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Why Study Large Projects? Environmental Regulation's Neglected Frontier

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ARTICLES

WHY STUDY LARGE PROJECTS? ENVIRONMENTAL REGULATION'S NEGLECTED FRONTIER

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I. INTRODUCTION

Large-scale natural resource and infrastructure projects create some of the most challenging and high-stakes contexts for environmental regulation. They are marked by a diversity of parties, including project sponsors, contractors, commercial lenders, international financial institutions, numerous government agencies, and important non-contracting parties including local communities, indigenous peoples, and environmental and human rights NGOs. Complexity is added by the multiplicity of jurisdictions from which these parties emerge. Networks of local and foreign investors, domestic and international banks, and local and international NGOs surround large projects with complex webs. And the laws of multiple jurisdictions shape the project documents and avenues for dispute resolution. Large projects often impose a new legal infrastructure on a country as well as a web of interlinked contracts, many of which will be delocalized through international arbitration clauses and references to foreign law, as well as "international standards".

One might expect scholars of environmental law and regulation to be circling these projects with anticipatory zeal, salivating at the opportunities for interdisciplinary, policy-relevant, and empirically rich re-

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search. As regulatory spaces, large projects provide a fascinating locus for the study of multi-layered environmental regulation in situations of considerable complexity. But to date, large projects have demonstrated remarkable immunity from the insights of regulatory scholarship. Assessments of national approaches to environmental regulation of natural resources remain the preferred lens.[1] Project-specific studies, where they exist, are often isolated within siloed areas of research focus, whether geographic or subject-specific.[2] Barriers between deep reservoirs of practitioner knowledge and areas of current scholarly interest may also be to blame.

A workshop that celebrates John Braithwaite's contributions to regulatory scholarship, and particularly to responsive regulation, provides an opportune moment to reflect on this lacuna in environmental regulatory research. Responsive regulation emerged as an attempt to transcend the confines of a stale, polarized theoretical debate over free markets versus government regulation.[3] Responsive regulatory theory advances a dynamic, flexible, actor-oriented model of regulation that envisages regulation as an ongoing process of moves and countermoves by regulators, fine-tuned to the individual actors involved and their conduct. Responsive regulation can thus be situated within a wider body of scholarship on "decentred" approaches to regulation which are

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1 See e.g. the excellent collections of largely country-specific case studies to emerge out of the work of the Academic Advisory Group of the International Bar Association's Section on Energy, Environment, Natural Resources and Infrastructure Law, including: Barry Barton et al, eds, *Regulating Energy and Natural Resources* (Oxford: Oxford University Press, 2006) [Barton et al, *Regulating*]; Donald N Zillman, Alastair R Lucas & George (Rock) Pring, eds, *Human Rights in Natural Resource Development* (Oxford: Oxford University Press, 2002); Donald L Zillman et al, eds, *Beyond the Carbon Economy* (Oxford: Oxford University Press, 2008); Aileen McHarg et al, eds, *Property and the Law in Energy and Natural Resources* (Oxford: Oxford University Press, 2010).

2 For example, much current environmental research on large projects focuses on environmental impact assessment processes. An opportunity exists to integrate this work within larger multi-layered studies of project-specific environmental regulation.

3 The earliest full articulation of the theory of responsive regulation can be found in Ian Ayres & John Braithwaite, *Responsive Regulation: Transcending the Deregulation Debate* (Oxford: Oxford University Press, 1992).

attentive to the actions of the regulated.[4] In Braithwaite's own words, "[t]he basic idea of responsive regulation is that governments should be responsive to the conduct of those they seek to regulate in deciding whether a more or less interventionist response is needed."[5] This is graphically expressed through regulatory pyramids of sanction and support.[6] At the base of the regulatory pyramid of sanctions lie dialogic approaches to securing compliance; sanctions escalate as a regulator moves up the pyramid.

This article provides reflections on one of the newer aspects of responsive regulatory theory most relevant to the large project context—the networking of pyramidal actors. Braithwaite's restatement of the theory of responsive regulation in this volume draws attention to the capacity of regulators to "escalate by networking in more regulatory partners to put pressure on a regulated firm."[7] The multiplicity of potential regulators, and the use of networked governance, resonates strongly with the realities of large project regulation. But the most significant imprint of responsive regulation on this article is methodological. Reflecting upon responsive regulation as a methodological project invites us to probe more closely the potential application of a "Braithwaitean" methodology to large project research.

Braithwaite's 1992 book (with Ian Ayres), *Responsive Regulation: Transcending the Deregulation Debate*,[8] combines careful empirical investigation, ambitious meta-analysis, and dynamic theorizing. It represents precisely the type of big-picture research that is lacking in the large project context. The authors offer a synthesis of regulatory insights gleaned from an expansive study of diverse industries, coun-

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4 See Barry Barton, "The Theoretical Context of Regulation" in Barry Barton et al, *Regulating*, *supra* note 1, 11 at 23–24, citing Julia Black, "Decentring Regulation: Understanding the Role of Regulation and Self-Regulation in a 'Post-Regulatory' World" (2004) 54:1 Curr Legal Probs 103.

5 John Braithwaite, "Responsive Regulation and Developing Economies" (2006) 34:5 World Development 884 at 886 [citation omitted] [Braithwaite, "Developing Economies"].

6 John Braithwaite, "The Essence of Responsive Regulation" (2011) 44:3 UBC L Rev 475 at 482, figure 1 [Braithwaite, "Essence"].

7 *Ibid* at 508, citing Peter Drahos, "Intellectual Property and Pharmaceutical Markets: A Nodal Governance Approach" (2004) 77:2 Temp L Rev 401.

8 *Supra* note 3.

tries, and social contexts. The theory is dynamic, and the learning is ongoing. The refinement of the theory of responsive regulation offered in this volume is evidence of this fact.[9]

When one reflects upon the methodological project of Braithwaite's ongoing work on responsive regulation, one sees the many parallels with his contributions to other areas of scholarship—his study with Peter Drahos of global business regulation,[10] his work on restorative justice,[11] and his current project with Val Braithwaite, Hilary Charlesworth, and Kate Macfarlane on peacebuilding.[12] Each of these studies is ambitious in its scope and involves the synthesis of a significant body of new research and theory. *Peacebuilding Compared* is conceived as a twenty-year research project to code 670 variables in relation to armed conflicts that have raged across the planet since 1990.[13] *Global Business Regulation* encompasses over ten years of research, more than five hundred interviews, and a final text of 629 pages. The book, like much Braithwaite's work, combines close empirical investigation of individual case studies (gained through extensive field work and interviews) with a meta-analytic approach that situates these individual case studies within a rich, theoretically-informed understanding of context. Case studies stand alone as valuable empirical accounts. But combined, these case studies provide the basis for integrated theories of governance and regulation, with potentially widespread application. The combination of close empirical investigation, policy-oriented prescription, and theoretical rigour is rare in work of such expansive scope. This is exactly the sort of work that is needed now in the area of environmental regulation of large projects.

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9 Braithwaite, "Essence", *supra* note 6.

10 John Braithwaite & Peter Drahos, *Global Business Regulation* (Cambridge: Cambridge University Press, 2000)

11 See e.g. John Braithwaite, *Crime, Shame and Reintegration* (New York: Cambridge University Press, 1989); John Braithwaite, *Restorative Justice and Responsive Regulation* (Oxford: Oxford University Press, 2002).

12 See e.g. John Braithwaite et al, *Reconciliation and Architectures of Commitment: Sequencing Peace in Bougainville* (Canberra: Australian National University E Press, 2010).

13 John Braithwaite et al, *Anomie and Violence: Non-Truth and Reconciliation in Indonesian Peacebuilding* (Canberra: Australian National University E Press, 2010) 2.

The objective of this article is to help set the stage for the emergence of such empirically-informed, interdisciplinary, and theoretically nuanced research on large projects. The article is organized in three parts. In the next section, I tackle the question "why study large projects?" I then describe the contours of environmental regulation in the large project context, with a preliminary mapping of existing scholarship. In the final section, I turn to a discussion of the methods of large project research, and suggest three points of entry through which environmental regulatory research might develop in large project contexts: (1) through contracts, (2) through monitoring and oversight, and (3) through references to "international standards". The conclusion turns to the methodological demands of building and synthesizing project-specific research.

II. WHY STUDY LARGE PROJECTS?

Asking why regulatory scholars should study large projects amounts to asking two questions: (1) why adopt a project-specific lens for regulatory study? and (2) why focus this lens on the subset of large projects? To answer the first question, individual projects provide "strategic research sites" for a grounded understanding of how regulatory webs function.[14] Scholarship on environmental regulation often adopts a lens which focuses on a particular regulatory technique (for example, environmental impact assessment, environmental taxes, permitting, litigation, environmental disclosures, socially responsible investment, self-regulation, or principles-based regulation). In contrast, by adopting a project-specific lens, the actual functioning and interaction of multi-layered regulatory practices can be understood in a fine-grained and highly contextualized manner. The ways in which environmental regulatory tools complement or undermine each other may be appreciated by mapping the regulatory webs that govern individual projects.

