elements originally found in NEPA, such as listing and assessing alternatives to the action, including a no-action alternative,[208] and including a description of the environmental impact of the activity and its alternatives.[209] But the Convention also includes particularly useful modern elements, such as an explanation of any assumptions in underlying environmental data[210] and direct identification of gaps in knowledge or uncertainty.[211]

The Convention further includes a list of activities that are presumed to create transboundary environmental harms and, thus, should immediately trigger the cooperative EIA process.[212] This per se list was later expanded by amendment.[213] Perhaps tellingly, this list includes large diameter oil pipelines.[214] Including a list of activities that automatically trigger cooperative review would be useful for two reasons. First, it should make the process more predictable and more efficient, allowing a party to quickly build and leverage institutional knowledge when assessing familiar actions.

Second, it allows for a kind of preassessment bargaining between the States Party to ensure a more credible and more efficient agreement. For example, if Uruguay and Argentina wished to enter into a cooperative EIA agreement but were spurned by their shaky history of transboundary environmental harms, they could negotiate upfront that all pulp mills on the shared river immediately trigger cooperative environmental review regardless of other factors. In exchange, Argentina could agree that any major fishing activities that occur on its side of the river would also trigger guaranteed cooperative review. This bargaining would ensure greater buy-in from Uruguay and Argentina while creating a more efficient agreement

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207. *See* Espoo Convention, *supra* note 6, app. II (describing the content of the environmental-impact-assessment documentation).

208. *See id.*; *see also* 42 U.S.C. § 4332(c)(iii) (2006) (requiring agencies to "include . . . a detailed statement . . . on . . . alternatives to the proposed action")

209. Espoo Convention, *supra* note 6, app. II; *see also* 42 U.S.C. § 4332(c)(i) (requiring agencies to "include . . . a detailed statement . . . on . . . the environmental impact of the proposed action").

210. Espoo Convention, *supra* note 6, app. II.

211. *Id.*

212. *Id.* app. I.

213. *See* Meeting of the Parties of the Espoo Convention, Decision III/7, Second Amendment to the Espoo Convention, app., Jun. 4, 2012, *available at* http://treaties.un.org/doc/source/RecentTexts/27_4cEnglish.pdf.

214. *Id.* ¶ 8.

that guarantees full assessment of actions that have caused transboundary problems in the past.

E. *Benefits of Adopting Cooperative EIA Agreements*

At minimum, widespread adoption of cooperative EIA agreements could lead to five benefits. First, cooperative environmental assessment will necessarily lead to a more transparent assessment. Most transboundary environmental harms are asymmetrical, meaning that one country bears a greater environmental cost than another.[215] For example, a country with a smoggy manufacturing plant may be harmed by air pollution just as their neighbor is, but its neighbor does not gain the benefit of the products produced by the plant. Further, most countries exchange fundamentally different transboundary environmental harms.[216] For example, a primary environmental concern of Canada in developing the oil sands might be the extensive strip mining of Alberta, while the United States may be primarily concerned with increased GHG emissions that will result from opening the market to Canadian crude oil.

Asymmetrical and fundamentally different harms place two cooperating countries in different bargaining positions. Presuming that neither self-interested country wants to fully internalize a significant environmental harm caused by their neighbor for free, these different bargaining positions create an incentive for a country to fully disclose their environmental harms to the other. The more detail a country can disclose about the nature of its environmental harms, the more likely it can guarantee that it is not internalizing the costs of their neighbor. Further, the more transboundary environmental harms a country can hold its neighbor accountable for in a public cooperative process, the better a country looks to its public constituency. Thus, a cooperative EIA process creates strong incentives for the parties to be more transparent than in domestic EIA.

Second, cooperative EIA agreements will better fulfill the purpose of environmental assessment and will comply with international norms. The fundamental purpose of EIA law is to

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215. See Edward A. Parson & Richard J. Zeckhauser, *Equal Measures and Fair Burdens: Negotiating Environmental Treaties in an Unequal World* 5 (Kennedy School of Government, Harvard University, Discussion Paper No. E-93-03, 1993), http://belfercenter.hks.harvard.edu/publication/2893/equal_measures_and_fair_burdens.html ("But in most cases, the nations joining a treaty are highly asymmetric in their interests on the environmental issue being negotiated—how strongly they want to improve it, and how much it costs them to make any particular level of contribution to the effort.").

