International Climate Change Litigation: Limitations and Possibilities for International Adjudication and Arbitration in Addressing the Challenge of Climate Change

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Climate change is a global concern of humankind. The impacts will touch almost every aspect of our lives and countering the challenge requires a comprehensive international response. This article argues that despite individual decisions in international climate-related litigation not achieving climate justice, judicial and arbitral decisions foster dialogue among significant actors. Most imperatively, this highlights governance gaps, thereby emphasising significant questions regarding how to constructively reform the climate, trade and investment regimes. Examining relevant decisions of the International Court of Justice (ICJ) indicates that the ICJ could potentially beneficially develop the scope of international obligations on states to address climate change, yet there is no guarantee given the underdevelopment of fundamental international obligations. Surveying key cases from the World Trade Organization (WTO) dispute settlement bodies as well as investor-state arbitral tribunals leads to the conclusion that there are deficiencies with both systems which fundamentally must be rectified if

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climate justice is to be achieved. Several starting points are identified, in particular greater emphasis on sustainable development in the WTO as well as substantial modification of investment rules. Significantly, utilising the compelling force of international human rights could have tangible benefits, especially asserting the human rights dimensions of climate issues in trade and investment spheres. Overall, while climate change litigation may not provide definitive solutions, such cases reveal structural deficiencies and expose institutional preferences within the outdated rules of the international economic system. These impede concerted climate action by the international community, an issue that is accentuated by the comparative weakness of climate change obligations. International litigation involving climate dimensions will continue to instigate, influence and strengthen dialogue to compel civil society, private entities and most importantly political actors to take meaningful climate action.

1. INTRODUCTION

> *Climate change may be global, it may be complex, but climate change is also strikingly familiar. Real people, typically those already marginalized with few resources, will suffer real harm because of the activities of others. Isn't this precisely what the law is meant to address?*[1]

Climate change is the greatest existential threat of our time, demanding that we fundamentally change the way we live. Widely acknowledged as a common global concern of humankind, climate change is a complex phenomenon best addressed across multiple forums and levels.[2] This article focuses on the role of international climate change litigation in addressing the overarching challenge of climate change. If climate change is to be surmounted, it must hold a central

1 David B Hunter "The Implications of Climate Change Litigation: Litigation for International Law-Making" in William CG Burns and Hari M Osofsky (eds) *Adjudicating Climate Change: State, National, and International Approaches* (Cambridge University Press, Cambridge, 2009) 357 at 378.
2 *Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights* UN Doc A/HRC/10/61 (2009) [*UNHCHR Report*].

place in the rules and discourse of various regimes and institutions, most importantly in trade, investment and human rights.[3]

The central thesis of this article is that while international courts and tribunals have displayed receptivity to climate change concerns, cumulatively their decisions undermine the conclusion that international regimes are providing a cohesive, coordinated approach to mitigate climate change. Conversely, the cases reveal that meaningful climate action is constrained rather than supported by trade and investment rules. Coherent, effective and holistic approaches have not been established.[4] This article examines key decisions of international courts and tribunals and places these disparate sets of proceedings in their broader context of interaction and cooperation. Part 2 outlines the scope of the challenge and the need for a response by the international legal system, before identifying the role of international climate change litigation. Specifically, adjudication and arbitration instigate dialogue and, by highlighting instances of real conflict, provide a lens through which to critically assess the interaction between climate change priorities on one hand and trade and investment rules on the other, revealing governance gaps and key aspects for reform.

Part 3 explores the potential for the International Court of Justice (ICJ) to determine climate change-related disputes. Through contentious or advisory proceedings, the ICJ could be called upon to decide cases relating to either the nature and scope of international climate obligations, or on state responsibility for the consequences of climate change. While ICJ decisions indicate responsiveness to the environmental dimensions of disputes, political realities, the present imprecise substance of climate change obligations and fundamental issues of causation limit both possibilities. Nevertheless, recent developments indicate positive potential for a symbolic and politically valuable ruling to further global climate action.

Part 4 reviews climate change litigation under the international regime perhaps most directly implicated in the issue — trade. Global economic activity, encouraged and supported by international trade and investment regimes, is the major source of greenhouse gas emissions.[5] Yet, trade regulation has substantial potential to combat climate change and prevent corresponding human rights

3 Shirley V Scott and Rosemary Rayfuse "Mapping the Impact of Climate Change on International Law" in Shirley V Scott and Rosemary Rayfuse (eds) *International Law in the Era of Climate Change* (Edward Elgar, Cheltenham, 2012) 3 at 5.

