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Trumping the Environment? An Empirical Perspective on the Legitimacy of Investment Treaty Arbitration

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Abstract

Disputes involving an environmental component continue to be at the forefront of ongoing legitimacy debates in investment treaty arbitration. Critics of the international investment regime contend that arbitration favors the property rights of foreign investors over the need of host states to environmentally regulate and legislate in the public interest. While there is some doctrinal and anecdotal evidence to this effect, we ask whether investment treaty arbitration as a whole is as problematic for domestic environmental protection as has been perceived. With mixed method techniques, we analyze environmental cases in the context of five specific legitimacy concerns. Overall, we find that critiques of the system require nuance and clarification of the normative benchmarks for legitimacy assessments. In a number of important areas, the critiques do have purchase but in the aggregate, the most problematic cases are often successfully defended by respondent states.

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1 Introduction

The tension between domestic environmental protection and foreign investor rights has been one of the primary drivers of the 'legitimacy crisis' in investment treaty arbitration (ITA). For almost two decades, scholars and civil society actors have raised concerns that domestic policy space for environmental protection regulation has been illegitimately restricted by the international investment regime, whether through the threat or instigation of arbitration or actual arbitral awards requiring host states to pay foreign investors sizable amounts of compensation.[1] These environmental-inflected charges against the legitimacy of ITA largely echo broader critiques against the entire regime. It is often alleged that ITA is pro-investor,[2] pro-investment,[3] anti-developing state[4] or a combination of all three. ITA claims challenging domestic environmental measures, about 10% of all claims according to our definition, have tended to exacerbate this perception.

Whether these legitimacy claims can be sustained in regard to environmental cases forms the basis of the research question taken up in this article: to what extent – as empirical fact – is ITA stacked against host state efforts to protect or conserve the environment? This question can be broken down into five specific inquiries about ITA: when and how often do the rights of claimants trump domestically implemented environmental measures; what type of environmental policies are most likely to be affected; to what extent are the democratic processes and regulatory autonomy of host states impinged; are environmental measures more frequently restricted in less developed states;

1 See eg Kyla Tienhaara, *The Expropriation of Environmental Governance: Protecting Foreign Investors at the Expense of Public Policy* (CUP 2009).

2 See eg Gus Van Harten, 'Arbitrator Behaviour in Asymmetrical Adjudication: An Empirical Study of Investment Treaty Arbitration' (2012) 50 Osgoode Hall LJ 211, 251.

3 See eg Malcolm Langford, 'Cosmopolitan Competition: The Case of International Investment' in Cecilia Bailliet and Katja Aas (eds), *Cosmopolitan Justice and Its Discontents* (Routledge 2011) ch 9.

4 See eg Daniel Behn, Tarald Berge and Malcolm Langford, 'Poor States or Poor Governance: Explaining Outcomes in Investment Treaty Arbitration' (2016) PluriCourts Research Paper 16–04 <http://ssrn.com/abstract=2740516> accessed 1 October 2016.

and is there a shift in outcomes over time that would evidence a gradual greening of ITA? While not all of these questions are novel, the current scholarship is primarily legalistic in its methods (analysis of doctrines and treaty texts) and qualitative (with case studies on particular cases or potential incidents of regulatory chill).[5] In this article, we combine textual and quantitative analysis to provide a different and more aggregative perspective.

Drawing on the numerous variables in our database of more than 800 registered ITA cases[6] and a close reading of all environmental cases, we examine how ITA stacks up against five legitimacy critiques that correspond to our research questions. We examine whether: (1) outcomes in environmental cases disproportionately favor claimants or are excessive in amounts of compensation awarded ('asymmetric and excessive outcomes'); (2) tribunals are sufficiently deferential to democratic processes and the regulatory autonomy of hosts states ('democratic legitimacy and regulatory autonomy'); (3) environmental policy space of host states is excessively restricted ('environmental policy effects'); (4) less developed states find their environmental policy choices frustrated more often than developed states ('distributive inequity'); and (5) tribunals are unresponsive to critique ('systemic responsiveness').

To be sure, there is one principal limitation to this approach: we focus almost exclusively on concluded cases.[7] This means that we capture in a limited fashion the regulatory chill aspects deriving from threatened or pending cases.

The article begins in Part 2 by problematizing existing definitions of environmental cases and offering an alternative analytical typology. This is followed in Part 3 by a discussion of five legitimacy criteria and the methodological challenges of assessing an anti-environment bias in ITA. In Part 4, we analyze ITA outcome measures against our legitimacy criteria. The article concludes with proposals for future research.

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5 See eg Marie-Claire Cordonier Segger, Markus Gehring and Andrew Newcombe (eds), *Sustainable Development in World Investment Law* (Kluwer 2010); Jorge Viñuales, *Foreign Investment and the Environment in International Law* (CUP 2012); Pierre-Marie Dupuy and Jorge Viñuales (eds), *Harnessing Foreign Investment to Promote Environmental Protection: Incentives and Safeguards* (CUP 2013); Kate Miles, *The Origins of International Investment Law: Empire, Environment and the Safeguard of Capital* (CUP 2013); Kate Miles (ed), *Research Handbook on Environment and Investment Law* (Edward Elgar 2016).

6 PluriCourts Investment Treaty Arbitration Database (PITAD) as of 1 October 2016. See <www.jus.uio.no/pluricourts/english/topics/investment/research-projects/database.html> accessed 1 October 2016.

7 Concluded cases are counted as where the claimant wins on the merits or where the claimant loses on jurisdiction or the merits; or where the case is settled or discontinued.

2 A Typology of Environmental Cases

There are a number of ways in which ITA can be considered as encroaching on environmental issues. One tendency in the current literature is to treat the environment as a descriptive category, denoting those cases in which the environment is a theme. For example, Viñuales defines environmental cases as:

> disputes that arise from the operations of investors (i) in environmental markets (e.g. land-filling, waste treatment, garbage collection, pesticides/chemicals, energy efficiency, emissions reduction, biodiversity compensation, etc.) and/or (ii) in other activities, where their impact on the environment or on certain minorities is part of the dispute (e.g. tourism, extractive industries, pesticides/chemicals, water extraction or distribution) and/or (iii) to disputes where the application of domestic or international environmental law is at stake.[8]

The result for Viñuales is a palette of 114 cases – including pending cases. Many of these cases relate broadly to claimant challenges of pro-environmental domestic measures; but they also include a significant number of cases that can be argued as anti-environmental domestic measures: ie those that relate to the elimination of renewable energy subsidies or claims based on a host states' refusal to implement its own environmental regulations.[9] Moreover, the definition embraces cases in which concerns of environmental protection may not be central; or where the subject-matter of the dispute only vaguely relates to the environment.

While this descriptive definition serves certain purposes (eg showing the breadth of cases that touch on environmental issues), it tends to conflate different types of cases that may or may not carry implications for the legitimacy of ITA and the environment debate. Prominent examples of cases which lack any effective environmental component include, inter alia, many water or

8 Jorge Viñuales, 'Foreign Investment and the Environment in International Law: The Current State of Play' in Miles, *Research Handbook* (n 5) ch 2.

9 While it is debatable whether these cases actually involve anti-environment policies, there is a conceptual distinction from other types of environmental cases. In these cases, the claimant is not challenging a domestic environmental measure that is negatively affecting the investment; rather, the claimant is challenging a measure whose failure to protect the environment is causing harm to the investment. In addition to the renewable energy sector cases, see also: *Peter Allard v Barbados*, PCA Case No 2012-06, Award (27 June 2016); *Zelena and Energo-Zelena v Serbia*, ICSID Case No ARB/14/27 (pending).

waste-related projects, where the dispute was unrelated to any environmental measure taken by the host state. To include every case that theoretically could possibly raise an environmental issue or that are vaguely related to the environment would discount the relevance of the analysis of the questions at hand. Therefore, we prefer to treat environmental issues in ITA as an analytical category. The relevant cases are those in which: (1) a domestic environmental measure is under direct challenge by the foreign investor; or (2) the host state argues that at least one of the measures at issue is justified for environmental reasons. The immediate consequence of this definition is a dataset of 49 cases concluded as at 1 October 2016.[10]

While we have attempted to be very clear and concise in what we are calling environmental cases, it is helpful to discuss a number of different choices that affect our ultimate selection. First, we do not include contract-based or foreign investment law-based arbitrations; rather, we focus exclusively on treaty-based arbitrations. One consequence of this choice is that we exclude a few early environmental cases that are almost always discussed in the literature, such as *Santa Elena* and *SPP*.[11] There are sound methodological reasons to not mix non-treaty cases with treaty cases. With only the exception of non-treaty based ICSID[12] cases, the universe of non-treaty arbitrations with a respondent state party remain largely confidential. Cherry-picking the few cases that are publicly available could distort any attempt to provide an aggregative perspective. Moreover, the legitimacy concerns with non-treaty arbitration may be less severe: state commitments are unilateral (in foreign investment laws) or specific (in contracts) and thus may be more easily rescinded or modified.

Second, we do not include pending or threatened cases.[13] In our database, there are 26 cases pending where it is known that the host state's justification for the domestic measure is based, in whole or part, on environmental grounds (see Figure 1 below).

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10 For details on all 49 cases, see Annex I.

11 *Compañia del Desarrollo de Santa Elena v Costa Rica*, ICSID Case No ARB/96/1, Final Award (17 February 2000); *Southern Pacific Properties v Egypt*, ICSID Case No ARB/84/3, Award (20 May 1992). Nonetheless, we do acknowledge that non-treaty arbitrations can influence doctrinal development in treaty-based arbitration.

12 International Centre for Settlement of Investment Disputes.

13 We only include cases where arbitration was formally registered, which excludes cases where only a notice of intent to arbitrate was transmitted. See eg *Sun Belt Water v Canada*, Notice of Intent (27 November 1998).

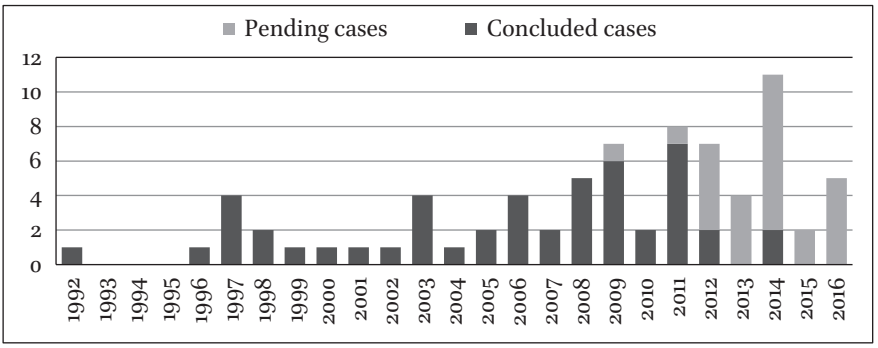

FIGURE 1 *Environmental cases by registration year (75 cases).*

Finally, it is important to reiterate that our analytical definition largely excludes cases in which the claimant challenges the failure of a host state to implement a pro-environmental measure.[14] There are a large number of cases that meet this criterion (52 cases – 50 of which are in the renewable energy sector), although only 12 have been concluded. While we categorize these cases as distinct from cases involving a challenge to domestic environmental protection measures, we acknowledge that these cases can, under certain conditions, be viewed as legitimating the contribution of ITA to environmental public goods. We therefore include an analysis of them in Part 4.4.