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[14] Robert Merton uses the term "strategic research site" to refer to "sites, objects, or events that exhibit the phenomena to be explained or interpreted to such advantage and in such accessible form that they enable the fruitful investigation of previously stubborn problems and the discovery of new problems for further inquiry." See Robert K Merton, "Three Fragments from a Sociologist's Notebooks: Establishing the Phenomenon, Specified Ignorance, and Strategic Research Materials" (1987) 13 Annual Review of Sociology 1 at 1–2.

Secondly, why do "large" projects deserve particular attention? To answer this, the specific nature of large projects needs to be better explored. Large projects can be defined as natural resource or infrastructure projects costing five hundred million dollars or more.[15] In the case of dams, they are often defined by physical size.[16] These definitions, on their own, may fail to give a real sense of these projects. A better understanding of their scale and complexity emerges from thinking about the contractual and regulatory webs by which they are governed. A typical large project may involve fifteen or more contracting parties from a number of different countries, tied together through over forty major contracts.[17] For example, the financing piece alone for the Baku-Tbilisi-Ceyhan pipeline required 208 finance documents and more than 17,000 signatures from 78 parties.[18]

The world's growing demand for energy and natural resources, coupled with the exhaustion of easily accessible natural resource deposits, means that international oil and mining companies are initiating large projects in remote areas that have been relatively untouched by major industrial activity. These projects involve billions of dollars of capital. Their scope is such that host countries have never seen, let alone attempted to regulate, projects of this magnitude. Many of these projects, particularly pipeline projects, are multi-jurisdictional.

A new generation of large projects introduces particular social and ecological risks. These risks emerge with the use of untested or highly

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15 This definition is adopted from Benjamin C Esty, "Why Study Large Projects? An Introduction to Research on Project Finance" (2004) 10:2 European Financial Management 213 at 214, 218 (citing major mines, pipelines, oilfields, toll roads, bridges, telecommunication systems, and power plants as common examples of large projects).

16 For example, the International Commission on Large Dams defines a large dam to mean "a dam with a height of fifteen metres or more from the foundation." If dams are between five and fifteen metres high and have a reservoir volume of more than three million cubic metres, they are also classified as large dams; see World Commission on Dams, *Dams and Development: A New Framework for Decision Making—The Report of the World Commission on Dams* (London: Earthscan, 2000) at 11.

17 Esty, *supra* note 15 at 216. These parties may include sponsors and contractors, suppliers, host governments, and lenders.

18 Hugh Pope, "Caspian Pipeline Financing Solidifies U.S. Policy", *Wall Street Journal* (3 February 2004) A13.

invasive technologies (e.g., genetic manipulation, nuclear fission, or chemical hydraulic fracking), the extension of extractive activities into hostile environments (e.g., deep oceans, polar regions, or tropical rainforests), and the challenges that arise through operations in especially corrupt regimes and settings of historic and current conflicts and violence. These realities point to a unique aspect of large project regulation: their very scope often requires broad reforms of national regulatory regimes. Like large industrial disasters, large projects motivate regulatory reform and innovation.[19] A conventional approach to regulatory analysis focuses on how regulation shapes a particular project. The magnitude of large projects means that an equally relevant inquiry is the extent to which a particular project irrevocably alters the nature and practices of regulation in a particular jurisdiction. Large projects leave an indelible mark, not only on business practices in a jurisdiction, but also on legal and regulatory regimes.

The majority of scholarship on regulation focuses on a set of assumptions that have developed through the study of regulatory contexts featuring single dominant regulators, who are governmental actors, operating in the context of developed countries. In contrast, large projects involve multiple regulators (often with conflicting mandates), powerful non-state actors, and while projects frequently (but not exclusively) occur in developing countries, many regulators are transnational. The large project context thus provides an opportunity to explore how well elements of regulatory theory "travel" to settings distinct from those in which these elements were initially described.

Based on these initial observations of the nature of large projects, I turn now to further explore two explanations for why large projects provide a productive setting in which to study environmental regulation and potentially extend existing regulatory theories. The first is that large projects offer strategic research sites for understanding the interaction of regulatory webs. The second is that the scale of large projects means that project-specific regulation may critically shape future law and practice in a project's jurisdiction.

[19] See Fiona Hanes, *Globalization and Regulatory Character: Regulatory Reform After the Kader Toy Factory Fire* (Aldershot: Ashgate, 2005) for a thoughtful account of post-disaster regulatory reform in Thailand.

A. THE INTERACTION OF REGULATORY WEBS

In suggesting that large projects provide a useful research site for understanding the *interaction* of regulatory approaches, I draw attention to the fact that these projects are of such scale and complexity that issues of environmental regulation are necessarily multi-layered. Regulation, defined in the context of large projects, is an expansive concept. It can be seen as "the sustained and focused attempt to alter the behaviour of others according to defined standards or purposes with the intention of producing a broadly identified outcome or outcomes."[20] This definition encompasses regulation by a range of state and non-state actors (NGOs, private banks, and insurers, to name a few) which are critical sources of regulation in large project contexts. It extends beyond standard-setting, the licensing and permitting of new projects, and the enforcement of conditions on existing projects, to acknowledge the regulatory significance of broader anticipatory processes to accommodate large projects, including attention to the cumulative effects of multiple projects, and strategic-level considerations of regional futures and sectoral policy implications. Such a definition moves regulation far beyond a consideration of targeted rules which are enforced. Large projects offer particularly rich terrain for understanding the interplay between state regulation and private orderings, as well as the operation of hybrid forms of regulation. The regulatory experiences of large projects can thus extend current understandings of regulation in important ways.

Defining "environmental" regulation in the large project setting is problematic. Arriving at satisfactory definitions of environmental law, environmental governance, and environmental regulation plague all of these areas of study. Environmental regulation, used here, extends beyond a biophysical notion of the environment, and beyond an approach to regulation that confines its mandate to pollution control or species protection. But its contours are difficult to fix. This is why it is tempting to speak of the "environmental aspects of large project regulation" rather than "environmental regulation". This label better captures the fact that we are talking about regulation that has environmental effects rather than regulation that necessarily emanates from a government department of the environment. But it is a cumbersome moniker. The

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[20] Julia Black, "Critical Reflections on Regulation" (2002) 27 Australian Journal of Legal Philosophy 1 at 26.

same terminological dilemma results in many law schools hosting centres for "law and the environment" rather than centres for "environmental law". Environmental law, like environmental regulation, risks too narrowly confining the parameters of the subject.[21]

Environmental regulation in this broader context explores a diversity of regulatory tools that are used to respond to environmental challenges. It includes "complicated mixtures of established legal concepts, *sui generis* reforms, non-legal regulatory ideals, policy and legal norms from a range of different jurisdictions."[22] Environmental regulation emerges from a number of sources without explicit environmental protection mandates. For example, many categories of law impact the environmental regulatory space of a large project: environmental law, financial law, corporate law, insurance law, contract law, public law, international law, property law, torts. The environmental regulators of a large project may be international insurance companies, project finance companies, development agencies, communities, activist organizations, project partners, lenders and investors, parent companies, and arbitrators—as well as national and local government officials.

For legal scholars, the multiplicity of regulators and sites of regulation poses considerable challenges as it demands a transcendence of disciplinary borders and bodies of expertise. An understanding of the tax and royalty regime applicable to a project may be critical to understanding environmental regulation. Knowledge of how international construction contract terms are interpreted by international arbitral bodies may also be required. The way in which a global corporation has applied industry standards to its operations worldwide might lend further insights into the environmental regime that will apply to the specific project. One danger inherent in research that focuses on "environmental regulation" is that project-specific regimes for addressing environmental mitigation or "environmental safeguards" become the sole subjects of inquiry.

Project-specific regulation involves "regulatory networks" or "regulatory webs" where the identity of the key environmental regulator or

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21 See Richard Macrory, "Maturity and Methodology: A Personal Reflection" (2009) 21:2 J Envtl L 251 at 252.

22 Elizabeth Fisher et al, "Maturity and Methodology: Starting a Debate about Environmental Law Scholarship" (2009) 21:2 J Envtl L 213 at 225.

regulators may not be immediately apparent.[23] In many projects, environmental regulation may be shared among many governmental departments. In federal states, this regulation may be split among departments of mining, wildlife, environment, and water, at both the regional and federal levels. Critical non-state actors such as international financial institutions, NGOs, and insurance companies may take on key regulatory roles.[24] But to suggest that these state and non-state actors form webs or networks is only the first step in regulatory analysis. Understanding the ways in which diverse regulatory actors complement (or, conversely, undermine) each other also requires elucidation and more nuanced use of the term "networks". Put another way, large project-focused research demands the development and articulation of more rigorous techniques for understanding the interrelationships between local, regional, national, and international environmental forms of regulation, and state and non-state regulators.