4 Valentina Vadi "Beyond Known Worlds: Climate Change Governance by Arbitral Tribunals?" (2015) 48 VJTL 1285 at 1287–1288.

5 Scott and Rayfuse, above n 3, at 12.

deterioration.[6] Recent renewable energy cases reveal that the environmental dimensions of trade cases are unfulfilled. The role of international investment rules is examined in part 5, in particular the potential for investment protection rules to prevent states' regressive renewable energy policies, or alternatively to impede the effective adoption of sustainable energy policies. In light of these questions which go to the heart of the normative framework of international economic law, part 6 presents possibilities for reform, the potential for human rights dimensions to come to the fore, and the relevance of litigation and adjudication for future climate action.

2. CLIMATE CHANGE

Average air temperatures on earth have been rising since the industrial revolution.[7] This "global warming" is a continuing, accelerating process, with climate scientists reaching widespread consensus that this is primarily caused by the increased presence of greenhouse gases (GHGs) from human activities in the earth's atmosphere trapping the sun's heat.[8] The Intergovernmental Panel on Climate Change (IPCC) has concluded that the evidence indicates with 95 to 100 per cent scientific certainty that human activity is the cause.[9] The cumulative effect is predicted to consist of shrinking glaciers and polar ice caps, with corresponding drastic rises in sea levels, more frequent and intense storms, heat waves, floods and droughts.[10] The ocean environment will be particularly affected, with reefs expected to be irreparably damaged and fisheries decimated. These physical environmental changes will inevitably have social and economic repercussions, including threats to global food security, water shortages, millions of displaced people and increased vulnerability to the spread of diseases.[11]

Climate change prevention or mitigation is the concept that if humans reduce the emission, and therefore the concentration, of GHGs, especially CO_2,

6 Philipp Aerni and others "Climate Change and International Law: Exploring the Linkages between Human Rights, Environment, Trade and Investment" (2010) 53 GYIL 139 at 159.
7 Vadi, above n 4, at 1286.
8 Ninety-seven per cent of publishing climate scientists agree: NASA "Scientific Consensus: Earth's Climate is Warming" Global Climate Change <http://climate.nasa.gov/scientific-consensus/>.
9 IPCC *Fifth Assessment Report* "Climate Change 2014: Synthesis Report Summary for Policy Makers" at 2–4 <http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf>.
10 Naomi Klein *This Changes Everything: Capitalism vs the Climate* (Penguin Books, London, 2014) at 13–14.
11 Scott and Rayfuse, above n 3, at 9.

this will subsequently reduce the rate and level of global warming.[12] Mitigation is a more accurate term because the accumulation of GHGs in the atmosphere has momentum, so even after output levels stop rising, the effects on the climate will continue.[13] Climate change is both qualitatively and quantitatively different from most other environmental issues as the repercussions will be felt across the whole spectrum of human life and activity. Anthropogenic climate change is indisputably linked with the global use of fossil fuels in the production and use of energy by the modern world, thereby directly implicating geopolitical power relations.[14] In response, the various substantive regimes of international law are attempting to govern climate change-related issues.

2.1 Climate Change as a Global Problem

A global economic system founded on resource extraction and consumption has spurred climate change and has been dubbed the "greatest market failure the world has ever seen".[15] The United Nations Framework Convention on Climate Change (UNFCCC) has almost universal ratification.[16] This treaty provides the parameters and forum for discussion and development of principles of international climate change law, requiring parties to create national strategies to reduce GHG emissions and to cooperate in learning about and adapting to climate change.[17] The 1997 Kyoto Protocol, entering into force in 2005, set specific rules and emission reduction targets founded on these broad legal principles.[18] Most recently, the signatories of the Paris Agreement pledged to keep global temperatures below 2°C whilst aiming for 1.5°C.[19] Together these form an international law foundation. Nevertheless, their structure has not yet produced the changes in state behaviour, nor private actions, necessary to effectively combat climate change.[20] Preservation of the climate requires