3 Benchmarks for Evaluating Environmental Cases

A multitude of legitimacy concerns dominate the literature on ITA.[15] A good summation can be found in what Schill calls the 'public law challenge,' which:

14 Jeff Sullivan and Valeriya Kirsey, 'Environmental Policies: A Shield or a Sword in Investment Arbitration?' (2017) 18(1) JWIT 100 (in this Special Issue).

15 See generally M Sornarajah, *Resistance and Change in the International Law on Foreign Investment* (CUP 2015); Daniel Behn, 'Legitimacy, Evolution, and Growth in Investment Treaty Arbitration: Empirically Evaluating the State-of-the-Art' (2015) 46(2) Georgetown JIL 363; Beth Simmons, 'Bargaining over BITS, Arbitrating Awards: The Regime for Protection and Promotion of International Investment' (2014) 66 World Politics 12; José Alvarez and Gustavo Topalian, 'The Paradoxical Argentina Cases' (2012) 6 World Arb & Med Rev 491; Charles N Brower and Stephan W Schill, 'Is Arbitration a Threat or a Boon to the Legitimacy of International Investment Law?' (2009) 9(2) Chicago JIL 471; David Caron, 'Investor-State Arbitration: Strategic and Tactical Perspectives on Legitimacy'

> relates to the observation that investment treaty arbitration restricts government action, and therefore concerns public law, without relying on a dispute settlement mechanism that conforms to core public law values, including democracy, equal treatment, separation of powers, legal certainty and predictability, or in other words, the rule of law.[16]

For the purpose of developing benchmarks for an empirical legitimacy assessment of environmental cases, we will focus on particular critiques that commonly appear in the prevailing environment-related discourse.[17] At their core, these critiques are mostly focused on the process legitimacy concerns in Schill's list, namely democracy and equal treatment.[18] The choice is primarily deductive but some of the focus within each criterion is influenced by the data we have at our disposal.

The first criterion concerns outcome legitimacy. An asymmetric outcome critique holds that ITA is structurally biased through both the substantive rules in international investment agreements (IIAs) and an arbitral process that favors foreign investors. Thus, such a system reinforces power asymmetries between the parties and has the capacity to reduce the potential scope of domestic environmental protection.[19] This critique is complemented by an analysis of compensation awarded. Concerns are regularly raised that ITA

(2009) 32 Suffolk Transnat'l LRev 409; Gus Van Harten, *Investment Treaty Arbitration and Public Law* (OUP 2007).

16 Stephan W Schill, 'Enhancing International Investment Law's Legitimacy: Conceptual and Methodological Foundations of a New Public Law Approach' (2012) 52 Va JIL 57.

17 See generally Tienhaara (n 1); Cordonier Segger et al (n 5); Viñuales (n 5); Dupuy and Viñuales (n 5); Miles, *Origins* (n 5); Miles, *Research Handbook* (n 5); Christina Beharry and Melinda Kuritzky, 'Going Green: Managing the Environment Through International Investment Arbitration' (2015) 30(3) AU Int'l LRev 383; Åsa Romson, *Environmental Policy Space and International Investment Law* (PhD Dissertation, Stockholm University 2012); Kathryn Gordon and Joachim Pohl, *Environmental Concerns in International Investment Agreements: A Survey* (OECD 2011).

18 On the process-output legitimacy distinction, see Andreas Føllesdal, 'Survey Article: The Legitimacy Deficits of the European Union' (2006) 14 J Pol Philosophy 441; Allen Buchanan, *Justice, Legitimacy, and Self-Determination: Moral Foundations for International Law* (OUP 2004).

19 See generally Behn (n 15); Van Harten (n 2); Thomas Schultz and Cédric Dupont, 'Investment Arbitration: Promoting the Rule of Law or Over-Empowering Investors? A Quantitative Empirical Study' (2014) 25 EJIL 1147; Stavros Brekoulakis, 'Systemic Bias and the Institution of International Arbitration: A New Approach to Arbitral Decision-Making' (2013) 4(3) JIDS 553.

provides disproportionately or excessively high levels of compensation to foreign investors and that this is particularly problematic in environmental cases.[20]

The second criterion concerns process legitimacy. A democratic legitimacy critique holds that ITA is a threat to democratic processes and institutions. Tribunals have the authority to usurp basic separation of powers principles and to rule on the legality of a state's exercise of public power against broad substantive rules whose interpretive standards are generated by arbitrators who have no democratic accountability towards the state that they are ruling against.[21] Similarly, a regulatory autonomy critique holds that ITA is a threat to sovereignty because it illegitimately restricts a state's ability to legislate and regulate in the public interest; and that this restriction is particularly acute where a host state forgoes efforts to protect the environment out of fear that a foreign investor's rights might be violated under an IIA.[22]

The third criterion returns to output legitimacy and concerns the environmental policy effects that the use of ITA has on domestic environmental protection efforts. It is often worried that ITA will hinder vitally important environmental measures or have a chilling effect on future ones.[23]

The final two criteria are spatial and diachronic. A distributive inequity critique holds that ITA is illegitimate because it is structurally biased against less developed states and frustrates, in particular, their regulatory autonomy. It is postulated that this is due in part to the fact that the IIA regime reinforces a system of economic imperialism along North-South lines (thus leading to

20 See generally Gus Van Harten and Pavel Malysheuski, 'Who Has Benefited Financially from Investment Treaty Arbitration? An Evaluation of the Size and Wealth of Claimants' (2016) Osgoode Legal Studies Research Paper No 14-2016 <https://ssrn.com/abstract=2713876> accessed 1 October 2016.

21 See generally Ingo Venzke, 'Investor-State Dispute Settlement in TTIP from the Perspective of a Public Law Theory of International Adjudication' (2016) 17 JWIT 374; David Schneiderman, *Constitutionalizing Economic Globalization: Investment Rules and Democracy's Promise* (CUP 2008).

22 See generally Caroline Henckels, 'Protecting Regulatory Autonomy Through Greater Precision in Investment Treaties: The TPP, CETA, and TTIP' (2016) 19(1) JIEL 27; Tomer Broude et al, 'Who Cares About Regulatory Space in BITs? A Comparative International Approach' in Anthea Roberts et al (eds), *Comparative International Law* (OUP 2016) <https://ssrn.com/abstract=2773686> accessed 1 October 2016; Caroline Henckels, *Proportionality and Deference in Investor-State Arbitration: Balancing Investment Protection and Regulatory Autonomy* (CUP 2015); Aikaterini Titi, *The Right to Regulate in International Investment Law* (Hart 2014).

23 Julia Brown, 'International Investment Agreements: Regulatory Chill in the Face of Litigious Heat?' (2013) 3(1) Western J Legal Stud 1, 9–13.

more claims against less developed states) and also because less developed states have limited legal and financial capacity to successfully defend their actions in ITA.[24] Finally, a systemic responsiveness critique holds that ITA has been inelastic in response to the legitimacy crisis, and that the regime and its arbitrators have not become more deferential to host states in cases involving an environmental component.[25]

Turning to measurement, a number of methodological challenges arise in attempting to empirically determine the validity of these legitimacy critiques. Two particular interpretive issues arise: one is quantitative, the other is qualitative. The quantitative challenge is the development of an acceptable benchmark for assessing numerical results. For example, if claimants are only successful or awarded high levels of compensation in a small number of environmental cases, is that a positive or negative result for environmental protection? Likewise, if legislation (as opposed to executive branch action) is only challenged in a minority of cases, should we still be concerned? Setting benchmarks involves a normative evaluation but that is not a task we take upon ourselves here. We aim to provide a more empirically nuanced picture of environmental cases with the occasional suggestion of comparative benchmarks. We thus hope to ensure that any normative assessment is at least factually-based.

The qualitative challenge is related and arises when we try to understand the reasons given by arbitrators for finding in favor of claimants in ITA cases. For instance, prominent arbitrator Brower recently stated that:

> [n]o investment tribunal has ever ordered a State to compensate an investor for simply enacting a generally applicable environmental law or for legitimately enforcing a regulation that caused an investor a loss. Very deferential standards have been applied to environmental regulatory measures.[26]

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24 See generally Behn, Berge and Langford (n 4); but cf Susan Franck, 'Conflating Politics and Development: Examining Investment Treaty Outcomes' (2014) 55 Va JIL 1; Susan Franck, 'Development and Outcomes of Investment Treaty Arbitration' (2009) 50 Harv Int'l LJ 435.

25 See generally Malcolm Langford and Daniel Behn, 'Managing Backlash: The Evolving Investment Treaty Arbitrator?' (2017) 28 EJIL (forthcoming); David Schneiderman, 'Legitimacy and Reflexivity in International Investment Arbitration: A New Self-Restraint' (2011) 2 JIDS 471.

26 Charles N Brower and Sadie Blanchard, 'From "Dealing in Virtue" to "Profiting from Injustice:" The Case Against "Re-Statification" of Investment Dispute Settlement' (2014) 55(1) Harv Int'l LJ Online 45, 50.

To be sure, Brower is correct that these are the reasons offered by arbitrators in the majority of environmental cases where the claimant was successful (21 cases in our dataset). Arbitrators found that environmental measures were aimed at legitimizing or disguising the actual aim of the host state's action or that the real purpose of such actions was to harm the foreign investor (nine cases); or that the host state's implementation of an otherwise legitimate and justifiable environmental measures was problematic on procedural grounds (five cases).[27] The remaining environmental cases in the dataset where the claimant won on the merits include four cases relating to environmental counterclaims or contributory negligence offsets (which could actually be considered a partial victory for the host state); and four cases where the environmental measure was not central to the IIA breach (in two cases, the effect of the environmental measure is unknown).

This means that of the 21 environmental cases where the claimant won on the merits, it would appear that none of them – as Brower states – challenge the mere enactment or 'legitimate enforcement' of an environmental law or regulation. This would make Brower's statement factually accurate. However, it fails to account for whether arbitrators were deferential enough to respondent states in such cases (or whether IIAs are stacked too much in favor of foreign investors in the first place).

Critics of the outcomes in these cases would question whether it is ever the task of arbitrators to second-guess the legitimate purpose of a domestically-enacted environmental law or regulation; or to inquire as to whether such laws or regulations were legitimately implemented or enforced. Further, it is debatable whether tribunals have always gotten it right in determining whether an environmental measure has been 'legitimately enforced.' The recent *Bilcon* case may be a case in point here.[28] In that case, a majority of the tribunal held that the process by which a domestic regulatory agency implemented its environmental impact assessment (EIA) procedures violated the relevant provisions of the North American Free Trade Agreement (NAFTA). The dissent argued that the majority had not been deferential enough to the actions taken by the host state, and that it was not the mandate of the tribunal to assess the manner in which a domestic institution applied its own laws and regulations.

27 See Annex I.

28 *Bilcon* (Annex I). See also Laura Létourneau-Tremblay and Daniel Behn, 'Judging the Misapplication of a State's Own Environmental Regulations: *Bilcon v Canada*' (2016) 17(5) JWIT 832.