In John Braithwaite's most recent work on responsive regulation (and the subject of this issue), he describes an explicit role for networking pyramidal governance by engaging wider networks of partners in the use of pyramids of support and sanction.[25] Intuitively, a networked pyramidal structure appears to describe well some of the tools available to regulators working in large project contexts—particularly in developing countries, where the capacity of government regulators may be limited.[26] However, a closer look at large projects suggests that a model that posits a government regulator "harnessing" or mobilizing non-state actors such as local and transnational NGOs may overstate the degree of cooperation between these actors.[27]

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23 See Braithwaite & Drahos, *supra* note 10 at 7, for a fuller discussion of regulatory webs.

24 See e.g. Yinka O Omorogbe, "Alternative Regulation and Governance Reform in Resource-Rich Developing Countries in Africa" in Barry Barton et al, *Regulating*, *supra* note 1, 39 at 41 (examining regulation by actors "other than the authorities whose function it is to make law and regulation within the territory in question").

25 See Braithwaite, "Essence", *supra* note 6 at 507; Ayres & Braithwaite, *supra* note 3 at 38–40.

26 Braithwaite, "Developing Economies", *supra* note 5 at 889.

27 The use of networks to harness non-state actors is discussed by Braithwaite, *ibid* at 889–96. The capacity of a government regulator to "mobilize cheaper forms of so-

NGOs each have their own agendas in large project debates, and the single-issue focus of some of these groups may function to undermine the partnership potential of these networks.[28] The same can be said for socially responsible investors or insurance companies. In other words, "constellations" of regulatory actors that appear as networks may not actually operate as networks.[29] Their manifestation may reflect only an ephemeral convergence of interests. The points of disagreement between the state regulator and the non-state network partner may be so acute that the network functions to undermine the functioning of the regulatory pyramid rather than to enhance it. Understanding how regulatory networking works also involves an appreciation of the ways in which an environmental regulator perceives environmental issues fitting into the wider package of large project regulation. Issues framed as "environmental" often disguise other regulatory concerns.

B. THE IMPACT OF PROJECTS ON REGULATORY REGIMES

The second reason I offer for studying large projects is that the scale of these projects means they leave an ineffaceable mark on the regulatory frameworks of the countries where they occur. Sierra Leone introduced new mining legislation to facilitate the Koidu Kimberlite and Sierra Rutile projects.[30] Madagascar's QIT Madagascar Minerals project, the first large scale mining project in the country by a private investor, led

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cial control" (*ibid* at 884) may be as limited as the regulator's capacity to regulate through command-and-control mechanisms.

28 For a critical look at NGO interests in the large project context, see Sebastian Mallaby, "NGOs: Fighting Poverty, Hurting the Poor", *Foreign Policy* (1 September 2004) 50.

29 I thank Susan Sturm for the useful image of the regulatory "constellation".

30 This legislative reform includes the introduction of the *Koidu Project Mining Lease (Modification and Ratification) Act 2002*, Act No 6 of 2002 (KPML), and the *Sierra Rutile (Ratification) Act 2002*, Act No 4 of 2002 (SRA), as well as development of a Core Mineral Policy. This legislation includes environmental requirements. For example, the KPML sets out provisions limiting pollution, restricting the use of water and addressing the environmental impacts on affected communities (clauses 6:3:1, 11:3). For a more thorough discussion of this legislation, see Priscilla Schwartz, "Corporate Activities and Environmental Justice: Perspectives on Sierra Leone's Mining" in Jonas Ebbesson & Phoebe Okowa, eds, *Environmental Law and Justice in Context* (Cambridge: Cambridge University Press, 2009) 429 at 434.

to the enactment of new national mining legislation.[31] In Uganda, the discovery of large oil deposits in the Lake Albert region by companies such as Heritage Oil culminated in the drafting of the *Petroleum (Exploration, Development, Production, and Value Addition) Bill 2010*.[32] National legal reform and project approval often proceed in tandem as a result of World Bank Group interventions in a country. These interventions include "rewriting laws (particularly related to the regulation of natural resources, the environment, and property rights); restructuring state agencies that regulate the environment . . . and funding large-scale 'green' infrastructural projects."[33] Each of these interventions is linked.

In developed economies, we also see project-specific regulatory innovations emerge in response to the seemingly one-off challenges of large projects. These project-specific regulatory tools often become entrenched in regulatory practices, alter expectations, and lead to legislative reform.[34] Large projects also have significant potential effects on regional development futures, sectoral policy development, and patterns of dependencies between nations.

Individual projects do not only impact domestic environmental regulation through legislative reform; treaty instruments and contracts also alter domestic regulatory practices. For example, the Baku-Tbilisi-Ceyhan (BTC) oil pipeline introduced a new international treaty among the host states to "ensure the principle of the freedom of transit of pe-

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31 Brunno Sarrasin, "Mining and Protection of the Environment in Madagascar" in Bonnie Campbell, ed, *Mining in Africa: Regulation and Development* (London: Pluto, 2009) 150 at 155–56.

32 See e.g. Robert D Langenkamp, "Comments on the Uganda Petroleum Bill" (8 July 2010), online: Revenue Watch International <http://www.revenuewatch.org>.

33 Michael Goldman, "Constructing an Environmental State: Eco-Governmentality and Other Transnational Practices of a 'Green' World Bank" (2001) 48:4 Soc Probs 499 at 506.

34 See Natasha A Affolder, "Rethinking Environmental Contracting" (2010) 21 J Envtl L & Prac 155. The negotiation of an environmental agreement to govern the Ekati Mine is an example of one such regulatory innovation that created expectations on the part of project-affected communities that other large mines would include similar agreements. The agreement formed a regulatory prototype for other large mining projects, and major proposed projects now are accompanied by demands for similar agreements.

troleum."[35] This treaty will have repercussions for environmental regulation of the project across the region as it provides for the freezing of local regulatory law, and an expedited process for the expropriation of land needed by the pipeline.[36]

This issue of scale further explains the fact that large projects often attract their own sets of rules. Motivated by the promise of significant economic activity, there have been efforts in a number of jurisdictions to "streamline" the environmental reviews of large projects, creating distinct environmental review processes which only apply to projects of a certain scale. The rationale for exempting large projects from the project-review rules that would otherwise apply emanates from concerns about the "regulatory burden" of multi-jurisdictional review for large projects.[37] A few examples illustrate this point. In a spirit of encouraging "efficiency" and "streamlining" the regulation of large natural resource projects, the Government of Canada introduced a Major Projects Management Office in 2007.[38] In 2005, the Government of New South Wales introduced a Major Projects Assessment System based on legislation to streamline environmental review regulations for major projects in the state and to "remove red tape" to help New South Wales "remain

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35 *Agreement Among The Azerbaijan Republic, Georgia and The Republic of Turkey Relating to the Transportation of Petroleum Via the Territories of The Azerbaijan Republic, Georgia and The Republic of Turkey Through the Baku-Tbilisi-Ceyhan Main Export Pipeline* (preamble), 18 November 1999, online: <http://subsites.bp.com> [*Agreement*]. See Abigail S Reyes, "Protecting the 'Freedom of Transit of Petroleum': Transnational Lawyers Making (Up) International Law in the Caspian" (2006) 24 Berkeley J Int'l L 842.

36 *Agreement*, *supra* note 35 (Articles II(4)(iv) and IV).

37 See e.g. Conference Board of Canada, *Making Canada More Competitive: Improving Major Project Regulation in Canada* (Toronto: Conference Board of Canada, 2008).

38 See Canada, Major Projects Management Office, *Reports and Publications: Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects* (October 2007), online: MPMO <http://www.mpmo-bggp.gc.ca>. The Major Projects Management Office (MPMO) is part of the Department of Natural Resources, and is the result of the *Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects*. For each major resource project, the MPMO forms a "Project Agreement" which sets out specific responsibilities and timelines for each governmental department involved in regulatory approval to help streamline the regulatory process (*ibid* at Part I(a)(2)).

Australia's economic powerhouse."[39] The UK's *Planning Act 2008* created a new institution, the Infrastructure Planning Commission,[40] with the goal of "streamlin[ing] the planning system for nationally significant infrastructure projects."[41]

Even absent specific legislation creating unique pathways for the review of large projects, the wide discretionary powers of decision-makers in certain jurisdictions to scope individual projects for environmental assessment implies that, in practice, large projects can be subject to distinct rules and processes. For example, in Canada, a recent legislative change may allow for the exemption of certain large projects, or aspects thereof, from environmental review.[42]

III. ENVIRONMENTAL REGULATION AND LARGE PROJECTS: MAPPING THE FIELD

An attempt to take stock of the field of scholarship that applies a project-specific lens to the environmental regulation of large projects leads to a few immediate conclusions. A first observation is that large projects do not feature in textbooks of environmental law or international environmental law. This points to a glaring gap in the scholarship: work that offers a synthesis of existing case studies—that builds, reflects upon, and identifies issues that cut across a range of projects. And it also suggests that large project regulation is not routinely taught as an aspect of environmental law.