12 James Nickel and Daniel Magaw "Philosophical Issues in International Environmental Law" in Samantha Besson and John Tasilolas (eds) *The Philosophy of International Law* (Oxford University Press, New York, 2010) 453 at 467.
13 At 468.
14 Scott and Rayfuse, above n 3, at 10.
15 Nicholas Stern *Stern Review: The Economics of Climate Change — Executive Summary* (Her Majesty's Treasury, London, 2006) at viii.
16 United Nations Framework Convention on Climate Change 1771 UNTS 107 (opened for signature 4 June 1992, entered into force 21 March 1994) [UNFCCC].
17 Cinnamon Carlarne, Kevin Gray and Richard Tarasofsky "International Climate Change Law: Mapping the Field" in Cinnamon Carlarne, Kevin Gray and Richard Tarasofsky (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 4 at 4.
18 Nickel and Magaw, above n 12, at 468.
19 Paris Agreement (opened for signature 15 December 2015, entered into force 4 November 2016), art 2.
20 Carlarne, Gray and Tarasofsky, above n 17, at 4–5.

unprecedented intergovernmental cooperation and intervention, as well as progress across international regimes and institutions.[21]

2.2 A Dialogical Lens

Adjudication and arbitration by international courts and tribunals serves various functions, including the determination and resolution of legal issues, remediation for harms, maintenance of the rule of law, and the prospective impacts for securing and regulating certain behaviour, relations and compliance.[22] Despite key differences, adjudication and arbitration share the features that the rules of international law are the determining criteria for resolution and the decisions usually bind the parties.[23] The UNFCCC does not establish a dedicated dispute settlement mechanism for climate change-related disputes. As with other multilateral environmental treaties, it reiterates the need for parties to settle their dispute through negotiation or any other peaceful means of their choice and provides for resolution by the ICJ or by arbitration.[24] Focusing purely on formal dispute settlement under the UNFCCC misconstrues the role of international courts and tribunals by ignoring dispute settlement processes outside of the climate regime and neglecting deeper links with the general body of international law, which are imperative for a comprehensive international response to climate change.[25] The underlying rationale of this article is to analyse key decisions of international courts and tribunals "dialogically", in the sense that a holistic view of the interaction and engagement of decision-makers with each other, with law-makers and administrative bodies, with different institutions, jurisdictions and levels of governance, can best be described through the metaphor of a multiparty dialogue.[26] Placing these disparate sets of proceedings in their broader context highlights how each contributes to the advancement, understanding

21 United Nations Industrial Development Organization *Public Goods for Economic Development* (UNIDO, Vienna, 2008) <https://www.unido.org/fileadmin/user_media/Publications/documents/Public%20goods%20for%20economic%20development_sale.pdf> at 6.

22 Duncan French and Lavanya Rajamani "Climate Change and International Environmental Law: Musings on a Journey to Somewhere" (2013) 25 JEL 437 at 451.

23 Tim Stephens "The Settlement of Disputes in International Environmental Law" in Shawkat Alam, Jahid Hossain Bhuiyan, Tareq MR Chowdhury and Erika J Techera (eds) *Routledge Handbook of International Environmental Law* (Routledge, Abingdon, 2012) 175 at 182.

24 UNFCCC, above n 16, art 14; Vadi, above n 4, at 1316.

25 French and Rajamani, above n 22, at 452.

26 Elizabeth Trujillo "A Dialogical Approach to Trade and Environment" (2013) 16 JIEL 535 at 541–542.

and distillation of legal statements and principles to ultimately illustrate that negotiators, legislators and the international community cannot place reliance on international adjudicators utilising prevailing international legal rules to identify and protect climate action. Accordingly, the battle for environmental sustainability necessitates exploring the internal dimensions of trade and investment rules, specifically their engrained preferences, their consequences and scope for development. Ultimately, litigation should help facilitate negotiations, the advent of novel environmental regimes and new mechanisms of regulation.[27]

3. THE INTERNATIONAL COURT OF JUSTICE

Climate change could provide the subject matter or the broader context for litigation in the ICJ.[28] Specifically, a dispute may arise which requires the ICJ to rule on international obligations under the climate change regime, or the ICJ could be invited to address the issue of state responsibility for contributing to climate change or failing to prevent the adverse consequences of climate change.[29] These could arise from advisory proceedings instigated by the UN General Assembly seeking clarification of the obligations under general international law to prevent climate change or mitigate its adverse consequences, or from contentious proceedings instigated by one state against another/others for causing climate change or failing to prevent adverse consequences.[30]