Taking the view that such an approach to the assessment of domestic environmental measures by tribunals can be problematic, Viñuales offers a midway alternative. He first claims that the traditional approach, such as implicitly articulated by Brower, considers all conflicts between domestic environmental measures and IIA obligations as 'legitimacy conflicts':

> [t]he environmental measures adopted by host States were thus seen as 'suspicious' (unilateral protectionism in disguise) and in all events 'subordinated' to international (investment) law (by virtue of the rule that international law prevails over domestic law). This view, which may have reflected the specific factual configurations of some early cases, has sometimes been extrapolated to the assessment of genuinely environmental and even internationally-induced measures, with the unfortunate result that environmental considerations remained legally subordinated to purely economic considerations.[29]

In other words, tribunals will discount legally sound domestic environmental measures on the basis that they are 'suspicious' in their intent or that domestic environmental measures which fail to meet international rule of law standards must always give way to the standards required by the applicable IIA.[30]

An alternative is what Viñuales calls the 'progressive approach', which he defines as an approach that would consider all conflicts between domestic environmental measures and IIA obligations as 'normative conflicts':

> [u]nder this view, most domestic environmental measures would be seen as required or justified by environmental treaties, hence standing on an equal footing with other international norms (such as investment disciplines) and reflecting multilateral action (defeating the suspicion of unilateral protectionism). This view would, in fact, apply a different set of conflict rules to different types of conflicts ('legitimacy' and 'normative' conflicts) and, more generally, defuse the suspicion and mistrust that some tribunals still see, despite the rise of environmental awareness at the global level, as the starting-point in the analysis of environmental regulation.[31]

29 Viñuales (n 8) 14.

30 ibid 16.

31 ibid.

In this article, we do not express a legal or normative preference for the traditional, progressive or critical approaches. However, we admit that there is some pragmatism in a progressive approach as it seeks to better balance foreign investor interests with those of environmental protection. On the one hand, it seems unrealistic or unreasonable to expect ITA to always bend towards the claims of another sub-branch of international law (such as that of international environmental law) or to a domestic state's laws in all circumstances. On the other hand, in the adjudication of international human rights law, states have been permitted wide margins of appreciation and discretion on property-related issues.[32] Thus, a progressive approach may be a useful way of parsing ITA – with a particular focus on whether tribunals are granting a wide enough margin of appreciation to host states on important environmental, rather than all environmental, values.

4 Evaluating Challenges to Environmental Measures

4.1 *Asymmetric and Excessive Outcomes*

How do claimants actually fare in environmental cases versus all ITA cases? Table 1 below breaks down arbitrations according to their outcomes, divided by environmental cases (left column) and all ITA cases to date (right column).[33] Defining a claimant win as at least a partial win,[34] we see that claimants won on the merits in 21, lost on jurisdiction in 11 and lost on the merits in nine.[35] Thus, claimants have succeeded in a slim majority of finally resolved environmental cases (21 of 41 cases).

32 See eg Lukasz Gruszczynski and Wouter Werner (eds), *Deference in International Courts and Tribunals: Standard of Review and Margin of Appreciation* (OUP 2014) ch 1; Eyal Benvenisti, 'Margin of Appreciation, Consensus and Universal Standards' (1999) 31(4) NYU JILP 848.

33 Through 1 October 2016.

34 Full and partial wins are not categorized according to the ratio of amount claimed and awarded or the number of successful claims. Rather, the distinction between a full and partial win is based on whether the claimant – in a holistic assessment – was made whole by the tribunal.

35 See Annex I.

TABLE 1 *Outcome percentages for environmental cases*

	Environmental cases		All ITA cases	
Outcome	**Percentage**	**Cases**	**Percentage**	**Cases**
Claimant wins on the merits	43%	21	31%	161
Claimant loses on jurisdiction	23%	11	17%	88
Claimant loses on the merits	18%	9	19%	96
Case settled	14%	7	22%	115
Case discontinued	2%	1	11%	54
Total	100%	**49**	100%	**515**

Let us now drill down on various aspects of these numbers in order to get at the concern with asymmetric outcomes.

4.1.1 Settled and Discontinued Cases

We begin with the eight environmental cases that were either settled or discontinued.[36] This sub-set of outcomes constitutes about 16% of all environmental cases. However, as can be seen in Table 1 above, this is significantly less than the percentage of all settled or discontinued cases in the complete dataset of all concluded ITA cases (33%). This might be viewed positively for environmental protection. Settled and discontinued cases often raise questions about regulatory chill. The respondent state may have agreed to settle the case by forgoing its domestic environmental measures (or forgoing its measures in exchange for the claimant discontinuing the case). In the context of our dataset, there are some cases in which there is evidence that such reciprocal dynamics have occurred[37] so the overall lower rate of settlement or discontinuance might be viewed sanguinely.

4.1.2 Jurisdiction and Merits

Turning to the fully resolved environmental cases (41 cases), the claimant lost in 11 cases at the jurisdictional stage.[38] This might be positive for environmental protection as the compatibility of the respondent state's environmental

36 ibid.

37 See eg *Ethyl* (Annex I); *Vattenfall I* (Annex I). See also 'The Obscure Legal System That Lets Corporations Sue Countries' The Guardian (10 June 2015).

38 See Annex I.

measures with the applicable IIA were not evaluated. However, these measures might have been at risk had the claimant overcome procedural obstacles, and other foreign investors might have survived the jurisdictional challenge. Yet, it may be conceivable to contend that some jurisdictional decisions did incorporate environmental sensitivity. By rejecting these cases at the jurisdictional stage, tribunals may have been attempting to avoid an assessment of the merits of the case, saving themselves from having to rule against legitimate environmental measures. At least two environmental cases potentially fall into this 'hard case' category.[39]

On the merits, the claimant won in 21 instances and lost in nine instances. In other words, if the claimant is able to pass the jurisdictional hurdle in an environmental case, the win rate is 70%. However, and notably, in each of the nine cases where the claimant lost on the merits, the domestic environmental measure taken by the respondent state appears to have been legitimately conceived or implemented; and the tribunal ultimately held that these measures did not breach any provisions of the relevant IIAs.[40] Moreover, in all of these cases, the environmental measure and its relation to the foreign investment was central – as opposed to merely incidental – to a finding that the host state did not breach the applicable IIA. The conclusion that can be drawn here is that tribunals in these cases did not give short shrift to a state's environmental justifications. They appear to fall within Viñuales' progressive approach.[41]

A slightly different picture emerges when we examine the cases in which claimants won. In these 21 cases,[42] many fall into the Viñuales' traditional approach.[43] Tribunals viewed the challenged domestic environmental measure as suspicious or illegitimately implemented or enforced. When we break down the tribunals' findings in relation to the relevant domestic environmental measures, it is evident that a number of cases fall into these two particularly problematic categories. In six cases, the domestic environmental measure taken by the host state was found to be 'suspicious' in the sense of disguising

39 *Commerce* (Annex I); *Corona* (Annex I). In these cases, the respondent state refused to issue the required permits as based on an EIA process that was alleged by the claimants to have been suspicious in its intent. In other words, there may have been procedural shortcomings that would have violated the substantive provisions of the applicable IIA if the cases had gone to the merits.

40 For eg see cases such as *Methanex* (Annex I); *Chemtura* (Annex I); *Al Tamimi* (Annex I). For a full list of all these cases see Annex I. We return to this in Part 4.4 below.

41 Viñuales (n 8) 14.

42 In two cases, the details of the awards rendered (and the exact grounds upon which an IIA violation was found) are unknown. See *Saar III* (Annex I); *Novera* (Annex I).

43 Viñuales (n 8) 14.

or legitimizing the true intent of the action or measures that negatively affected the foreign investors' investment.[44] In five cases, implementation of a possibly legitimate or justifiable environmental measure by the host state was found to violate the relevant IIA because it was illegitimately implemented or enforced (including non-payment of compensation for expropriation).[45]

The remaining eight cases raise questions but not necessarily to the same degree. Four cases include an environmental counterclaim against the foreign investor[46] or a finding of the foreign investors' contributory negligence on environmental grounds[47] that off-set or could have off-set the claimants' compensation award. In three of these cases,[48] the counterclaim or contributory negligence off-set was accepted.[49] Thus, while still an overall loss for the host state, these decisions could also be viewed as partially successful defenses for the respondent state on environmental grounds – and thus much less problematic than the cases in the first two categories listed above. In the final four cases, domestic environmental measures taken by the host states were present, but largely inconsequential or unrelated to the breach of the IIAs.[50]

While many (but not all) outcomes in environmental cases might be explainable, a slightly less explicable pattern is that claimants are actually more likely to win in environmental cases in comparison to all other ITA cases. If we restrict the sample to finally resolved cases, the win rate for claimants in environmental cases is 51% (21 of 41 cases), while the corresponding win rate

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44 *Saar I* (Annex I); *Metalclad* (Annex I); *SD Myers* (Annex I); *Gold Reserve* (Annex I); *Quiborax* (Annex I); *Crystallex* (Annex I). The classic example of this was in *Metalclad* where the municipal government attempted to justify its actions, in part, as necessary for preservation of endangered cacti species. The tribunal viewed this environmental justification with suspicion.

45 *Tecmed* (Annex I); *MTD Equity* (Annex I); *Unglaube I* (Annex I); *Bilcon* (Annex I); *Abengoa* (Annex I). In *Bilcon*, for example, the challenge to the domestic environmental measure was not the legitimacy of the regulation itself, but the (flawed) way in which the regulation was applied and implemented by a committee. The tribunal viewed the host state's implementation of its EIA regulation as so procedurally deficient as to violate the IIA.

46 The issue of use of counterclaims by respondent states as a tool for rebalancing ITA is not new; however, it was not until 2014 that the first environmental counterclaim was accepted. The final resolution of that case remains pending. See *Perenco* (Annex I), Interim Decision on the Environmental Counterclaim (11 August 2015). The other environmental counterclaim cases include: *Paushok* (Annex I); *Burlington* (Annex I).

47 *Copper Mesa* (Annex I).

48 In one case, the environmental counterclaim was rejected. See *Paushok* (Annex I).

49 *Perenco* (Annex I); *Burlington* (Annex I); *Copper Mesa* (Annex I).

50 *Maffezini* (Annex I); *Vivendi A* (Annex I); *Vivendi B* (Annex I); *Chevron I* (Annex I).

in all ITA cases is 47% (161 of 345 cases).[51] This is slightly unexpected given the environmental policies at stake in many of these cases and the associated expectation that respondent states would successfully defend themselves at least as often as in all ITA cases. A question thus arises as to whether this difference is statistically significant. Controlling for different structural factors relevant to ITA case outcomes, we have conducted a bivariate and multivariate logit regression analysis in Annex II to determine the strength of the variation. The difference in outcomes between claimant success in environmental cases versus all other ITA cases is not statistically significant in the subset of cases in which the claimants scores at least a partial win. But the difference is statistically significant in cases in which the claimants receive a full win.[52]

While this clearly raises some normative concerns, the multivariate models in Annex II provide an indication as to why the level of claimant success might be slightly higher in environmental cases. Environmental cases disproportionately concern projects in the extractive industries (14 of 49 cases) and this sector tends to produce higher success rates for claimants.[53] Thus, the difference in win rates between environmental and all other ITA cases may be structurally related to the fact that so many environmental cases involve an economic sector that typically produces high levels of success for claimants.