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39 Austl, NSW, Department of Planning, *A Community Guide: NSW Major Projects Assessment System* (March 2006), online: NSW Planning <http://www.planning.nsw.gov.au> at 2. The relevant regulatory provisions to enable the Projects Assessment System include an amendment to Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW) and a new environmental planning instrument, the *State Environmental Planning Policy (Major Projects) 2005* (NSW).

40 *Planning Act 2008* (UK), c 29, s 1(1).

41 UK, Infrastructure Planning Commission, "Our Role" (2010), online: <http://infrastructure.independent.gov.uk>.

42 *Canadian Environmental Assessment Act*, SC 1992, c 37, ss 15(1), 7.1(2), as amended by *Jobs and Economic Growth Act*, SC 2010, c 12, part 20, which allows the Minister of the Environment to limit the scope of an environmental assessment "to one or more components of that project" and to exempt federally funded public utility projects (enumerated in the schedule to the *Environmental Assessment Act*) from environmental assessment.

Existing case studies that adopt a project-specific lens, mostly with different foci and emphases, stand alone. They are not integrated within a wider literature, and attempts to learn from these project-specific experiences are also stifled. In this section, I draw together some of these diverse case studies of individual projects to begin to sketch the contours of a body of work that adopts a project-specific lens to illuminate the environmental aspects of large project regulation. Much of this work is being produced by graduate students; this fact likely speaks to the time and travel demands of in-depth field work. Many single case studies offer a vision of large project regulation at a fixed point in time; this limits available accounts of the dynamism of large project regulation over long periods. The existing scholarship is also generally prescriptive. It often has an advocacy bent. It is uneven. Scholarship clusters around a few topics of particular interest, including the environmental impacts of actual,[43] proposed,[44] and even hypothetical[45] large projects, and the adequacy of environmental assessment regimes for these projects.[46] A recent Australian book, for example, takes a project-specific focus to scrutinizing large project developments across Australia and the role of environmental assessment in project approvals.[47] The rather universal conclusions of this body of work are that environmental

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43 See e.g. Ndenecho Emmanuel Neba & Banyuy Paul Ngeh, "Environmental Assessment of the Chad-Cameroon Oil and Pipeline Project in the Kribi Region of Cameroon" (2009) 4:5 International NGO Journal 225.

44 See e.g. Timothy Van Hinte, *Managing Impacts of Major Projects: An Analysis of the Enbridge Gateway Pipeline Proposal* (Master of Resource Management Thesis, Simon Fraser University School of Resource and Environmental Management, 2005), online: <http://ir.lib.sfu.ca> [unpublished].

45 See e.g. Kenneth S Culotta, "Recipe for a Tex-Mex Pipeline Project: Considerations in Permitting a Cross-Border Gas Transportation Project" (2004) 39:2 Tex Int'l LJ 287.

46 See e.g. Sarah Njoki Macharia, "A Framework for Best Practice Environmental Impact Assessment Follow-up: A Case Study of the Ekati Diamond Mine, Canada" (MA Thesis, University of Saskatchewan, 2005) [unpublished]; Ari Hershowitz, "A Solid Foundation: Belize's Chalillo Dam and Environmental Decisionmaking" (2008) 35:1 Ecology LQ 73; Sanjay Jose Mullick, "Power Game in India: Environmental Clearance and the Enron Project" (1997) 16 Stan Envtl LJ 256.

47 Tim Bonyhady & Andrew Macintosh, eds, *Mills, Mines and Other Controversies: The Environmental Assessment of Major Projects* (Annandale: The Federation Press, 2010).

assessment processes, and particularly environmental assessment follow-up, are inadequate.[48]

The transnational nature of large project regulation is also attracting attention. Scholarship addressing the environmental regulatory regime for the BTC oil pipeline project, for example, draws attention to the ways in which large project regulation can be delocalized and transnational treaties can become the prevailing legal regime;[49] it also examines the environmental problems likely to emerge from the insulation of the pipeline project from domestic law.[50] Sanjeev Khagram's work on resistance to dam projects has documented the multiple sites of environmental regulation, including federal government, state, the World Bank, NGOs, and grassroots.[51] A collection of essays and several individual articles address the environmental policy, law, and liability considerations applicable to the Chad-Cameroon pipeline project.[52] The link between financing and environmental regulation is explored through a study of the Three Gorges Dam where World Bank Group financing for the project was denied because it did not conform with the Bank's environmental guidelines.[53] David Szablowski offers a case study of the Antamina Mine in Peru which highlights the selective absence of the state in regulating conflicts between the company and the affected community.[54] In his study of the P&O Port Project in Dahanu,

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48 See e.g. Neba & Ngeh, *supra* note 46; Macharia, *supra* note 46. See also Judith Kimerling, "Recent Development: The Environmental Audit of Texaco's Amazon Oil Fields: Environmental Justice of Business as Usual?" (1994) 7 Harv Hum Rts J 199, outlining the weaknesses of an environmental audit of Texaco's oilfield operations in the Amazon.

49 See Reyes, *supra* note 35.

50 See Christopher PM Waters, "Who Should Regulate the Baku-Tbilisi-Ceyhan Pipeline?" (2004) 16:3 Geo Int'l Envtl L Rev 403.

51 See Sanjeev Khagram, *Dams and Development: Transnational Struggles for Water and Power* (Ithaca: Cornell University Press, 2004).

52 See SA Bronkhorst, ed, *Liability for Environmental Damage and the World Bank's Chad-Cameroon Oil and Pipeline Project* (Amsterdam: Netherlands Committee for IUCN, 2000); Edwin Mujih, "The Regulation of Multinational Companies Operating in Developing Countries: a Case Study of the Chad-Cameroon Pipeline Project" (2008) 16:1 African Journal of International & Comparative Law 83.

53 William Shapiro, "Human Rights and the Environment: IV. China's Three Gorges Dam" (1998) 9 Colo J Int'l Envtl L & Pol'y [YB] 146 at 154.

54 David Szablowski, *Transnational Law and Local Struggles* (Oxford: Hart, 2007).

India, Oren Perez documents the community struggle against an international project to build what would be the biggest deep-water port in India.[55] This account highlights the limits of efforts to regulate multinational enterprises in large projects where the environmental ramifications are significant.

Industry-specific attempts at synthesis have also contributed to the understanding of certain types of large projects. The World Commission on Dams spawned an entire industry of dam studies.[56] Dam projects are now the sites of a considerable number of project-specific studies.[57] The Mining, Minerals and Sustainable Development project[58] and the World Bank's Extractive Industries Review process[59] both established important benchmarks for further work on governance of extractive industry projects. Oil and gas projects, and particularly pipelines,[60] have also

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55 Oren Perez, "Reflections on an Environmental Struggle: P&O, Dahanu, and the Regulation of Multinational Enterprises" (2002) 15:1 Georgetown Int'l Envtl L Rev 1 at 14–15.

56 See e.g. World Commission on Dams, *Dams and Development: A New Framework for Decision-Making* (London: Earthscan, 2000); Deborah Moore, John Dore & Dipak Gyawali, "The World Commission on Dams + 10: Revisiting the Large Dam Controversy" 3:2 (2010) Water Alternatives 3; Peter Bosshard, "The Dam Industry, the World Commission on Dams and the HSAF Process" (2010) 3:2 Water Alternatives 58.

57 See e.g. William F Fisher, ed, *Toward Sustainable Development?: Struggling Over India's Narmada River* (Armonk: ME Sharpe, 1995); Philippe Cullet, ed, *The Sardar Sarovar Dam Project: Selected Documents* (Aldershot: Ashgate, 2007); Wilson Cabral de Sousa Júnior & John Reid, "Uncertainties in the Amazon Hydropower Development: Risk Scenarios and Environmental Issues around the Belo Monte Dam" (2010) 3:2 Water Alternatives 249; Maarit Virtanen, "Foreign Direct Investment and Hydropower in Lao PDR: The Theun-Hinboun Hydropower Project" (2006) 13:4 Corporate Social Responsibility & Environmental Management 183.

58 See International Institute for Environment and Development, *Breaking New Ground: The Report of the Mining, Minerals, and Sustainable Development Project* (London: Earthscan, 2002).

59 See The World Bank Oil, Gas, Mining Unit, *Extractive Industries Review Reports*, online: <http://go.worldbank.org>. The Extractive Industries Review consists of six volumes of reports with a total of more than twenty individual reports.