3.1 International Climate Change Obligations

The UNFCCC, art 14 frames "disputes" as matters "concerning the interpretation or application of the Convention", reinforcing that this provision is one of many potential facets of climate change dispute settlement. Article 14 has not yet been invoked as a jurisdictional basis, likely due to the disinterest of any particular state in bringing a case for the collective good, combined with the lack of the peculiar circumstances required for a specific dispute to arise.[31] As only Cuba and the Netherlands have accepted the jurisdiction of the ICJ to

27 At 582.
28 French and Rajamani, above n 22, at 453.
29 Phillipe Sands "Climate Change and the Rule of Law: Adjudicating the Future in International Law" (2016) 28 JEL 19 at 25.
30 At 25.
31 French and Rajamani, above n 22, at 452.

resolve disputes under the UNFCCC, contentious proceedings are unlikely.[32] While the role the ICJ can play depends on the content and context of specific proceedings, the key would be an advisory opinion which, after identifying the applicable law, expresses a view on the substance of any obligation to prevent climate change, and the nature and extent of a duty to address the consequences of climate change.[33] The ICJ could clarify the relationship between the treaties in force and general international law, which is not necessarily straightforward, but is important to cohesive action.[34] Standards derived from customary international law and international environmental law, such as the precautionary principle, could affect states' treaty obligations to limit their contribution to climate change. Hence a ruling by the ICJ could both clarify obligations and exert pressure to comply.[35] Previously the Kyoto Protocol set the standards and effectively represented agreement on the precautionary approach.[36] Now, the Paris Agreement embodies a political commitment to limit emissions to ensure global temperatures remain below 2°C whilst aiming for 1.5°C. The question remains whether that commitment reflects an obligation under international law to reduce emissions, including phasing out certain CO_2 and other GHG emissions.[37]

In the absence of an ICJ decision, international arbitration between states could have a valuable role in identifying, defining and enforcing obligations under climate agreements. Indeed, the International Bar Association's (IBA) 2014 report *Achieving Justice and Human Rights in the Era of Climate Disruption* (IBA Report) recommended arbitration as a means of settling disputes arising from climate change.[38] Where parties from multiple jurisdictions are involved, national courts are not a viable forum for climate change-related disputes given issues concerning a state recognising judgment delivered by another state's courts. International forums, such as the Permanent Court of Arbitration (PCA) are better suited, as the parties can choose arbitrators with

32 *Declarations of States Parties to the UNFCCC* <http://unfccc.int/essential_background/convention/items/5410.php>.
33 Sands, above n 29, at 30.
34 At 30–31.
35 Andrew Strauss "Climate Change Litigation: Opening the Door to the International Court of Justice" in WCG Burns and HM Osofsky (eds) *Adjudicating Climate Change: State, National, and International Approaches* (Cambridge University Press, Cambridge, 2009) 334 at 338.
36 Alan Boyle and Navraj Singh Ghaleigh "Climate Change and International Law Beyond the UNFCCC" in Cinnamon Carlarne, Kevin Gray and Richard Tarasofsky (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) 26 at 52.
37 Sands, above n 29, at 31.
38 International Bar Association Climate Change Justice and Human Rights Task Force Report *Achieving Justice and Human Rights in the Era of Climate Disruption* (July 2014) at 13.

specific experience or expertise in climate issues. As an institution the PCA is increasingly versed in environmental disputes; it already has Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment, and is recommended by the IBA Report as the preferred institution to handle international environmental disputes.[39]

3.2 State Responsibility for Climate Change

The concept that a state or several states could be held legally responsible under international law for adverse effects of climate change occurring in another state is complex. There are states that are high-emitters of GHGs, and there are low-emitters who contribute little yet will be most directly impacted, such as small island states. In particular, vague primary obligations, issues of obscured causation and multiple actors are tangible impediments to a finding of state responsibility.[40]

In order to impose state responsibility there must be a wrongful act, which is a breach of an international obligation that is attributable to a state.[41] The no-harm rule is the principle of customary international law not to inflict damage on or violate the rights of other states. However, relying on a customary rule as a primary obligation makes it difficult to ascertain its scope.[42] Hints of the ICJ's willingness to contribute to the law's progressive development in the environmental field emerged in the *Nuclear Weapons Advisory Opinion*, where the ICJ laid pivotal groundwork in the fight against climate change with two salient statements:[43]

> 29. The Court recognizes that the environment is under daily threat … the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn.
>
> …
>
> [T]he general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas

39 Akhlaq Choudhury and Khaled Moyeed "Spotlight on International Arbitration as a Means of Settling Disputes Arising from Climate Change" (10 February 2016) Mondaq <http://www.mondaq.com/x/465168/Climate+Change/Spotlight+on+International+Arbitration+as+a+Means+of+Settling+Disputes+Arising+from+Climate+Change>.