4.1.3 Compensation Awarded

Moving to the levels of compensation awarded, we assess the cost of losing an environmental case for a respondent state. In 16 environmental cases (out of 21 cases)[54] claimants have been awarded a total of 2.80 billion US dollars (USD) in damages.[55] However, this amount becomes relatively more modest if one removes the two recent mining concession cases against Venezuela. These two cases resulted in damage awards of 1.39 billion USD[56] and 713 million USD.[57] Of the remaining 14 cases, claimants were awarded a total of 731 million USD in damages with an average of 53 million USD per case. As Figure 2 below demonstrates, tribunals in 44% of the cases (seven cases) have awarded less than ten million USD in damages. On average, the ratio of

51 See Table 1.

52 See Annex II.

53 See 'extractive industry' cases in Annex III.

54 In four cases, a final damage award is still pending as of 1 October 2016; and in one case, the amount of compensation is unknown. See Annex I.

55 See Annex I.

56 *Crystallex* (Annex I).

57 *Gold Reserve* (Annex I).

FIGURE 2 *Environmental cases by compensation awarded (16 cases).*

the compensation awarded to the amount of compensation claimed in these 16 cases was 41%. This ratio is only slightly higher than the compensation ratio for all ITA cases resolved to date (39%).[58]

Looking at the relationship between compensation levels and the type of IIA violation found in environmental cases,[59] we find that there is no clear pattern between the amount of compensation awarded and the IIA violation. A number of cases where significant amounts of compensation were awarded come as a result of violations of the expropriation (both direct and indirect) standard (ten of 16 cases). These cases might raise fewer concerns about excessive compensation in that they relate to instances where the entirety of the investment was considered to have been wiped out by the host state. However, it is more concerning that in half of the remaining six cases where a non-expropriation standard was violated, the levels of compensation were as high (or higher).[60] From a legitimacy perspective, these particular cases might be viewed as most problematic in the environmental context because they often relate to the procedural treatment of the foreign investor or to how a domestic measure was implemented. High levels of compensation in these cases potentially exacerbate the perception that a foreign investor's property interests are disproportionately favored vis-à-vis a host state's efforts to implement an otherwise legitimate environmental measure.

4.1.4 Concluding Remarks

Looking at the overall outcomes in environmental cases, we find that claimants win in approximately half of the cases, which is just slightly better than claimant win rates for all ITA cases. Importantly, in a slim majority of cases

58 See Langford and Behn (n 25). This percentage is based on all ITA cases through 1 August 2016 where the amount of compensation claimed and awarded is known (126 cases).

59 See Annex I for details of the type of IIA violation found.

60 *Vivendi B* (Annex I); *Chevron I* (Annex I); *Gold Reserve* (Annex I). Only minimal compensation was awarded in the other three non-expropriatory cases: *Maffezini* (Annex I); *SD Myers* (Annex I); *MTD Equity* (Annex I).

where the claimant wins on the merits (11 of 21 cases), tribunals held that the respondent state could not rely on the environmental justification because it was either viewed suspicious in terms of its intent or the environmental measure failed to meet basic procedural standards in its application or implementation. At the same time, a significant number (23%) of environmental cases were dismissed on jurisdictional grounds, and when the claimants reach the merits stage but lose, the respondent states have largely won on environmental grounds.[61] Environmental cases are also settled or discontinued less frequently than all other ITA cases, which might reflect a lower risk of domestic regulatory chill than in other types of ITA cases.

We find that – in the aggregate – the patterns of outcomes do not appear overly asymmetrical or excessive; and that many, but not necessarily all, of the environmental cases are justifiable after a careful analysis of the facts. From a legitimacy perspective, it does appear that the outcomes in these cases are more balanced than some commentaries would suggest. Of course, it may be normatively attractive to claim that foreign investors should not have been successful in any of these cases. However, many tribunals' justifications in cases lost by claimants suggest that tribunals may be more sophisticated than commonly imagined. The concern instead should be arguably with cases where the traditional approach[62] might still dominate and which raises real questions as to whether the tribunal got the balance right between environmental protection and foreign investor protection.

There are also a number of environmental cases where claimants were awarded significant (possibly excessive) amounts of compensation; and that even though many of the cases (44%) provided only minimal levels of compensation, the cases where over a billion USD was awarded could be viewed as problematic from a legitimacy perspective. However, it is also reasonable to point out that, in line with the general approach of ITA, in none of the environmental cases did a tribunal order non-pecuniary restitution. No losing respondent state has been expressly required to revoke or change its environmental policies. Thus, while it may be unpleasant to be hit by an award that requires the payment of significant amounts of compensation, there is no evidence that – to date – an environmental case has directly impeded a host state from pursuing and implementing measures that it deems necessary for the protection of the environment.

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61 See especially *Methanex* (Annex I); *Parkerings* (Annex I); *Chemtura* (Annex I); *Glamis Gold* (Annex I); *Al Tamimi* (Annex I).

62 Viñuales (n 8) 14.

Yet, this kind of defense can only be stretched so far. It is still an open question whether these environmental cases, in the aggregate and at the individual level, might be having a chilling effect on domestic environmental policies. We know from research on the impacts of domestic court judgments that the magnitude of indirect effects can exceed direct effects.[63] As we shall discuss, there is some evidence of such indirect effects and, more generally, it is too early to conclude – with the available evidence – that domestic environmental regulations have or have not been systematically chilled in the face of ITA.

4.2 *Democratic Legitimacy and Regulatory Autonomy*

A particular critique of ITA is that it overrides or distorts the democratic will of a host state's citizens[64] and restricts its regulatory autonomy – its ability to regulate environmental protection.[65] In responding to this critique, we look at two specific areas where a democratic concern may arise: (1) the branch of public authorities where the environmental measure originates; and (2) the level of public authorities where the environmental measure originates.

Looking first at the branch of public authorities, we discover one of the more profound and distinct findings in our dataset. The idea that legislative environmental measures (as opposed to those deriving from executive branch action) are being challenged regularly in environmental cases just does not – descriptively speaking – hold up. As can be seen from Figure 3 below, the vast majority of measures taken by host states originate in the executive branch (87%).[66] Only 9% of the cases challenge legislative acts[67] and most importantly, the claimant has won none of these cases. While one can argue that all executive authority is ultimately derived from legislation, the evidence indicates that the premier representative, deliberative and participatory institution of a democratic state – the legislature – still maintains a fair degree of (legal) freedom to legislate without the worry that the legislation would be successfully challenged by a foreign investor.

63 See overview of literature in Malcolm Langford, Cesar Rodriguez-Garavito and Julieta Rossi, *Social Rights Judgments and the Politics of Compliance: Making It Stick* (CUP 2017) (forthcoming).

64 See references supra n 21.

65 See references supra n 22.

66 See Annex I.

67 ibid.

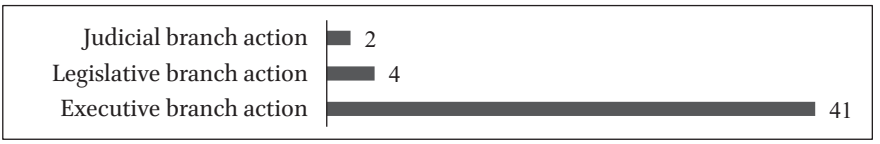

FIGURE 3 *Branch of Government Involved (47 cases).*[68]

A related question deals with the extent to which EIA processes feature in environmental cases. As EIA legislation has become so common among states that the duty to carry out such processes amounts to customary international law,[69] EIA processes may thus provide a good indicator of how restrictive ITA is to a host state's regulatory freedom. In half of the environmental cases where a foreign investor was denied the ability to pursue an investment project, it was justified fully or partly on an EIA process that identified serious environmental risks (21 of 40 cases where information is available). In some of these cases, the claimant was successful in challenging the legitimacy of the EIA process (nine of 21 cases).[70] This mixed outcome raises again an interpretive challenge. Cases in which a host state unsuccessfully justifies their action on an EIA process raises real concerns about a state's regulatory freedom. Some even question whether claimants should ever be able to bring an ITA case as based on an allegedly flawed EIA process.[71]

We now turn to the level of public authorities where the domestic environmental measure originates – ie from a national, regional or local body. A good number of environmental cases (15 cases) involve domestic measures that at least partially originate at the local or regional level (33%).[72] This challenge to local and regional decision-making might be viewed as less problematic if the executive act is specific (and not found across many or all municipal jurisdictions in a host state) or resistance comes from particular local dynamics – eg NIMBY (not in my backyard) scenarios.

68 Note that in two cases, the origin of the domestic measure is unknown. See Annex I.

69 See *Pulp Mills on the River Uruguay* (*Argentina v Uruguay*), Judgment [2006] ICJ Rep 113 para 204.

70 See eg, inter alia, *Quiborax* (Annex I); *Crystallex* (Annex I).

71 See *Bilcon*, Dissenting Opinion (Annex I); see also Graham Mayeda, 'Integrating Environmental Impact Assessments into IIAs: Global Administrative Law and Transnational Cooperation' (2017) 18(1) JWIT 131 (in this Special Issue).

72 See Annex I.

Focusing on the latter NIMBY scenario, a localized environmental backlash and push for municipal authorities to target and act against particular foreign investment projects that the public opposes appears to be a feature of the dataset. About 36% of the environmental cases (14 of 39 cases) might be placed in this category.[73] Importantly, the incidence of public protests in the factual record of the environmental cases is as high as 60% if one looks just at the cases originating out of local or regional measures.[74] In terms of outcomes, claimants have won 56% of the time in these cases (which is better than the 43% win rate for claimants in all environmental cases),[75] indicating perhaps that a local environmental measure taken as a response to a public outcry might have a significant (detrimental) effect on the chances that a respondent state will successfully defend itself.

To be sure, local participatory democracy is an important value. It can be certainly argued that environmental cases permit foreign investors to internationalize disputes that might be better resolved at the local or regional level. Yet, it is worth bearing in mind that a justification for the legitimacy of internationalizing local foreign investor disputes is that many of these cases are very susceptible to responses from local government that may be arbitrary or reactionary (including anti-foreign sentiment among local officials and citizens). The principal point we wish to emphasize is that the character and dynamics of local environmental policies may vary significantly between cases; and while democratic legitimacy concerns may arise in these cases, there is nothing glaring about the environmental cases to date that would indicate that (local) democratic governance is particularly under threat from the environmental cases.

That said, while we do not see any particular instances where environmental cases have posed serious threat to the democratic functioning of a state, it does not dispose of the fact that challenges to local measures could theoretically constitute a significant democratic legitimacy problem. At the local level, most environmental costs will be directly experienced by a host states' citizens. Moreover, many ecosystems cohere with local rather than national

73 Many of the environmental cases in the water and waste sectors involve local public protests where the community objects to the implementation of a particular project. See eg *Metalclad* (Annex I); *Abengoa* (Annex I); *Vivendi A* (Annex I); *Vivendi B* (Annex I).

74 Compared to just 16% (five of 31 cases) where public protests occur in response to a national measure. See Annex I for complete details.

75 *Vivendi A* (Annex I); *Metalclad* (Annex I); *Vivendi B* (Annex I); *Abengoa* (Annex I); *Bilcon* (Annex I).

geography. It could be thus argued that environmental cases involving challenges to local measures ought to be highly deferential to the state's environmental protection objectives unless there are particularly good reason to the contrary. While we do not see outcomes in local environmental cases to be asymmetrical, it is also feasible to ask whether tribunals have been deferential enough in a number of these cases. In the absence of a very low claimant success rate, further qualitative investigation of the balancing of foreign investor and environmental concerns is warranted.