60 See e.g. Michael M Wenig & Patricia Sutherland, "Considering the Upstream /Downstream Effects of the Mackenzie Pipeline: Rough Paddling for the National Energy Board" (2004) 86 Resources 1, online: Canadian Institute of Resources Law <http://www.cirl.ca>; Van Hinte, *supra* note 44.

generated a project-specific literature, as have nuclear projects.[61] In Canada, the tar sands are the subject of a growing body of research on environmental regulation.[62]

Collections of case studies also attempt to shed empirical light on the use of corporate self-regulation in the environmental context. Noeleen McNamara, in a recent doctoral thesis, draws on case studies of large gold mines in Tanzania, Papua New Guinea, and Queensland, to address whether self-regulatory mechanisms are more important than formal legislation in motivating compliance with environmental laws.[63] These studies are valuable, but most often they offer a single-point-in-time perspective of regulatory practices. Missing is a more long-term view of the interactive and dynamic regulatory relationships at stake. Particularly in the mining and oil and gas sectors, where mergers and acquisitions are so frequent, the key subjects of regulation can be constantly moving targets. This may offer particular challenges for responsive approaches to regulation where individual relationships are critical.

Detailed case studies that adopt a pluralist lens to the regulation of projects allow us to grasp the multiple layers of project-specific environmental regulation. Among the few examples of this work, Priscilla Schwartz's study of the Koidu Kimberlite Mining Project in Sierra Leone stands out as a rich and nuanced example of project-specific regulatory scholarship.[64] She reveals how environmental regulation of

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61 Edward D Bayda, "The Adequacy of the Public Inquiry Process for Assessing Major Nuclear Facilities" (1980) 45:1 Sask L Rev 3; Atomic Energy of Canada Ltd (AECL), *Nuclear Energy Inquiries: National and International*, Report AECL-10768 by JAL Robertson (Chalk River: AECL, 1993).

62 See e.g. Pierre Gosslin et al, *The Royal Society of Canada Expert Panel: Environmental and Health Impacts of Canada's Oil Sands Industry* (Ottawa: Royal Society of Canada, 2010); Constance D Hunt & Alistair R Lucas, *Environmental Regulation: Its Impact on Major Oil and Gas Projects: Oil Sands and Arctic* (Calgary: Canadian Institute of Resources Law, 1980); Oil Sands Advisory Panel, *A Foundation for the Future: Building an Environmental Monitoring System for the Oil Sands* (Ottawa: Minister of Environment, 2010); Steven A Kennett, "Next Steps for Cumulative Effects Management in Alberta's Athabasca Oil Sands Region" (2006) 96 Resources 1, online: Canadian Institute of Resources Law <http://www.cirl.ca>.

63 Noeleen McNamara, *The Environmental Regulation of Mining: An International Comparison* (PhD Dissertation, University of Southern Queensland 2009), online: <http://eprints.usq.edu.au>.

64 See Schwartz, *supra* note 30.

the project operates through lease agreements, mining laws and policies, loan agreements, environmental assessment practices, World Bank guidelines, and contractual terms including requirements to comply with applicable "rules of international law" and "best international standards". She further contextualizes this discussion of project regulation by situating the project within the institutional limitations which hamper enforcement of environmental laws in Sierra Leone including "state-centric albeit uncoordinated bureaucratic processes, corruption, ill-defined responsibilities between departments and lack of technical capacity on the part of regulatory bodies."[65]

Research on large project regulation admittedly faces a number of barriers to entry. This may explain the dearth of academic research. Large projects are few and regarded as idiosyncratic. They are context-specific to such a degree that lessons may not be immediately translated to other contexts. Obtaining detailed information on these projects is challenging due to the private and often confidential nature of the governing contractual regimes. Given the highly contested nature of many of these projects, "honest numbers" are hard to find.[66] And understanding the applicable webs of regulation demands time-consuming and in-depth field work.

IV. ENVIRONMENTAL REGULATION AND LARGE PROJECTS: A RESEARCH AGENDA

While synthesis of existing studies of the environmental aspects of large project regulation may be lacking, the financial and economic development dimensions of large project success and failure are the subject of enormous popular, political, and scholarly interest.[67] The insights that emerge from taking a closer looking at environmental regulation are likely to be of broader significance—and interest—as an aspect of

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65 *Ibid* at 437.

66 See Bent Flyvbjerg, Nils Bruzelius & Werner Rothengatter, *Megaprojects and Risk: An Anatomy of Ambition* (Cambridge: Cambridge University Press, 2003) at 5. Megaprojects are not a field of "honest numbers". Disputes around these projects are rife with allegations of bias in the work of environmental professionals.

67 See e.g. Erik J Woodhouse, "The Obsolescing Bargain Redux? Foreign Investment in the Electric Power Sector in Developing Countries" (2006) 38:2 NYUJ Int'l L & Pol 121.

large project regulation. Understanding project-specific regulatory contexts may elucidate trends of wider regulatory significance, given the fact that many regulators, particularly in the developing world, are repeat actors in multiple projects. For example, aside from the "usual suspects" such as international financial institutions, the private project sponsors are often the same in different countries, and the main international NGOs are often the same (for example, International Rivers for dam projects).

There is value in complementing conventional approaches to studying environmental regulation (which focus on permitting and environmental impact assessments) with understandings of de-centred approaches to regulation at the project level. These include studies of environmental regulation of projects through socially responsible investment, environmental insurance, project finance mechanisms, self-regulation, standard-setting initiatives, and contractual mechanisms. In this section, I explore three particular opportunities for such research that might further elucidate the value of a broad conception of regulatory tools, and the potential for regulatory advance through the careful development of a well-conceived suite of these tools. The three examples of such tools I discuss are: (1) contracts, (2) project oversight and monitoring, and (3) international standards.

To date, early examples of this research have emerged in the context of international investment law. This has the consequence of conceptualizing large project regulation as a "developing country" issue. John Braithwaite's 2006 essay on "Responsive Regulation and Developing Economies" offers particularly helpful reflections on the challenges and opportunities for responsive approaches in developing countries.[68] But large project regulation is not only an issue impacting developing countries. One goal of this essay is to highlight the challenges of large project governance that transcend national borders and affect all countries, regardless of the nomenclature used to classify their level of economic development. A narrow focus that conceives large project regulation as an aspect of foreign investment law obscures the experimentation taking place around large project regulation in diverse contexts.

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[68] Braithwaite, "Developing Economies", *supra* note 5.

A. THE CONTRACTUALIZATION OF LARGE PROJECT GOVERNANCE

Contracts are central to large project regulation. They provide a key mechanism for environmental regulation of project operations. Loan agreements, insurance agreements, investment agreements, construction contracts, environmental agreements, and community benefit agreements are just a few examples of contracts that adopt environmental regulatory functions. The environmental significance of contracts can be obscured for a number of reasons. First, these contracts may not be public and thus their terms may be unknown. Second, as a form of private law, the wider public and political significance of contracts can easily be missed. And third, the environmental regulatory aspects of contracts may be buried in larger contractual documents that address other issues. Contracts are highly contextualized instruments that can fine tune regulatory responses to the challenges of specific situations and unknown contingencies. They can provide for environmental performance bonds or security deposits, which provide a "stick" should negotiated attempts to secure environmental outcomes fail. But contractual provisions can equally entrench environmental disregard and fail to provide for responsive approaches to environmentally destructive behaviour.

In the setting of large projects, contracts are critical because so many aspects of regulation are one-off and negotiated. For example, in international investment contracts, project-specific commitments have been concluded through stabilization clauses that freeze environmental laws and constrain the ability of host states to raise environmental standards in project settings and comply with international environmental law.[69] Stabilization clauses are contractual commitments not to interfere with the regulatory framework governing an investment project.[70] These commitments typically can be found in contracts between global natural resource companies (or their local subsidiaries) and host governments.

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69 See Lorenzo Cotula, "Stabilization Clauses and the Evolution of Environmental Standards in Foreign Investment Contracts" (2006) 17:1 YB Int'l Env L 111.

70 See Peter Cameron, *International Energy Investment Law: The Pursuit of Stability* (Oxford: Oxford University Press, 2010); Evaristus Oshionebo, "Stabilization Clauses in Natural Resource Extraction Contracts: Legal, Economic and Social Implications for Developing Countries" 10 Asper Review of International Business and Trade Law 1.

The clause may involve a commitment by the government not to alter the regulatory framework for the project, through legislation or other means, without the consent of the other contracting party, in effect freezing regulation as it applies to the contract; it may also provide for compensation of the investor for the economic impact of any new regulation. Clauses may also specify compensation or "restoration of the economic equilibrium" of the project in the event that a regulatory change causes prejudice to the project.[71] Such clauses are intended to address investors' lack of confidence in the legal systems of developing countries.