40 Christina Voigt "State Responsibility for Climate Change Damages" (2008) 77 NJIL 1 at 2.

41 *Draft articles on the Responsibility of States for Internationally Wrongful Acts, with commentaries 2001* [2001] vol II, pt 2 YILC 31, art 2.

42 Voigt (2008), above n 40, at 8.

43 *The Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 226.

> beyond national control is now part of the corpus of international law relating to the environment.

The first acknowledges the irreplaceable value of the environment and intergenerational dimensions of environmental issues such as climate change. The second applies to the transboundary harm of climate change caused by high-emitters, unequivocally confirming that protection of the environment is governed by the rules of general international law.[44]

Further clarification occurred in the recent *Pulp Mills* case, where the ICJ ruled that a state is obliged to use all means at its disposal to prevent activities taking place under its jurisdiction causing significant damage to the environment of another state.[45] Likewise, the 2011 *Seabed Mining Advisory Opinion* from the International Tribunal for the Law of the Sea (ITLOS) Seabed Disputes Chamber recognised "a trend towards making [the precautionary principle] part of customary international law".[46] In particular the decision highlights that international environmental law imposes a due diligence standard on governmental processes regarding decision-making that may have transboundary environmental effects.[47] Such statements and clarifications of law from courts of general jurisdiction can significantly elucidate the legal framework, which assists in resolving future disputes and promoting standards of behaviour.[48]

As emissions are predominantly produced by private actors and citizens rather than states directly, imposing state responsibility for climate change damages would depend on the concept of due diligence.[49] The three common elements — opportunity to act or prevent; foreseeability or knowledge that a certain activity could lead to transboundary damage; and proportionality in the choice of measures to prevent or minimise — are logically satisfied in relation to climate change mitigation and adaptation.[50] However, a decision on state responsibility for climate change is faced by the mammoth obstacle of causation. The emissions of a specific country cannot be attributed to specific damage, impeding traditional "but-for" or "specific causation" legal

44 Sands, above n 29, at 26.
45 *Pulp Mills on the River Uruguay (Argentina v Uruguay) (Merits)* [2010] ICJ Rep 14 at [104].
46 Seabed Disputes Chamber of the International Tribunal for the Law of the Sea *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area: Advisory Opinion* (1 February 2011) at [135].
47 At [103], [108], [112]–[116], [145].
48 French and Rajamani, above n 22, at 454.
49 Birsha Ohdedar "Loss and Damage from the Impacts of Climate Change: A Framework for Implementation" (2016) 85 NJIL 1.
50 Voigt (2008), above n 40, at 10–14.

tests.[51] Nevertheless, we may see legal developments where novel concepts of causation come to the fore. One possibility is the probabilistic causation test, where even less than 50 per cent contribution to the risk of harm suffices where the scientific evidence confirms the cause of damage. Used in complex tort cases with multiple defendants and causes, the underlying policy is that victims should not be left without a remedy despite unconventional causation.[52]

3.3 Developments in the Right Direction

Given the prevalence of other adjudicatory and arbitral forums engaging with climate change issues, the pressure on the ICJ to contribute positively to the response of state and international institutions to the legal challenges of climate change is mounting.[53] Important developments have been taking place in this regard in ICJ decisions.