4.3 *Environmental Policy Effects*

We turn now to the direct environmental policy effects of ITA. In this respect, we are particularly interested in: (1) the type of challenged environmental measure; and (2) the economic sector where the environmental measure originates. We focus on these features and interpolate them with outcomes in order to determine what types of environmental measures and in what economic sectors the environmental policy objectives of a host state are most likely to be affected or frustrated.

Taking each area in turn, we find considerable variation in outcomes for claimants across different types of environmental measures. Certain types of measures seem to encounter a negative reception for claimants in terms of environmental case outcome. We classify as follows the 41 finally resolved cases as based on the type of environmental measures and note the claimant win percentages:[76] (1) cases related to a refusal to renew or grant a license or permit or change in the legal framework governing the investment (16 cases, claimant wins 25%); (2) cases related to a cancellation or modification of a concession or contract or expropriation of other property interests (15 cases, claimant wins 87%); (3) cases related to an environmentally justified import or sale ban on certain products (eight cases, claimant wins 25%); and (4) cases related to judicial decisions dealing with domestic environmental litigation (one case, claimant wins 100%).

A parsing of the win-loss ratios is revealing. Generally speaking, environmental cases involving the cancellation or modification of concessions or contracts[77] have a very high incidence of claimant success (87%), while cases involving the issuance or licenses or permits (25%) and cases involving

76 See Annex I; all win-loss percentages in this Part are based on all 41 finally resolved environmental cases (ie excluding all discontinued and settled cases).

77 All environmental cases involving contracts or concessions arise out of the extractive industries or water and waste sectors.

environmentally justified bans or sale prohibitions on certain products (25%) have very low instances of claimant success.

A possible justification for this significant difference in outcomes might relate to whether the type of environmental measure is specific to the particular investment project or whether it is a measure of general applicability. As Figure 4 below shows, the majority of environmental cases involve specific measures targeting particular foreign investments. Importantly, win rates are much higher in these cases (claimants win 59%)[78] than in cases concerning generally applicable measures, where claimant win rates are much lower (claimants win 18%).[79] Given that all environmental cases relating to the cancellation of a concession or contract are specific measures to the foreign investment project and a high percentage of environmentally justified bans or sale prohibitions on certain products relate to general applicable domestic measures (60%), it might be viewed positively – from a legitimacy perspective – that the win rates for claimants according to these two types of domestic measures are so asymmetrical.

However, this explanation may not hold on closer inspection. Claimants have also not been particularly successful in cases concerning refusals to renew or grant a license or permit; and *all* of these cases also relate to measures that are specific to the foreign investment. This would suggest that the specificity of the measure to the foreign investor and the type of the measure (ie cancellation of contract, denial of a permit, etcetera) may not be causally linked to outcomes at all. Nonetheless, it remains positive that challenges to generally applicable measures have not been successful for claimants. This is important because one of the critiques in the context of environmental cases is that generally applicable measures aimed at the protection of the environment in the public interest are challenged by foreign investors and that this fact raises significant legitimacy concerns. The fact that claimants have actually fared so poorly in these types of cases might bode well for ITA (at least in response to that particular critique).

We have also looked at outcomes of ITA cases as related to economic sectors. Economic sectors tend to be diverse in their regulatory and legal frameworks; and certain sectors may raise greater concerns about interference with a host state's regulatory autonomy. Interestingly, environmental cases tend to be restricted to a small number of economic sectors. Approximately 80% of all

78 See Annex I.

79 ibid.

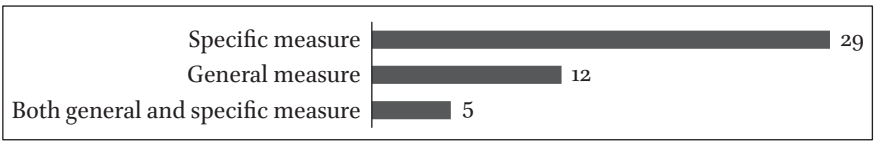

FIGURE 4 *Specific versus general measures (46 cases).*[80]

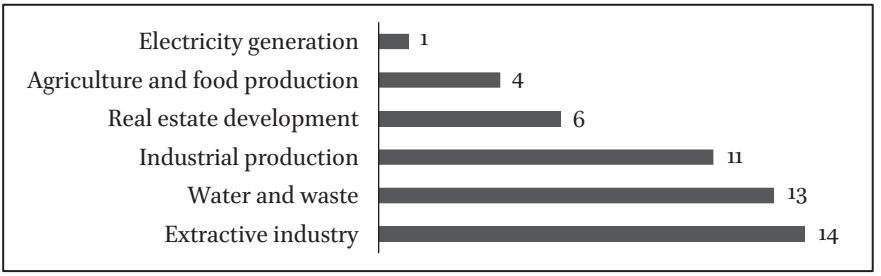

FIGURE 5 *Environmental cases by economic sector (49 cases).*

environmental cases arise out of three economic sectors: water and waste,[81] the extractive industries[82] and industrial production.[83] The rest arise out of the real estate development sector, agriculture and food production and electricity generation (Figure 5 above).

Looking at the win-loss percentages in environmental cases by economic sector, we find that the sector matters. As Annex III shows, 86% of all the cases where the claimants win come from either the extractive industries (nine cases) or the water and waste sectors (nine cases): 18 out of the 21 cases.[84] Of the 41 finally resolved environmental cases, claimants won 64% of the time in extractive industry cases (nine of 14 cases) and 75% of the time in water and waste cases (nine of 12 cases). There may be structural features that can explain why these cases constitute such a large percentage of claimants wins. 64% (18 cases) of the environmental cases in these two sectors involve

80 ibid; in three cases the specificity of the measure is unknown.

81 Cases relating to water services, transport of waste products and management of waste disposal sites.

82 Cases relating to upstream natural resource extraction industries.

83 Cases relating to industries producing petrochemicals, cement and metals.

84 See Annex I.

the cancellation of a concession or contract, and in these cases the claimant won 78% (14 cases) of the time.[85]

The next two most common sectors in environmental cases are industrial production and real estate development. Most of these cases involve (at least partially) thwarted real estate development projects or cases relating to the production of petrochemicals, cement or metals where the respondent state justifies a ban (or a refusal to issue the required permits) on environmental protection grounds. In cases involving these two sectors claimants have not been successful, winning only 18% (three of 17 cases).[86] Notably, these two economic sectors (industrial production and real estate development) include most of cases that are frequently quoted as the most problematic for environmental protection. They are cases that often include generally applicable legislative or regulatory measures whose principal aim is to protect the environment in the public interest.

A logit regression analysis in Table 2 below of the 41 fully resolved environmental cases across the four most commonly involved sectors in environmental cases shows that claimants' success rates in water and waste cases are significantly greater than for all other environmental cases (at a statistically significant 5% level). Industrial production cases have much lower success rates for claimants (negative coefficient) although the coefficients are not statistically significant.

TABLE 2 *Environmental cases by economic sector* (*logit regression*)

	Any win	
Economic sector	**Coefficient**	**Standard error**
Extractive industry (14 cases)	1.42	1.64
Water and waste (13 cases)	2.68**	1.57
Industrial production (11 cases)	−0.64	1.60
Real estate development (six cases)	0.49	1.74
Constant	−1.36	1.18

* p<.10; ** p<.05; *** p<.01 (controls excluded from table, available on request).

85 ibid.
86 ibid.

From a policy perspective, it may not be assuring that claimants have fared so exceptionally well in environmental cases involving the extractive industries and the water and waste sectors. These two sectors certainly can raise important environmental issues and it appears – at least in the aggregate – that a respondent state's environmental justifications have not been very successful in these types of cases. One point of nuance, however, is that cases in these two sectors have frequently related to individual concessions or contracts that are rescinded through specific measures taken by executive branch agencies; and therefore, it is less likely that the environmental issues in these cases would have broader impacts on a state's general efforts to prescribe policy measures aimed at environmental protection.

Overall, we find that the economic sector is an important factor for determining outcome in environmental cases and that the majority of the cases where claimants have won occur in cases that raise environmentally sensitive issues, but that the particular factual scenarios in these cases lead us to conclude that these cases do not seem to pose an exceptional threat to a state's policy space for environmental protection.

We conclude this Part with a brief mention of cases that might actually be considered anti-environmental cases, but that are often included as environmental cases. We have excluded these cases from our primary dataset since it is arguable whether a domestic environmental protection measure is actually being challenged. In fact, the inverse might be occurring. For example, almost all of the renewable energy cases involve challenges to host state measures that reduce foreign investors' incentives to implement pro-environment projects.[87] However, there is an equal argument that all of these cases are about the host states' ability to modify and adjust their regimes for the promotion of renewable energy in order to adapt to changing circumstances; and that these types of measures should be considered in the same way as the others in our dataset. Thus, we think that – at least in terms of typology – renewable energy cases are very difficult to categorize. Nonetheless, these cases are relevant to environmental policy decisions and the associated discourse on the legitimacy of ITA, and we therefore include them in our analysis here.

87 Sullivan and Kirsey (n 14).

TABLE 3 *Outcome percentages for renewable energy cases*

	Renewable energy cases		All other electricity cases	
Outcome	**Percentage**	**Cases**	**Percentage**	**Cases**
Claimant wins on the merits	**17%**	2	**30%**	16
Claimant loses on jurisdiction	8%	1	15%	8
Claimant loses on the merits	42%	5	13%	7
Case settled	33%	4	42%	23
Case discontinued	0%	0	0%	0
Total	100%	12	100%	54

In Table 3 above, we provide the frequency and outcomes of the renewable energy cases. Of the 50 filed cases, 12 are concluded.[88] However, the outcomes statistics do not fare well for those arguing ITA is helping promote the greening of energy production by protecting the associated interests of foreign investors. When compared with all other electricity generation sector cases in our database (right column in Table 3), renewable energy cases settle at a higher rate and claimants have a significantly lower chance of success when the case goes through to the merits. Thus, these cases might be viewed as a clear win for the regulatory autonomy of experimental host state policy but not necessarily for environmental protection.

4.4 *Distributive Inequity*

One of the main charges against ITA is that there is an anti-developing state bias. Our concurrent research has shown that less developed states are significantly more likely to lose in ITA than more developed states. This occurs regardless of levels of democratic governance[89] and the trend has only strengthened over time.[90] Thus, we should ask if particular states are more or

88 For a list of many of these cases, see Daniel Behn, Ole Kristian Fauchald and Laura Létourneau-Tremblay, 'Promoting Renewable Energy in the EU: Shifting Trends in Member State Policy Space' (2017) 28 Eur Bus LRev (forthcoming).

89 Behn, Berge and Langford (n 4).

90 Langford and Behn (n 25).

less likely to successfully defend themselves against claimants in environmental cases. This may be of concern in the case of less developed states: environmental measures are in their infancy and challenges by strong foreign investors may be more devastating for policy development.

TABLE 4 *Outcome percentages by respondent state World Bank income groups (49 cases)*

Environmental cases	Upper	Upper middle	Lower middle	Lower
Claimant wins on the merits	41%	60%	17%	0%
Claimant loses on jurisdiction	10%	33%	50%	0%
Claimant loses on the merits	26%	7%	17%	0%
Case settled	19%	0%	16%	100%
Case discontinued	4%	0%	0%	0%
Total (number of cases)	27	15	6	1

What is immediately apparent when looking at all environmental cases in the dataset is that the vast majority of cases are brought against respondent states with more developed economies. Over 86% (42 cases) of all environmental cases are against states falling within the two upper categories of the World Bank incomes groups[91] (Table 4 above). Further, 55% (27 cases) are exclusively against respondent states in the upper income category. These are all states that are considered developed economies and most of them are member states of the Organization for Economic Cooperation and Development (OECD).