But contractual clauses cannot be examined in isolation. It is the interaction between contract law and bilateral investment treaties that provides a more complete regulatory picture. Stabilization clauses can have a chilling effect on the introduction of new environmental regulation.[72] But the entrenching effect of the terms of bilateral investment treaties may be more significant. Understanding contractual commitments in the context of bilateral investment treaties is made all the more pressing by recent robust arbitral interpretations of investor protections, including umbrella clauses and standards of fair and equitable treatment (FET), in these treaties. Umbrella clauses "create an international law obligation that a host state shall, for example, 'observe any obligation it may have entered to'; 'constantly guarantee the observance of the commitments it has entered into'; or 'observe any obligation it has as-

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71 *Host Government Agreement between and Among the Government of Turkey and* [*the MEP Participants*] (19 October 2000) [Turkish HGA], articles 7.2(xi), 10.1(iii) & 10.3 [Turkish HGA], one of a series of contracts emerging as part of the Baku-Tbilisi-Ceyhan (BTC) Pipeline Project.

72 One way to counteract the effect of stabilization contracts has been to attempt to negotiate environmental or human rights exemptions to broad stabilization clauses. For example, due to civil society protest, the BTC consortium made a unilateral commitment not to interpret the stabilization clause included in agreements such as the Turkish HGA, *ibid*, in such a way as to prevent host state regulation promoting human rights and environmental goals. This undertaking provided that such regulation for human rights and environmental purposes met certain requirements which were directed to prevent host country abuse of this commitment. See Baku-Tbilisi-Ceyhan Pipeline Company, *BTC Human Rights Undertaking* (22 September 2003), online: BP Caspian <http://subsites
.bp.com>.

sumed'."[73] FET standards are also a common feature of bilateral investment treaties, and they form part of the investment chapters of economic integration agreements such as free trade agreements. As one author explains, "[t]oday, non-compliance with the FET clause is the most alleged breach in international investment arbitrations, along with the protection against expropriation."[74]

The contractual clauses discussed above are rare examples of clauses in the public domain. Certain foreign investment contracts and many project documents are not publicly available. Those that are may only be accessible through costly subscription services, or made publicly available only under pressure exerted by international financial institutions (including recent reforms to the World Bank's disclosure policies).[75] This demonstrates the concern that networked forms of environmental regulation can be compromised by a lack of access to key contractual provisions.[76]

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73 Katia Yannaca-Small, "Interpretation of the Umbrella Clause in Investment Agreements" in OECD, *International Investment Law: Understanding Concepts and Tracking Innovations*, online: OECD <http://www.oecd.org> 101 at 102. See also Jarrod Wong, "Umbrella Clauses in Bilateral Investment Treaties: Of Breaches of Contract, Treaty Violations, and the Divide between Developing and Developed Countries in Foreign Investment Disputes" (2006) 14:1 Geo Mason L Rev 135.

74 Sebastián López Escarcena, "The Elements of Fair and Equitable Treatment in International Investment Law", Policy Brief No 14 (April 2010) at 2, online: Leuven Centre for Global Governance Studies <http://www.ggs.kuleuven.be>; see also Ioana Tudor, *The Fair and Equitable Treatment Standard in the International Law of Foreign Investment* (Oxford: Oxford University Press, 2008).

75 In July 2010, the World Bank introduced a new policy on access to information. See World Bank, *Access to Information*, online: World Bank <http://www.worldbank.org>.

76 In response to international concerns that confidential contracts breed corruption and that greater transparency is needed, several sources of pressure urging the disclosure of contracts are mounting. The BTC contracts discussed above (*supra* notes 35, 71) were disclosed after civil society uproar led the International Finance Corporation (IFC) to put pressure on BP to disclose the agreements; see Kyla Tienhaara, *The Expropriation of Environmental Governance: Protecting Foreign Investors at the Expense of Public Policy* (Cambridge: Cambridge University Press, 2009) at 115. In the wake of the recommendation by the Extractive Industries Review (*supra* note 59) that the World Bank Group require the disclosure of contracts in the extractive sector, the IFC altered its Policy on Social and Environmental Sustainability to require that: (i) for significant new extractive industries projects, clients publicly disclose their material project payments to the host government (such as royal-

Environmental regulation of large projects through contracts does not only happen through investment agreements. Large mining and oil and gas projects, for example, are routinely subject to a range of environmental protection demands from state and non-state communities of interest, and must answer these demands to secure a "social license to operate", particularly in ecologically sensitive sites. Contracts with governments, local communities, and conservation organizations have emerged as one mechanism for responding to community demands for environmental safeguards. Negotiated agreements with companies may take the form of environmental agreements,[77] impact and benefit agreements,[78] or good neighbour agreements. They may also emerge as part of community-company negotiations on natural resource projects.[79] These negotiated agreements may respond to gaps in regulatory regimes and add an additional layer of project-specific environmental regulation.

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ties, taxes and profit sharing), and the relevant terms of key agreements that are of public concern such as host government agreements (HGAs) and intergovernmental agreements (IGAs); see IFC, *Policy on Social and Environmental Sustainability* (30 April 2006), online: IFC <http://www.ifc.org>.

77 See Affolder, *supra* note 34, for a discussion of the environmental agreement that governs the Ekati Diamond Mine in Canada's Northwest Territories; see also Ciaran O'Faircheallaigh, *Environmental Agreements in Canada: Aboriginal Participation, EIA Follow-up and Environmental Management of Major Projects* (Calgary: Canadian Institute of Resources Law, 2006); Meinhard Doelle, "Regulating the Environment by Mediation andContract Negotiation: A Case Study of the Dona Lake Agreement" (1992) 2:2 J Envtl L & Prac 129.

78 A data set of these agreements is now housed at University of Melbourne as part of the Agreements, Treaties and Negotiated Settlements (ATNS) Project, online: ATNS <http://www.atns.net.au>.

79 See Christian Rarivoson, "The Mandena *Dina*, a Potential Tool at the Local Level for Sustainable Management of Renewable Natural Resources" in Jörg U Ganzhorn, Steven M Goodman & Manon Vincelette, eds, *Biodiversity, Ecology and Conservation of Littoral Ecosystems in Southeastern Madagascar, Tolagnaro (Fort Dauphin)* (Washington, DC: Smithsonian Institution, 2007) 309; for example, in the QIT Madagascar Minerals ilmenite mine, a *dina* (a Malagasy social contract) was negotiated between the communities and the mining company pursuant to which the company, the communities, and the Malagasy forest department co-manage conservation zones. The *dina* also incorporates the company's environmental and social programmes as set out in the Integrated Development Plan.

Contractual approaches to regulation illustrate the dynamic nature of regulation. The impact and benefit agreements, environmental agreements, and community agreements referenced above are of fairly recent vintage. But contracts as an aspect of large project regulation were also the subject of interest in earlier decades. The late 1970s and early 1980s featured a period of intense interest in large project law and governance in a number of jurisdictions, with particular interest in contractual approaches. State or franchise agreements, which gave statutory effect to large project agreements, were the subject of much Australian scholarship.[80] In Canada, interest in environmental regulation generally, and contractual approaches to environment regulation more particularly, emerged, particularly in the context of debates surrounding natural resource development in Canada's North.[81]

A further category of contracts that is deserving of greater regulatory scrutiny is standard form contracts.[82] Energy and resource industry associations, particularly petroleum associations, are active in producing standardized contracts.[83] Model or standard contracts can have enor-

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80 See e.g. Leigh Warnick, "State Agreements" (1988) 62:11 Austl LJ 878; Malcolm Hollick, "Industry Agreement Acts and Environmental Management in Australia" (1983) 7:3 Environmental Management 253; KD MacDonald, "The Negotiation and Enforcement of Agreements with State Government Relating to the Development of Mineral Ventures" (1977) 1:1 Australia Mining Petroleum Law Journal 29; and for more recent work, see Michael Crommelin, "State Agreements: Australian Trends and Experience" (1996) AMPLA Yearbook 328; Richard Hillman, "The Future Role for State Agreements in Western Australia" (2006) 25:3 (2006) Australian Resources and Energy Law Journal 293.

81 Andrew R Thompson, "Contractual v. Regulatory Modes for Major Resource Development Projects" (1984) 8 Resources, online: Canadian Institute of Resources Law <http://www.cirl.ca>; Andrew R Thompson, *Environmental Regulation in Canada: An Assessment of the Regulatory Process* (Vancouver: Westwater Research Centre, 1980); J Owen Saunders, "New Directions in Resource Management: The Single Window" (1983) 5:1 Resources, online: Canadian Institute of Resources Law <http://www
.cirl.ca>; Barry Barton, Robert Franson & Andrew Thompson, *A Contract Model for Pollution Control* (Vancouver: University of British Columbia, 1984).