In *Pulp Mills*, the Court noted the "interconnectedness between equitable and reasonable utilization of a shared resource and the balance between economic development and environmental protection that is the essence of sustainable development".[54] The case is notable for its strengthening and delineation of state responsibility under the no-harm principle of customary international law. Building on *Pulp Mills*, the joint decisions of *Certain Activities and Construction of a Road* arguably include positive signals for the protection of global public goods such as the climate under enforceable principles of environmental law. The Court acknowledged that the parties broadly agreed on the existence of a general international law obligation to conduct an environmental impact assessment where activities within a state's jurisdiction risk causing significant harm to other states, particularly "in areas or regions of shared environmental conditions".[55] The use of this phrase in a decision concerning a bilateral disagreement, rather than a more confined concept, indicates that the ICJ is open to rapidly developing principles and standards in environmental law capable of protecting public goods such as the climate. While the results cannot be easily predicted, this trajectory could give the urgent impetus required to environmental protection and climate change mitigation. The Court also explicitly expanded the principle as articulated in *Pulp Mills*, holding that it applies beyond industrial activities to

51 Ohdedar, above n 49, at 25.
52 At 25.
53 Sands, above n 29, at 32.
54 *Pulp Mills*, above n 45, at [177].
55 *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) and Construction of a Road in Costa Rica Along the San Juan River (Nicaragua v Costa Rica) (Merits)* [2015] ICJ Rep 1 at [101].

generally proposed activities which may have a significant adverse impact in a transboundary context.[56]

Despite the unlikelihood of a dispositive case on climate change in the near future, an increase in both contentious and advisory cases with environmental dimensions may lead to the accretion of comments and legal statements which will cumulatively reinforce, dialogically, the urgent pressure so that climate mitigation is achieved even if a purely legal solution to impose state responsibility cannot be reached. International courts and tribunals are one of many actors that occupy the realm in which global public consciousness emerges and is shaped, and represent a space where the legitimacy of international governance is forged or challenged.[57] Given its status and gravitas, the ICJ could have a central role in facilitating and directing necessary action by states, international institutions, NGOs, the private sector and individuals.

4. WTO DISPUTE SETTLEMENT AND CLIMATE CHANGE

Trade and environmental regimes fundamentally disagree as to whether or how to utilise or protect the earth's resources.[58] The trade system's core objective is the liberalisation of world trade, with the General Agreement on Tariffs and Trade (GATT) intended to gradually remove tariffs and non-tariff restrictions, and create non-discrimination obligations.[59] Conversely, specific trade restrictions are utilised by multilateral environmental agreements (MEAs) as effective governance tools to protect natural resources.[60] Protecting global public goods such as the climate is undermined by the trade regime's non-discrimination obligations, which ensure that goods produced by environmental free-riders have access to the markets of countries bearing the costs of environmental measures.[61]

The formal structure of the World Trade Organization (WTO), with its legislative and judicial forums, conveys a sense of legitimacy, making the WTO a natural focal point for those advocating for a global governing structure for

56 At [104].
57 Sands, above n 29, at 26.
58 Nicole Roughan *Authorities: Conflicts, Cooperation, and Transnational Legal Theory* (Oxford University Press, Oxford, 2013) at 187.
59 Thomas Gehring "The Institutional Complex of Trade and Environment: Toward an Interlocking Governance Structure and a Division of Labor" in Sebastian Oberthür and Olav Schram Stokke (eds) *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (MIT Press, Cambridge, 2011) 227 at 233.
60 At 228.
61 At 239.

trade and environmental issues.[62] When economic interests are sufficiently strong, disagreements gravitate towards WTO adjudication regardless of the existence of appropriate multilateral forums to deal with the issues, primarily because the WTO has a compulsory enforcement mechanism.[63] These strong features risk subsuming less-defined environmental goals, yet there is potential for WTO adjudication to foster judicial cross-fertilisation of trade and environmental issues, as well as international and domestic dialogue, given that WTO panels address domestic environmental regulation.[64] This article will assess to what extent WTO dispute settlement is opening dialogue towards greater recognition of environmental and climate change imperatives.

Several authoritative decisions indicate receptivity of WTO adjudicators to environmental considerations which could extend to climate issues. The most notable environmental exceptions under WTO rules are art XX(b) and XX(g) of GATT, which make exceptions for measures "necessary to protect human, animal or plant life or health" and "relating to the conservation of exhaustible natural resources" respectively.[65] These measures are subject to the art XX chapeau requirement that they are not applied in a manner that constitutes "arbitrary or unjustifiable discrimination" or "a disguised restriction on international trade". Article 3.5 of the UNFCCC specifically invokes the language of the art XX chapeau, implicitly recognising the relationship between climate agreements and the WTO agreements.[66] Climate change will clearly become a threat to human life and to exhaustible natural resources, a term which the WTO Appellate Body held includes clean air,[67] and potentially includes forests, terrestrial and marine living resources, biodiversity and water. Thus a WTO dispute settlement body, or even a governing body like the Committee on Trade and Environment (CTE), could theoretically declare a

62 Trujillo, above n 26, at 536–537.

63 Sabrina Shaw "Policy should be made through negotiation, not litigation" in Adil Najam, Mark Halle and Ricardo Meléndez-Ortiz (eds) *Trade and Environment: A Resource Book* (IISD, 2007) 23 at 23–24.