91 A respondent state's World Bank income group categorization is set for the year that the ITA was registered. We use World Bank income groups here instead of GDP per capita (as used in the regression analysis in Annex II) for categorizational convenience. World Bank income groups are based on gross national income (GNI) per capita, not GDP per capita; but for statistical purposes they are nearly identical, correlating at 99.9%. See World Bank Country and Lending Groups <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> accessed 1 October 2016.

Likewise, if we examine the respondent state's regulatory quality score as measured by the World Bank's Worldwide Governance Indicators (WGI),[92] a striking and similar pattern emerges.[93] We could hypothesize that respondent states with higher levels of regulatory quality are more likely to have entrenched and sophisticated regulatory systems for the protection of environmental interests and that this phenomena will result in a higher percentage of environmental cases being filed (as compared with states with lower regulatory quality scores), but that claimants will also not be successful in these cases (based on the claim that states with high regulatory quality scores would be less likely to violate their IIA obligations). Our dataset confirms this hypothesis: 71% of all respondent states in environmental cases in the dataset (Table 5 below) score relatively well in terms of their regulatory quality (between zero and +2); and yet the success percentages for claimants decrease as the regulatory quality of the host state increases.

TABLE 5 *Outcome percentages by respondent state WGI regulatory quality scores (49 cases)*

Environmental cases	**> 1**	**0 to 1**	**0 to -1**	**> -1**
Claimant wins on the merits	25%	42%	38%	100%
Claimant loses on jurisdiction	18%	32%	24%	0%
Claimant loses on the merits	37%	21%	13%	0%
Case settled	25%	0%	25%	0%
Case discontinued	0%	5%	0%	0%
Total (number of cases)	**16**	**19**	**8**	**6**

92 This score is an aggregate measure of a number of different indicators aimed at 'captur[ing] perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.' The scores are calculated annually and range from a low score of -2 to a high score of +2. See Worldwide Governance Indicators <http://info.worldbank.org/governance/wgi/index.aspx#home> accessed 1 October 2016.

93 The WGI regulatory quality score for each respondent state is given according to the year that the relevant ITA was registered.

Comparing the development status and regulatory quality scores of respondent states, there are three patterns and one possible counter-conclusion regarding outcomes worth noting. First, claimants in the two upper World Bank income groups won 48% (20 of 42 cases) of the time. Claimants were only successful one time (17%)[94] in cases against states in the lower two income groups (one of seven cases). Hence, for development status, as measured by World Bank income groups, claimants appear to do better against more developed than less developed states. This is the converse of the overall win-loss percentages for all ITA cases.[95]

Second, looking at the regulatory quality scores in relation to outcomes in environmental cases, the pattern is expected. The higher the regulatory quality score, the more likely the respondent state will successfully defend itself in an ITA case. Moreover, for respondent states with the highest regulatory quality scores (ie above a score of +1), claimants only succeeded 25% (four of 16 cases) of the time.[96] If one examines environmental cases where the respondent state scores above a +1.5, the win rate for claimants drops even further to 17% (two of 12 cases).[97]

Third, one might expect that there would be significant correlation between development status and regulatory quality. However, in terms of outcomes, a respondent state with a high regulatory quality score has a much higher chance of successfully defending itself in an environmental case than a state with a high development status (see the difference in the far left columns in Tables 4 and 5 above).

However, the above data might also suggest a more problematic conclusion if viewed in a broader perspective. There is an issue of selection bias. While it is apparent that there are interesting patterns that emerge in regard to outcomes as related to development status and regulatory quality, it is important to note that these findings only relate to cases that are actually adjudicated through to conclusion. Many of the legitimacy critiques targeting the use of ITA in the context of environmental cases focus on the effects that threatened or instigated cases may pose for a host state's ability to (environmentally) regulate in the public interest. Thus, beyond the awards rendered (and their outcome percentages), one needs to examine whether the existence and operation of the ITA itself leads to a regulatory capitulation by less developed

94 *Quiborax* (Annex I).

95 Behn, Berge and Langford (n 4).

96 *Maffezini* (Annex I); *SD Myers* (Annex I); *MTD Equity* (Annex I); *Bilcon* (Annex I); *SD Myers* (Annex I).

97 *SD Myers* (Annex I); *Bilcon* (Annex I).

states, particularly in instances where their capacity to enforce or implement environmental protection measures may be lower. This may be occurring in cases that have been settled,[98] but also in potential cases: the famous repeal of environmental legislation in Indonesia after threats of foreign investor litigation may be a case in point.[99] Given the low number of environmental cases filed against developing states, it is reasonable to assume that many disputes against these states are being resolved in the shadow of the law.

4.5 *Systemic Responsiveness*

A final claim against the legitimacy of ITA is that the international investment regime is unresponsive to external and internal critique, especially in the context of environmental cases. Viñuales argues though that there is some evidence of the progressive approach being applied by tribunals, or more modestly what he calls the 'upgraded traditional' approach.[100] Accordingly, we would expect tribunals to increasingly look at domestic environmental measures with less suspicion in ITA and be increasingly sensitive to environmental issues.

Here, we explore whether there has been a shift in the behavior of arbitrators that would signal a greening of ITA across time. In other words, are arbitrators re-balancing decisions in a manner that would show more deference towards respondent states and their environmental policies?

Looking at the time trend of the 41 finally resolved ITA cases involving a challenge to a domestic environmental measure (Figure 6 below), we find almost a U-shape. First, the number of cases resolved prior to 2005 is extremely limited (nine cases) and in these cases, the claimants had a very high success rate (89%).[101] Second, in the period of 2005 through about 2010, the number of cases resolved annually increases but the success rate for claimants in these cases drops significantly (18%).[102] Third, in the period of 2011 through to the present, the annual number of finally resolved cases averages about four cases per year and the success rate for claimants is about 55%.[103] Thus, early

98 There are two environmental cases in less developed states where the settlement of the case may have been premised on limiting or rescinding the effects of domestic environmental regulation. See *VICAT* (Annex I); *Shell Brands* (Annex I).

99 Brown (n 23); Kyla Tienhaara, 'What You Don't Know Can Hurt You: Investor-State Disputes and the Protection of the Environment in Developing Countries' (2006) 6(4) Global Environmental Politics 73.

100 Viñuales (n 8) 14.

101 See Annex I.

102 ibid.

103 ibid.

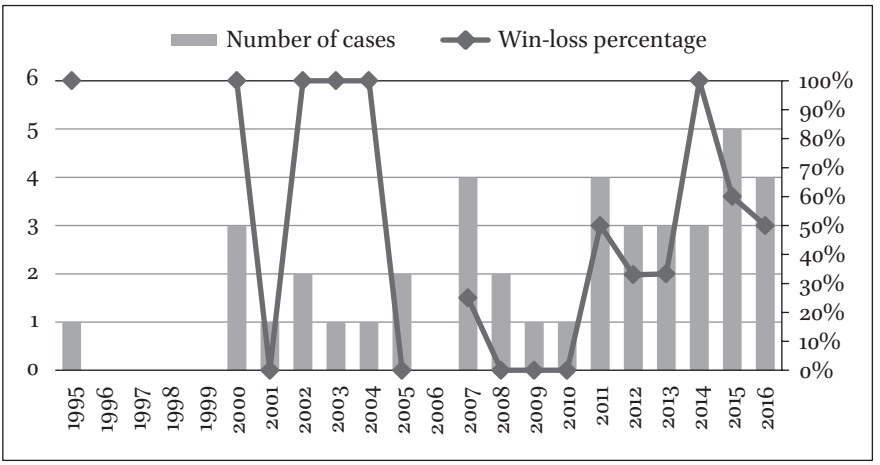

FIGURE 6 *Outcome percentages and number of disputes resolved per year (41 cases).*

cases produced a lot of wins for claimants, followed by a period of relatively low claimant success, and is culminating in what appears to be a seemingly balanced win-loss ratio in the past five years.

What could explain this pattern? We have previously found that a general decline in claimant wins for all ITA cases could be partially attributed to arbitrator reflexivity.[104] Notably, the trajectory of environmental cases follows the general pattern of ITA cases over time, although it is more dramatic. For all ITA cases, we found that the decline in claimant success coincides with periods when states express significant unease about the regime's development. It is likely that state signaling in the context of environmental cases has had some effect in driving a shift towards 'greener' decisions by arbitrators across time.[105]

Two other systemic shifts might also show responsiveness. First, the drop in claimant success rates in environmental cases might be caused by the newer generation of treaties like the Central American-Dominican Republic

104 Langford and Behn (n 25).

105 Moreover, some of the reflexivity hypotheses made in our previous work can clearly be discarded for environmental cases. For instance, prominent tribunal chairs do not appear to act reflexively as 'guardians of the system.' In environmental cases with prominent tribunal chairs (20 of 41 cases) claimants have won 50% of the time (ten of 20 cases), which is almost identical to the win-loss percentage (52%) for all other fully resolved environmental cases (11 of 21 cases). This rate is consistent in each of the three periods under analysis, namely 1990 through 2004; 2005 through 2010; and 2011 to 2016.

Free Trade Agreement (CAFTA-DR) and recent US bilateral free trade agreements that include investment chapters. These agreements provide many environment-related provisions. Remarkably, claimants have won none of the cases under these agreements (zero of seven cases).[106] One could thus easily speculate that it is these new rules that are requiring arbitrators to be more deferential to a state's environmental measures, and that this is driving the statistics. However, looking more closely, it appears that claimants have lost on jurisdiction in all but one of these cases.[107] It is therefore difficult to argue that the stronger environmental provisions in these IIAs might be responsible for the high incidence of claimant loses in these cases.

Second, we might expect respondent states to retain high quality (or at least high expense) legal counsel and thus successfully defend themselves more often. We would expect cases where one side has retained a Global 100 law firm, and the other side has not, to have an effect on outcome[108] – and we have previously found evidence for this across all ITA cases.[109] However, in environmental cases there is almost always equality of arms and very little effect on outcomes. If we exclude the seven cases in which the identity of one of the parties' lawyers is unknown, we find that in 19 cases both sides have Global 100 lawyers and in 11 cases neither has such a law firm. In the remaining cases where only one side retains a Global 100 law firm (four for claimants and six for respondent states), the win-loss percentages matched the general pattern of outcomes for all environmental cases. Moreover, there is no observable difference over time as both claimants and respondent states have increasingly 'lawyered up' – 52% (14 of 27 cases) of the environmental cases since 2011 include counsel on both sides of the dispute from Global 100 law firms.[110]

Instead, an underlying structural explanation might better explain the dramatic variations in outcomes across time. In the period 1990 through 2004, 70% of environmental cases were in the water and waste sector, where claimants have generally been successful.[111] However, in the middle period (2005 through

106 *McKenzie* (Annex I); *Renco* (Annex I); *Renée Levy* (Annex I); *Corona* (Annex I); *Pac Rim* (Annex I); *Commerce* (Annex I); *Al Tamimi* (Annex I).

107 *Al Tamimi* (Annex I).