82 See e.g. Oren Perez, "Using Private-Public Linkages to Regulate Environmental Conflicts: The Case of International Construction Contracts" (2002) 29:1 JL & Soc'y 77 (arguing that standard form construction contracts can institutionalize ecological indifference).

83 A Timothy Martin, "Model Contracts: A Survey of the Global Petroleum Industry" (2004) 22:3 Journal of Energy & Natural Resources Law 281.

mous influence across individual projects. They evidence the need to look for environmental regulation in unanticipated places.

A wide range of contracts thus take on environmental regulatory functions in project settings. Contracts can be extremely responsive to project-specific contexts and unforeseen issues. But as the concern around the use of stabilization clauses highlights, contracts can also lead to a gutting or undermining of otherwise applicable environmental regulation. A further concern that contracts raise is the ability to dislodge contractual forms of environmental regulation by exiting the contract. Chad demonstrated this in the context of the Chad–Cameroon pipeline project where it evaded World Bank conditions in a loan agreement by prepaying the loan. India avoided World Bank conditions by withdrawing its loan application in the Narmada dam project.[84] Governance through contracts allows parties to contract out of domestic law and apply ambiguous international standards as the only governing law.[85] This concern can be better understood through a richer understanding of the multiple interacting arms of project-specific regulation, and the multiple levels of contractual regulation.

Contracts fit within a wider context of public law and institutions for judicial enforcement. As Hugh Collins has so convincingly shown in the domestic law context, contracts regulate but they are also regulated.[86] Further research on the contractual governance of large projects could build upon Collins's study by examining how contracts are regulated as a matter of transnational law. How important are contractual provisions in the large project context, where contracts are difficult to enforce? Further research could also check against the risk that legal scholars overstate the importance of contracts as an aspect of environmental regulation.

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84 See Khagram, *supra* note 51 at 130.

85 Kyla Tienhaara, "Environmental Aspects of Host Government Contracts in the Upstream Oil and Gas Sector" (2010) 8:3 Oil, Gas & Energy Law Intelligence, online: Social Science Research Network <http://papers.ssrn.com>.

86 Hugh Collins, *Regulating Contracts* (Oxford: Oxford University Press, 1999).

B. PROJECT OVERSIGHT AND MONITORING

In most jurisdictions where some form of environmental assessment is practiced, follow-up has been dubbed the weakest stage.[87] Indeed, a common critique of large projects, whether they are situated in Mozambique or Melbourne, is that oversight and monitoring regimes are absent or insufficient. While the terminology is often used loosely, monitoring frequently refers to some form of testing to measure the environmental impacts of a project. Oversight generally refers to a "watchdog" function of ensuring that the project proponent is complying with their environmental commitments. But oversight need not only refer to watching the performance of a project proponent. It also includes in its scope the oversight of regulators to see if they are performing their statutory duties. Environmental oversight bodies may emerge in project settings as a requirement of legislation, as part of a contractual agreement to create such an institution, or in practice without an explicit legislative, regulatory, or contractual basis.

Given the multiple hats that host governments wear as investment attractors, tax and royalty collectors, and environmental regulators, their capacity and willingness to strictly monitor environmental regimes poses a problem in many project situations. Oversight bodies are one response to the lack of capacity and will to rigorously monitor project impacts. These bodies can have vastly different forms, functions, powers, and degrees of integration into other legal and regulatory processes. Yet remarkably little is known about the types of oversight bodies that exist in large projects and their efficacy.

Monitoring institutions provide a useful point for thinking about the application of responsive regulatory approaches, as they can yield the information that is vital to escalating or de-escalating sanctions and supports. Responsiveness depends on fine-tuned and highly contextualized responses to the activities of those being regulated. Accessing accurate accounts of these activities can be a challenge in large project contexts, and monitoring institutions can play vital roles in respect to accessing information.

Various forms of commission of inquiry have long accompanied large projects. In the UK, the so-called "big public inquiry" has been a

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[87] O'Faircheallaigh, *supra* note 77 at 1.

mechanism for debating large go/no-go decisions for projects.[88] In Canada, Thomas Berger's Mackenzie Valley Pipeline Inquiry stands as a high water mark of public inquiry.[89] A number of jurisdictions have also used committees of inquiry to examine the implications of uranium mining.[90]

At the level of the individual project, monitoring agencies have emerged to provide a watchdog on environmental performance once the decision to approve a project is made. In Canada, diamond projects in the Mackenzie Valley have yielded various instructive experiments in structuring environmental oversight agencies.[91] The emergence of these independent oversight agencies speaks to a monitoring gap in existing regulation; it also reflects a lack of trust on the part of the local, predominantly First Nations communities, that either government or the project proponent would live up to the commitments made as part of the environmental assessment process unless they were being "watched".[92] These oversight institutions are tasked with both promoting Aboriginal participation and ensuring that government regulators and project pro-

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88 See Council for Science and Society, *The Big Public Inquiry: A Proposed New Procedure for the Impartial Investigation of Projects with Major National Implications* (London Outer Circle Policy Unit, 1979); R Kemp, T O'Riordan, & M Purdue, "Investigation as Legitimacy: the Maturing of the Big Public Inquiry" (1984) 15:3 GeoForum 477; Brian Wynne, *Rationality and Ritual: The Windscale Inquiry and Nuclear Decisions in Britain* (Chalfont St Giles: British Society for the History of Science, 1982).

89 Thomas R Berger, *Northern Frontier, Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry* (Ottawa: Minister of Supply and Services, 1977); see also Kenneth M Lysyk, Edith E Bohmer & Willard L Phelps, *Alaska Highway Pipeline Inquiry* (Ottawa: Minister of Supply and Services, 1977).

90 See Australia, Independent Committee of Inquiry into Nuclear Weapons and Other Consequences of Australian Uranium Mining, *Australia and the Nuclear Choice:The Report of the Independent Committee of Inquiry into Nuclear Weapons and other Consequences of Australian Uranium Mining* (Sydney, Total Environment Centre, 1984); British Columbia, Royal Commission of Inquiry, Health & Environmental Protection, *B.C. Royal Commission Uranium Mining* (Atlin: Atlin Community Association, 1980); David V Bates, *Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining: Commissioners' Report, October 30, 1980* (Victoria: Queen's Printer, 1981).

91 See Affolder, *supra* note 34 for a discussion of the emergence of these agencies as part of environmental agreements governing these projects.

92 *Ibid* at 162.

ponents keep to promises made with respect to environmental aspects of project governance. The Ekati Diamond Mine, Diavik Diamond Mine, and Snap Lake Diamond Mine have each adopted a distinct form of environmental oversight agency.[93] These institutions provide independent oversight of not only the project proponent (the traditional regulated entity) but also of the regulator (the government agencies tasked with regulating the project proponent). These monitoring agencies also reflect how a flexible and responsive regulatory innovation introduced in one project (the independent environmental monitoring agency for the Ekati Mine) can create expectations that crystallize into a practice where such one-off innovations become expected by project-affected communities, and even institutionalized in regulatory practice.

Outside of Canada, other forms of project-specific environmental oversight have emerged as a result of agreements between mining companies and affected communities. For example, the Good Neighbor Agreement (GNA) signed between community groups and the Stillwater Mine in Montana, establishes an oversight body at each of the mine's two project sites.[94] A technology oversight committee was also established to ensure that responsible practices, including continuous technological improvements, are incorporated into the mine site operations.[95] The mandate of these oversight committees includes monitoring the implementation of the GNA agreement, resolving disputes, and maintaining lines of communication between the parties.[96] In order to function as both a technical watchdog and a conduit of information the oversight committees are vested with certain rights under the GNA in-

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93 See *Ekati Environmental Agreement* (6 January 1997), online: Independent Environmental Monitoring Agency <http://www.monitoringagency.net>; *Diavik Mine Environmental Agreement* (8 March 2000), online: Environmental Monitoring Advisory Board <http://www.emab.ca>; *Snap Lake Environmental Agreement* (21 May 2004), online: Snap Lake Environmental Monitoring Agency <http://www.slema.ca>.

94 *Stillwater Good Neighbor Agreement* (8 May 2000), online: Northern Plains Resource Council <http://www.northernplains.org>, ss 7.0.1–2 [*Stillwater GNA*]. The oversight bodies established are the East Boulder Oversight Committee and the Stillwater Oversight Committee.

95 *Ibid* at s 8. This is known as the Responsible Mining Practices and Technology Committee.

96 *Ibid* at s 7.

cluding broad access to information from the proponent, as well as citizen-sampling, mine access, and mine inspection rights.[97] These bodies emerged as part of a contractual negotiation between concerned community groups and the company, a negotiation process that developed completely outside of governmental regulatory approval processes for the mine expansion.