216. *Id.* at 10–14.

produce complete and accurate information on the environmental costs of a decision, and that purpose is undermined where transboundary harms are not addressed.[217] Further, international norms require a country to engage in adequate EIA where transboundary harms are implicated.[218] Cooperative EIA agreements provide a binding, efficient, and effective way to bring transboundary harms into a country's existing EIA law.

Third, cooperative EIA agreements could bring greater awareness to transboundary harms, helping fill a hole in environmental policy.[219] Forcing parties to engage in a bargaining process at a national level could draw the attention of nongovernmental organizations, interested citizens, and other stakeholders who are sensitive to the problem of transboundary harms. Even bilateral cooperative EIA agreements that are limited in scope could help identify regional transboundary harms and spur movement towards a broader, multilateral solution.

Fourth, cooperative EIA agreements could force greater compliance with EIA law generally. For example, if an agreement is set up with a low, mutual threshold for triggering cooperative review, countries with robust EIA laws and strong compliance could trigger cooperative review with less compliant neighbors. In countries like China that have dismal compliance rates with domestic EIA procedures,[220] a strong web of interconnected, cooperative review would increase participation in EIA while spreading the cost amongst multiple parties.

Fifth, cooperative EIA and better assessment of transboundary harms will likely result in better environmental quality. Although EIA generally does not substantively control decisions, the process itself often provides synergistic benefits to decision makers that

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217. *See supra* Part II.B.

218. *See id.*; *see also supra* Part II.C (discussing *Pulp Mills on the River Uruguay*).

219. *See, e.g.*, Espoo Convention, *supra* note 6, pmbl. (coming to agreement, "[m]indful of the need and importance to develop anticipatory policies and of preventing, mitigating and monitoring significant adverse environmental impact . . . in a transboundary context").

220. A joint investigation by [China's environmental agency] and Ministry of Land and Resources in 2004 shows that 30 to 40 percent of the mining construction projects went through the procedure of environment impact assessment as required, while in some areas only 6 to 7 percent did so. This partly explains why China has witnessed so many mining accidents in recent years.

Lin Gu, *China Improves Enforcement of Environmental Laws*, EMBASSY OF CHINA IN THE U.K. OF GR. BRIT. & N. IR. (Sept. 29, 2009), http://www.chinese-embassy.org.uk/eng/zt/Features/t214565.htm.

increase awareness and consideration of environmental issues.[221] The EIA process educates decision makers such that they better understand future environmental concerns and will begin to recognize environmental issues in other arenas.[222] Similarly, the EIA process educates the participating parties, and will add more sophisticated and constructive environmental criticism to the process as the parties gain experience.[223] Collectively, these synergistic influences will result in a more complete and efficient EIA process, which, if consistent with the purpose of EIA generally, will lead to more environmentally conscious decision making and better environmental quality.

V. CONCLUSION

The goal here is not to reinvent the wheel. Much of the necessary infrastructure and knowledge to adequately assess transboundary environmental harms exists within domestic EIA law and practice, and transboundary harms are, by necessity, happening within the borders of some jurisdiction. The problem is that this law is stuck between the state lines.

An exploration of the Keystone XL pipeline assessment drives this point home by connecting the abstract transboundary problem with a tangible global energy decision. The U.S. decision to permit the pipeline could have had an immense impact on global oil markets, both national and global GHG emissions, and land use in Alberta, among other harms. And yet the U.S. environmental assessment of

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221. For instance, an international survey of EIA practitioners in the mid-1990s suggested that, quite apart from its immediate influence on proposals, EIA confers other benefits, such as increasing environmental awareness and learning amongst participants. More recent studies also highlight the potential for critical education to take place amongst participants involved in EIA processes. This is likely to contribute to greater consideration of environmental concerns in the future, both by proponents, whose plans may become more environmentally acceptable from the outset, and by decision-makers, who may come to demand higher standards of environmental protection.

> If EIA does facilitate environmental learning amongst communities and other stakeholders involved in EIA processes, this greater environmental awareness is likely to be brought to bear not only on future development proposals but also in societal debate about the broader direction of development.

Jay, *supra* note 4, at 294 (citations omitted).

222. *Id.*

223. *Id.*

the project resisted fully addressing these environmental costs because it would not and could not reach across the Canadian border.

The goal then is to bridge the gap, cross the lines, and connect nations. This Note provides a flexible set of guidelines for making that connection with bilateral or multilateral cooperative environmental assessment agreements. These guidelines can provide a step towards solving the transboundary problem in EIA or, at minimum, provide a springboard for livening discussion on this global problem.

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