108 Global 100 law firms are listed at: American Lawyer <www.americanlawyer.com/id=1202471809600/2015-Global-100-TopGrossing-Law-Firms-in-the-World> accessed 1 October 2016.

109 Langford and Behn (n 25).

110 See Annex I.

111 ibid.

2010), water and waste cases only account for 15% of the environmental cases while industrial production cases (the category in which claimants most frequently lose) rose to 30%. In the final period, it is environmental cases from the extractive industries that dominate (53%); and this is arguably a key driver in the more symmetrical outcome percentages witnessed in this most recent period (2011 through 2016).

The above discussion suggests that environmental cases have only been partly responsive to critique. The drop off in success rates for claimants (ie after 2005) follows the general trend in ITA. However, recent environmentally-friendly changes in IIAs or respondent state litigation strategies (ie more likely to hire a Global 100 law firm) have had little effect so far. Instead, the other apparent key determinant of diachronic change is the sectoral composition of environmental cases. Thus, it is likely the type of cases that is driving the change in the environmental case outcomes as much as changes to the structure of the international investment regime through treaty practice reform or changes in litigation strategies.

5 Conclusion

The question of whether ITA is a threat to environmental protection continues to engage critics and defenders of the international investment regime. Do ITA cases and their arbitrators give short-shrift to a host states' environmental justification for measures taken that negatively affect the profitability or existence of a foreign investor's investment? If yes, what does such insensitivity to host states' domestic environmental measures mean for the legitimacy of ITA? In this article, we have attempted to provide an alternative lens on these issues through a quantitative forensic. Defining environmental cases as an analytical category, in which claimants have challenged a domestic measure seeking to protect or conserve the environment, we examined closely the outcomes and features of such cases against five legitimacy criteria.

Our findings present a mixed picture of the role of ITA in relation to environmental issues. The first criterion concerned the asymmetry and amount of compensation in outcomes. The pattern of win-loss ratios for claimants does not significantly diverge from that of all ITA cases. In cases in which respondent states successfully defended themselves, tribunals importantly recognized that the protection of the environment as a legitimate part of the respondent states' defense. However, in environmental cases in which the claimants won, tribunals largely viewed the claimed domestic environmental measure with

suspicion – a fig leaf to defend an otherwise anti-foreign investment action or omission. The language of some of these findings may suggest that ITA is yet to fully embrace the importance of environmental arguments and their values into the adjudication of these kinds of disputes. As to levels of compensation awarded, the amounts varied dramatically from two awards close to or over a billion USD through to seven of 16 known compensation awards falling well below ten million USD.

The next three criteria concerned the features of environmental cases: democratic legitimacy and regulatory autonomy, environmental policy effects and distributive inequity. Here, our analysis could be read as nuancing some of the critiques against the regime. In only a small minority of cases (four of 47 cases where information is available) did claimants challenge domestic legislation, rather than executive or judicial action, and they lost in each of these cases. There was also a sharp divergence in win-loss rates between the type of measures taken and the economic sectors from which the dispute arose. This suggests that the material impact of ITA on regulatory autonomy may be less than envisaged. Claimants tended to win in cases concerning specific measures (eg cancellation of concessions or contracts) in the extractive industries and the water and waste sector but fared poorly in challenging generally applicable measures, particularly those banning the import or sale of products on environmental grounds. Notably, for environmental cases, more developed states were more likely to lose than less developed states – the stark inverse of the pattern we have uncovered in concurrent work.[112]

However, caution should be exercised before one breaks out in environmental optimism about the legitimacy of ITA. Examining the final criteria of systemic responsiveness, we do not find that the newer generation of IIAs (many with explicit provisions on the importance of environmental protection) or changes in arbitrator behavior are directly responsible for the drop-off in claimant wins in environmental cases after 2005. The most significant explanation of change across time seems to be the economic sector and type of environmental measure challenged. It is uncertain whether this pattern will replicate itself into the future. Overall, we – like Viñuales – find some empirical support for the proposition that environmental cases are being litigated in an increasingly environmentally friendly or sensitive manner. However, there are still outliers that challenge this assumption.

112 See Behn, Berge and Langford (n 4).

Importantly, our methodology cannot get at some questions concerning regulatory chill. We do not know in how many instances host states have abandoned environmental protections in order to avoid ITA. The low number of less developed states in the sample may not necessarily be a sign of a lack of willingness to adopt environmental policies, but an inability or unwillingness to defend them at all costs.[113] These are questions that can only be answered through qualitative methods, process tracing and the unearthing of more threatened litigations.

113 This argument is also made by Brown (n 23).

Annex I: List of Environmental Cases

No	Case	Award date[a]	Outcome[b]	Treaty	Fora	Sector[c]
1	*Saar Papier v Poland* (*Saar I*)	16 October 1995	CW	BIT	UNCITRAL[k]	W
2	*Ethyl v Canada*	2000	S	NAFTA	UNCITRAL	I
3	*Metalclad v Mexico*	30 August 2000	CW	NAFTA	ICSID Case No ARB(AF)/97/1	W
4	*Emilio Agustín Maffezini v Spain*	13 November 2000	CW	BIT	ICSID Case No ARB/97/7	I
5	*SD Myers v Canada*	13 November 2000	CW	NAFTA	UNCITRAL	W
6	*Saar Papier v Poland* (*Saar II*)	7 June 2001	CLM	BIT	UNCITRAL	W
7	*Lutz Ingo Schaper v Poland* (*Saar III*)	2002	CW	BIT	UNCITRAL	W
8	*Compañía de Aguas del Aconquija and Vivendi Universal v Argentina* (*Vivendi A*)	3 July 2002	CW	BIT	ICSID Case No ARB/97/3	W
9	*Técnicas Medioambientales Tecmed v Mexico*	29 May 2003	CW	BIT	ICSID Case No ARB(AF)/00/2	W
10	*MTD Equity and MTD Chile v Chile*	25 May 2004	CW	BIT	ICSID Case No ARB/01/07	R
11	*Industria Nacional de Alimentos and Indalsa Perú* (*Lucchetti*) *v Peru*	7 February 2005	CLJ	BIT	ICSID Case No ARB/03/4	A
12	*Methanex v US*	3 August 2005	CLM	NAFTA	UNCITRAL	I
13	*Shell Brands International and Shell Nicaragua v Nicaragua*	2007	S	BIT	ICSID Case No ARB/06/14	I
14	*Bayview Irrigation District and Others v Mexico*	19 June 2007	CLJ	NAFTA	ICSID Case No ARB(AF)/05/1	W

Branch[d]	Level[e]	Type I[f]	Type II[g]	Compensation (USD)[h]	Treaty breach[i]	EIA	Protests	Prom chair	Law firm advantage[j]
E	N	S	I	1 600 000	IE	No	No	No	0
L	N	G	I	S	S	No	No	Yes	-1
E	L	S	C	16 685 000	IE, FET, FPS	No	Yes	No	0
E	N	S	P	150 000	FET, MFN	Yes	No	Yes	0
E	N	G	I	3 800 000	FET, NT	No	No	No	-1
E	N	S	I	0	NB	UNK	UNK	UNK	0
E	N	S	I	3 000 000	IE	UNK	UNK	UNK	0
E	L	S	C	105 000 000	IE, FET	No	Yes	No	-1
E	L	S	C	5 533 000	IE, FET	No	No	No	+1
E	N	G	P	5 871 000	FET	Yes	No	Yes	0
E	L	S	P	0	NB	Yes	No	No	0
E	L	G	I	0	NB	Yes	No	Yes	-1
J	N	S	J	S	S	UNK	Yes	UNK	0
E	NL	G	I	0	NB	No	No	Yes	0

(cont.)

No	Case	Award date[a]	Outcome[b]	Treaty	Fora	Sector[c]
15	*Compañía de Aguas del Aconquija and Vivendi Universal v Argentina* (*Vivendi B*)	20 August 2007	W	BIT	ICSID Case No ARB/97/3	W
16	*Eduardo Vieira v Chile*	21 August 2007	J	BIT	ICSID Case No ARB/04/7	A
17	*Parkerings-Compagniet v Lithuania*	11 September 2007	M	BIT	ICSID Case No ARB/05/8	R
18	*Canadian Cattlemen for Fair Trade v US*	28 January 2008	J	NAFTA	UNCITRAL	A
19	*Plama Consortium v Bulgaria*	27 August 2008	M	ECT[l]	ICSID Case No ARB/03/24	I
20	*Glamis Gold v US*	8 June 2009	M	NAFTA	UNCITRAL	EI
21	*Vattenfall and Others v Germany* (*Vattenfall I*)	2010	S	ECT	ICSID Case No ARB/09/6	EG
22	*Dow AgroSciences v Canada*	2011	S	NAFTA	UNCITRAL	I
23	*William Jay Greiner and Malbaie River Outfitters v Canada*	2011	S	NAFTA	UNCITRAL	A
25	*Chemtura v Canada*	2 August 2010	M	NAFTA	UNCITRAL	I
24	*Commerce Group and San Sebastian Gold Mines v El Salvador*	14 March 2011	J	CAFTA	ICSID Case No ARB/09/17	EI
26	*Sergei Paushok and Others v Mongolia*	28 April 2011*	W	BIT	UNCITRAL	EI
27	*Chevron and Texaco Petroleum v Ecuador* (*Chevron I*)	31 August 2011	W	BIT	PCA[m] Case No 34877	EI
28	*Vito Gallo v Canada*	15 September 2011	J	NAFTA	PCA	W

Branch[d]	Level[e]	Type I[f]	Type II[g]	Compensation (USD)[h]	Treaty breach[i]	EIA	Protests	Prom chair	Law firm advantage[j]
E	L	S	C	383 600 000	FET	No	Yes	No	-1
E	N	S	P	0	NB	No	No	No	-1
E	NL	GS	P	0	NB	Yes	No	Yes	0
E	N	G	I	0	NB	No	No	Yes	-1
L	N	G	P	0	NB	No	No	No	0
E	NL	GS	P	0	NB	Yes	Yes	No	-1
E	NL	GS	P	S	NB	Yes	Yes	Yes	-1
E	L	G	I	S	S	UNK	UNK	UNK	UNK
E	N	G	P	S	S	UNK	UNK	UNK	-1
E	N	G	I	0	NB	Yes	No	Yes	0
E	N	S	C	0	NB	Yes	Yes	Yes	0
E	N	S	C	P	FET, MFN	No	No	Yes	+1
J	N	S	J	96 355 000	Other	No	No	Yes	0
L	L	G	P	0	NB	No	Yes	Yes	-1

(cont.)