These project-specific examples of project "watchdogs" speak to the concern that follow-up and monitoring are among the most problematic stages of environmental regulation. Project oversight has also emerged as a significant issue for international financial institutions. The World Bank Inspection Panel, established in 1993, was largely motivated by concerns about the impacts on local communities and the environment of several large Bank-funded projects. These included the Narmada projects in India, which attracted significant criticism from the NGO community of the environmental assessment process and the way in which resettlement issues were addressed.[98] The Inspection Panel hears requests for inspection from organizations or other groupings of two or more individuals that believe they are likely to be adversely affected from the Bank's violation of its own policies and procedures. The Inspection Panel has also spawned oversight agencies at other international institutions. These include the Independent Evaluation Group for the World Bank Group institutions, the Accountability Mechanism at the Asian Development Bank, and the Independent Review Mechanism at the African Development Bank Group. Examples of oversight at international financial institutions highlight the transnational dimensions of regulatory approaches. While projects intensely affect local environments, many key regulators are transnational institutions.

C. "INTERNATIONAL STANDARDS" AS A REGULATORY TOOL

International standards offer a particularly useful lens for thinking about responsive approaches to project regulation as they provide a dynamic means of ratcheting up standards, rather than fixing regulation on rules

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97 *Stillwater GNA*, *supra* note 94 at s 7.6.

98 See David Freestone, "Incorporating Sustainable Development Concerns into the Development and Investment Process—the World Bank Experience" in Malgosia Fitzmaurice & Milena Szuniewicz, eds, *Exploitation of Natural Resources in the 21st Century* (The Hague: Kluwer Law International, 2003) 91 at 100.

"that ossify industry standards at the state of the art at the times rules were written."[99] A regulatory approach that relies on flexible standards may offer a welcome departure from regulatory approaches fixated on narrow interpretations of rule compliance where cosmetic compliance is always a risk. But "international standards" present their own challenges as a regulatory device.

References to "international standards" in project documents emerge in different ways and with different legal consequences. Standards can be technical performance standards or broad statements of principle. They can be best-practice guides rather than mandatory enforceable rules. Some references to standards are industry-specific and thus denote "international standards" applicable in a particular industry. An example of this is "good oilfield practices", which were introduced as a source of regulation in a production sharing agreement between the Government of Georgia and Canargo Norio Ltd.[100] Corporations or banks may also impose their own standards applicable to all global operations, such as Goldman Sachs's Environmental Policy and its endorsement of the Benchmark of Biodiversity Management Practices.[101] In large project settings, "international standards" are often intended to refer to the International Finance Corporation's Performance Standards, which have become a commonly used yardstick for social and environmental "safeguards" in large projects.[102]

Views on the regulatory significance of "international standards" differ sharply. Thomas Wälde, who spent many years advising corpora-

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99 Braithwaite & Drahos, *supra* note 10 at 22.

100 *Production Sharing Agreement between State of Georgia and Canargo Norio Ltd* (12 December 2000); "In conducting Petroleum Operations, the Contractor shall operate according to Good Oilfield Practices and use best endeavours to minimize potential disturbances to the environment, including the surface, subsurface, sea, air, flora, fauna, other natural resources and property." See Tienhaara, *supra* note 76 at 107–10 for other examples of industry standards clauses.

101 Goldman Sachs, *Environmental Policy Framework* (November 2005), online: <http://www2.goldmansachs.com>.

102 The International Finance Corporation is the largest multilateral financial organization for private sector projects in the developing world. Its Performance Standards were initially created in 1998 and updated in 2006. They are widely adopted by private lenders. See Natasha Affolder, "The Market for Treaties" (2010) 11:1 Chi J Intl L 159 at 189.

tions and governments on transnational contracts, suggests that the task of managing compliance with international standards has become a major challenge for both management and legal professionals in the natural resource and energy sectors.[103] He suggests that global standards work as a regulatory device both directly and indirectly. Their direct function is to operate by incorporation into treaties, conflicts and regulation. But they also operate indirectly by "giving more specificity and substance to open-ended standards in the primary legal instruments, they legitimize legal argument and arbitral decision-making and they provide some protection [for corporations] from NGO campaigns operating through public opinion."[104] Picking up on this last point, Judith Kimerling, who has campaigned against Occidental Petroleum's operations in Ecuador's Amazon Oil Fields, is particularly concerned that the lack of specificity and transparency around corporate references to "international standards" invites corporate manipulation of these standards. She suggests that "Occidental has used 'international standards' to wrap its activities in a veneer of environmental excellence; reassure government officials and local residents; cultivate confusion about standards and practices that apply to the operations; deflect meaningful oversight and transparency; and arbitrarily legitimize norms that have been defined by special interests."[105]

There is room for research into the ways in which international standards are integrated into corporate management and impact the behaviour of companies from within. Given the often glacial nature of international environmental treaty negotiation, international standards are an important site for articulating international norms. This means that companies will be attentive to the ratcheting up of environmental standards through developments in "international standards".[106]

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103 Thomas W Wälde, "International Standards: A Professional Challenge for Natural Resources and Energy Lawyers" in Elizabeth Bastida, Thomas W Wälde & Janeth Warden-Fernández, eds, *International and Comparative Mineral Law and Policy* (The Hague: Kluwer Law International, 2005) at 219.

104 *Ibid* at 220.

105 Judith Kimerling, "International Standards in Ecuador's Amazon Oil Fields: The Privatization of Environmental Law" (2001) 26 Colum J Envtl L 290 at 291–92.

106 See e.g. *The Koidu Kimberlite Project Mining Lease Agreement (Ratification) Decree, 1995*, supplement to the Sierra Leone Gazette vol CXXVI, no 48, art 11.4,

While international standards, oversight agencies, and project-specific contracts all force us to think about the opportunities for a more careful consideration of decentred approaches to large project regulation, the capacity of regulators to coordinate such approaches cannot be assumed. The model of a local government "harnessing" other public and private organizations to promote its goals may be misplaced. Further, the multiplicity of actors and issues involved means that it may not be possible to "design" a regulatory system where the interactions between regulators are coordinated or "networked" in any prescriptive way.

V. CONCLUSION: MUSINGS ON METHODS

This article has argued that the environmental aspects of large project regulation are worthy, and indeed deserving, of greater study. I have drawn together examples of a disparate literature that illustrate that there are case-based studies from which ambitious and theoretically-informed meta-analysis can develop. One of the challenges for future researchers is not only to produce more individual case studies, but to think about appropriate methodologies for building upon new and existing case studies. I have suggested three avenues for descriptively thick new research on environmental regulation in large project settings (regulation through contracts, monitoring agencies, and international standards) that can complement existing case studies. And I have provided an example of the best of this sort of scholarship—the "Braithwaitean" tradition which combines careful empirical investigation, ambitious meta-analysis, and dynamic theorizing.

What is left to acknowledge, then, are the immense methodological challenges of creating such expansive, yet carefully informed, work. I have already alluded to the very challenge of defining "environmental

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which allows the project sponsor (the Lessee) to contract out of any improvements in "international standards":

"Nothing in this mining lease or in the Decree or other legislation shall impose any liability whatsoever on the Lessee in respect of any pollution or loss or damage to the environment or the risk thereof, or other claim, where such pollution, loss, damage, risk or claim arises from, or in connection with, any acts or omissions in or with respect to the Mining Lease Areas prior to the date of this Mining Lease, or from the raising or extension of environmental standards generally accepted in the international mining industry above the level of such standards as prevailing as at the date hereof, or as a result of scientific or technological information, analysis or findings not available at the date hereof . . .".

regulation". I admit that it is not only decentred approaches to regulation that require further elucidation. In many cases, knowledge of conventional and market-based approaches to regulation in many project settings is lacking. Environmental regulation can involve complex and uncertain technical and scientific issues. It takes place against a backdrop of regulatory initiatives that are often constantly moving targets. International treaties, European Community legislation, and domestic law from multiple jurisdictions combine to produce a mind-numbing package of applicable law, all of which can be complex and fast-developing.

A first step in promoting meta-analysis of environmental regulation of large projects is promoting a conversation about large projects among regulatory scholars. This is a conversation that extends regulatory debates in new directions and invites scholars to tackle issues of environmental regulation that are highly contested and relevant beyond the developed countries where responsive regulation debates have mostly flared. But it is not a conversation that can be limited to scholars. It implicates all those who regulate, and are regulated, in large project contexts. It is also a conversation that can change the way that we teach environmental law and regulation. Large project regulation belongs in our textbooks of national and international environmental law.

The cross-cutting work this article hopes to promote is not intended to yield a recipe for regulation that can be applied across the globe. It does not envisage environmental law as a cut-and-paste tool. Rather, this article has higher aspirations: to encourage the carefully nuanced, thought-provoking, and intellectually rigorous sort of scholarship that John Braithwaite has taught us is possible.