No	Case	Award date[a]	Outcome[b]	Treaty	Fora	Sector[c]
29	*Accession Eastern Europe Capital and Mezzanine Management Sweden v Bulgaria*	2012	D	BIT	ICSID Case No ARB/11/3	W
30	*Pac Rim Cayman v El Salvador*[n]	1 June 2012	J	CAFTA	ICSID Case No ARB/09/12	EI
31	*Marion Unglaube v Costa Rica* (*Unglaube I*)	16 May 2012	W	BIT	ICSID Case No ARB/08/1	RE
32	*Reinhard Unglaube v Costa Rica* (*Unglaube II*)	16 May 2012	M	BIT	ICSID Case No ARB/09/20	RE
33	*Saint Mary's v Canada*	2013	S	NAFTA	PCA	I
34	*Yuri Bogdanov and Yulia Bogdanova v Moldova* (*Bogdanov IV*)	16 April 2013	M	BIT	SCC Case No V091/2012	I
35	*Abengoa and COFIDES v Mexico*	18 April 2013	W	BIT	ICSID Case No ARB(AF)/09/2	W
36	*Michael McKenzie v Vietnam*	11 December 2013	J	BFTA[o]	PCA	R
37	*Perenco Ecuador v Ecuador*	12 September 2014	W	BIT	ICSID Case No ARB/08/6	EI
38	*Gold Reserve v Venezuela*	22 September 2014	W	BIT	ICSID Case No ARB(AF)/09/1	EI
39	*Burlington Resources v Ecuador*	14 December 2014	W	BIT	ICSID Case No ARB/08/5	EI
40	*Renée Rose Levy and Gremcitel v Peru*	9 January 2015	J	BFTA	ICSID Case No ARB/11/17	R
41	*Bilcon of Delaware and Others v Canada*	17 March 2015	W	NAFTA	PCA Case No 2009-04	EI
42	*Novera and Others v Bulgaria*	27 August 2015	W	BIT	ICSID Case No ARB/12/16	W

Branch[d]	Level[e]	Type I[f]	Type II[g]	Compensation (USD)[h]	Treaty breach[i]	EIA	Protests	Prom chair	Law firm advantage[j]
UNK	UNK	UNK	C	D	D	UNK	UNK	UNK	0
E	N	S	P	0	NB	Yes	Yes	Yes	0
E	N	S	P	4 000 000	DE	Yes	No	No	0
E	N	S	P	0	NB	Yes	No	No	0
E	L	S	P	S	NB	No	Yes	No	-1
L	N	G	I	0	NB	No	No	No	UNK
E	NL	S	C	40 300 000	IE, FET	Yes	Yes	Yes	+1
E	N	S	P	0	NB	UNK	UNK	No	-1
E	N	GS	C	P	IE, FET	No	No	No	0
E	N	S	C	713 000 000	IE, FET	Yes	No	Yes	0
E	N	GS	C	P	DE	No	No	Yes	0
E	N	S	P	0	NB	No	No	Yes	-1
E	NL	S	P	P	FET, NT	Yes	Yes	No	-1
UNK	UNK	UNK	C	UNK	UNK	UNK	UNK	No	0

(cont.)

No	Case	Award date[a]	Outcome[b]	Treaty	Fora	Sector[c]
43	*Quiborax and Non-Metallic Minerals v Bolivia*	16 September 2015	W	BIT	ICSID Case No ARB/06/2	EI
44	*Adel Hamadi Al Tamimi v Oman*	3 November 2015	M	BFTA	ICSID Case No ARB/11/33	EI
45	*VICAT v Senegal*	2016	S	BIT	ICSID Case No ARB/14/19	I
46	*Copper Mesa Mining v Ecuador*	15 March 2016	W	BIT	PCA Case No 2012-02	EI
47	*Crystallex International v Venezuela*	4 April 2016	W	BIT	ICSID Case No ARB(AF)/11/2	EI
48	*Corona Materials v Dominican Republic*	31 May 2016	J	CAFTA	ICSID Case No ARB(AF)/14/3	EI
49	*Renco Group v Peru*	15 July 2016	J	BFTA	ICSID Case No UNCT/13/1	I

a * denotes a liability award with an award on damages pending.
b Case outcome: claimant wins on the merits (W); claimant loses on jurisdiction (J); claimant loses
c Sector: water and waste (W); industrial production (I); real estate development (R); agriculture
d Branch of government: executive branch (E); legislative branch (L); judicial branch (J).
e Level of government: national measure (N); local or regional measure (L); both national and local
f Type of measure I: generally applicable measure (G); specific measure (S); both generally
g Type of measure II: cancellation of contract or concession (C); import or sale ban (I); permit or
h Compensation: case settled (S); case discontinued (D); damage award pending (P).
i Treaty breach: no breach (NB); indirect expropriation (IE); direct expropriation (DE); fair and national treatment (NT); arbitrary and discriminatory measures (AD); settlement (S); case
j Global 100 law firm counsel: only claimant (+1); only respondent (-1); both claimant and
k Ad hoc arbitration applying the UNCITRAL Arbitration Rules.
l Energy Charter Treaty.
m Permanent Court of Arbitration.
n In *Pac Rim*, all treaty-based claims were dismissed for lack of jurisdiction. The foreign investment as a loss for the claimant on jurisdictional grounds.
o Bilateral free trade agreement including an investment chapter.

Branch[d]	Level[e]	Type I[f]	Type II[g]	Compensation (USD)[h]	Treaty breach[i]	EIA	Protests	Prom chair	Law firm advantage[j]
E	N	S	C	48 620 000	DE, IE, FET, AD	Yes	No	Yes	-1
E	N	S	P	0	NB	Yes	No	Yes	0
UNK	UNK	UNK	P	S	NB	UNK	UNK	No	0
E	N	S	C	19 447 000	DE, FET	Yes	Yes	Yes	0
E	N	S	C	1 386 000 000	IE, FET	Yes	No	Yes	0
E	N	S	P	0	NB	Yes	No	No	0
E	N	S	C	0	NB	Yes	Yes	No	0

on the merits (M); case settled (S); case discontinued (D).
and food production (A); extractive industries (EI); electricity generation (EG).

measures (NL).
applicable and specific measures (GS).
license denial (P); judicial decision (J).

equitable treatment (FET); full protection and security (FPS); most-favored nation treatment (MFN); discontinued (D).
respondent or neither (0).

law claims survived the jurisdictional hurdle, but for the purposes of this article, we categorize the case

Annex II: Comparing Outcomes (Logit Regression)

	Any win			Full win		
	Model 1 Bivariate	**Model 2** With controls	**Model 3** Only controls	**Model 4** Bivariate	**Model 5** With controls	**Model 6** Only controls
Environmental cases	0.10	0.32		0.43	0.73*	
Controls						
NAFTA-based		-0.55	-0.51		-1.57**	-1.50*
Extractive industry		0.55*	0.61**		0.16	0.30
State learning		0.01	0.01		0.08*	0.08
Case cluster		0.62	0.60		0.10	0.05
Law firm advantage		0.51**	0.50**		0.28	0.25
GDP per capita (log)		-0.36***	-0.35***		-0.30**	-0.27**
Chi-sq	0.09	35.58	34.79	1.36	21.38	18.11
Observations	341	343	341	341	343	341

* p<.10; ** p<.05; *** p<.01

The analysis above uses claimant win rates in all ITA cases as the dependent variable and compares these rates with the sub-set of claimant win rates in environmental cases. It includes a bivariate analysis (Models 1, 4) and a multivariate analysis with controls (Models 2, 5) and only controls (Models 3, 6). We split the analyses by 'Any win' (either a partial or full win on the merits) or 'Full win' (only a full win on the merits). The control variables in the alternative models are taken from our concurrent work in analyzing ITA[114] and aim to control for different structural features that we believe might influence outcomes in environmental cases: 'NAFTA-based cases',[115] 'Extractive industry

114 See Langford and Behn (n 25).

115 We include this control because many NAFTA-based arbitrations have involved environmental issues.

cases',[116] 'Law firm advantage',[117] 'State learning',[118] 'Case cluster'[119] and respondent state 'GDP per capita (log)'.[120] The results are mixed. On one hand, there is no statistically significant difference in outcomes in environmental cases for the 'Any win' outcome indicator as compared with the overall caseload of all fully resolved ITA cases (Models 1, 4). On the other hand, we see that the coefficient for environmental cases outcomes remains positive even after the addition of controls. This would indicate that claimants are more likely to be successful in environmental cases than in all ITA cases, but given the lack of statistical significance, we cannot make definitive claims about this effect. However, in the multivariate analysis for 'Full win,' the coefficient is significant at the 10% level. Model 3 provides an indication of why the level of claimant wins might be slightly higher in environmental cases. The coefficient for the 'Extractive industry' control is much higher when environmental cases are not included; and it is significant at the 5% rather than 10% level. Indeed, the two variables are highly correlated, as confirmed by a covariance test.[121] Thus, the higher claimant success rates in environmental cases may be driven by the fact that many of them involve the extractive industries (15 cases);[122] and that cases in this economic sector have generally higher success rates than other types of sectors when looking at all ITA cases.[123]

116 We include a control for disputes arising out of this sector because these cases often involve varying degrees of expropriation, where issues center on levels of compensation more than liability (and thus claimants will be more likely to win).

117 This control takes the value of +1 if only the claimant counsel is from a Global 100 law firm; -1 if only the respondent state retains a Global 100 law firm; or zero if both or neither the claimant and the respondent state are represented by a Global 100 law firm. For a definition of a Global 100 law firm, see American Lawyer (n 108).

118 We include this control because we would assume that respondent states with more exposure to ITA will be more successful in their defenses across time. We code how many cases any given respondent state has had filed against it at the time of case registration up until the tenth case.

119 This control takes the value +1 if a respondent state has had five or more cases registered against it in a given year, and zero otherwise. The case clusters in the full set of cases are: Argentina (2002, 2003, 2004), Czech Republic (2005), Ukraine (2008), Egypt (2011) and Venezuela (2011, 2012).

120 See Behn, Berge and Langford (n 4).

121 Chi-sq = 13.41 and the positive relationship is statistically significant at the 1% level.

122 See Annex I.

123 See Annex III.

Annex III: Outcome Percentages by Economic Sector

Outcome	Environmental cases		All other cases	
	Percentage	Cases	Percentage	Cases
Extractive industry				
Claimant wins on the merits	**67%**	10	46%	26
Claimant loses on jurisdiction	22%	3	11%	6
Claimant loses on the merits	14%	2	14%	8
Case settled	0%	0	26%	15
Case discontinued	0%	0	3%	2
Total	100%	15	100%	57
Water and waste				
Claimant wins on the merits	**69%**	9	40%	8
Claimant loses on jurisdiction	15%	2	15%	3
Claimant loses on the merits	8%	1	15%	3
Case settled	0%	0	20%	4
Case discontinued	8%	1	10%	2
Total	100%	13	100%	20
Industrial production				
Claimant wins on the merits	**9%**	1	33%	21
Claimant loses on jurisdiction	9%	1	13%	8
Claimant loses on the merits	37%	4	29%	18
Case settled	45%	5	14%	9
Case discontinued	0%	0	11%	7
Total	100%	11	100%	63
Real estate development				
Claimant wins on the merits	**40%**	2	36%	14
Claimant loses on jurisdiction	0%	0	16%	6
Claimant loses on the merits	60%	3	23%	9
Case settled	0%	0	15%	6
Case discontinued	0%	0	10%	4
Total	100%	5	100%	39
Agriculture and food production				
Claimant wins on the merits	**0%**	0	24%	8
Claimant loses on jurisdiction	75%	3	27%	9
Claimant loses on the merits	0%	0	12%	4
Case settled	25%	1	15%	5
Case discontinued	0%	0	22%	7
Total	100%	4	100%	33

Electricity generation				
Claimant wins on the merits	**0%**	0	27%	18
Claimant loses on jurisdiction	0%	0	14%	9
Claimant loses on the merits	0%	0	18%	12
Case settled	100%	1	41%	27
Case discontinued	0%	0	0%	0
Total	100%	1	100%	66