64 Trujillo, above n 26, at 537. See Ruti Teitel and Robert Howse "Cross-Judging: Tribunalization in a Fragmented but Interconnected Global Order" (2009) 41 NYU JILP 959 at 959–964.

65 Harro van Asselt "Legal and Political Approaches in Interplay Management Dealing with the Fragmentation of Global Climate Governance" in Sebastian Oberthür and Olav Schram Stokke (eds) *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (MIT Press, Cambridge, 2011) 59 at 62.

66 At 63–64.

67 *United States — Standards for Reformulated and Conventional Gasoline* WT/DS2/AB/R, 29 April 1996 (Appellate Body Report) at 19; Boyle and Ghaleigh, above n 36, at 31.

range of economic instruments that are designed to mitigate climate change to be GATT consistent.[68]

Despite WTO dispute settlement panels traditionally interpreting these exceptions restrictively to prevent protectionism,[69] WTO jurisprudence on the interaction between trade and environment has been progressive. The use of environmentally motivated unilateral trade restrictions was considered and approved in the Appellate Body's *US-Shrimp* decision, finding that the WTO system permitted meaningful environmental protection of importing states to be weighed against the interests of the exporting states.[70] However, on the facts the USA's import prohibition was arbitrary and unjustifiable discrimination due to its application. This positive ruling indicates that members can take unilateral actions based on the way in which products are produced.[71] Process and production methods (PPMs) are particularly relevant to climate change initiatives, as policies incentivising cleaner, low-emissions, energy efficient products are best directed at the way in which products are manufactured or obtained.[72] However, the acceptability of discrimination on the basis of PPMs has remained a highly contested issue within the WTO.

More recently, the Appellate Body in the *Brazil-Tyres* dispute found that measures to protect the environment may satisfy the art XX(b) "necessity" threshold where on balance the evidence indicated the measure was likely to materially contribute to achieving the legitimate objective.[73] Notably, proving such a material contribution need not only rely on evidence or data collected indicating the measure makes a material contribution to the issue. Instead, the Panel can rely on a demonstration that proves the measure is apt to produce a material contribution based on quantitative projections or qualitative reasoning founded on a set of hypotheses tested and supported by sufficient evidence.[74] The Appellate Body explicitly recognised this was particularly relevant for climate change, as any contribution to climate mitigation can only

68 Margaret Young "Climate Change Law and Regime Interaction" (2011) 2 CCLR 147 at 148.
69 Gehring, above n 59, at 234; *United States — Import Prohibition of Certain Shrimp and Shrimp Products* WT/DS58/R, 15 May 1998 (Panel Report); *United States — Restrictions on Imports of Tuna* DS29/R, 16 June 1994 (Panel Report) at [5.38].
70 *United States — Import Prohibition of Certain Shrimp and Shrimp Products* WT/DS58/AB/R, 12 October 1998 (Appellate Body Report) at [156].
71 Hugo Cameron "The Evolution of the Trade and Environment Debate at the WTO" in Adil Najam, Mark Halle and Ricardo Meléndez-Ortiz (eds) *Trade and Environment: A Resource Book* (IISD, 2007) 3 at 6.
72 Trujillo, above n 26, at 553.
73 *Brazil — Measures Affecting Imports of Retreaded Tyres* WT/DS332/AB/R, 3 December 2007 (Appellate Body Report) at [151].
74 At [151].

be discerned over time.[75] On the facts, the Appellate Body upheld the Panel's ruling that certain exemptions resulted in the import ban constituting arbitrary or unjustifiable discrimination.[76] Yet, the decision emphasised that a measure may be necessary as one of a suite of measures as part of a comprehensive strategy to deal with a particular environmental issue.[77] Arguably this reserves significant environmental policy space to deal with climate change mitigation. An especially restrictive measure, if it is a key element in that strategy, may be justifiable if it appears to be apt to make a material contribution. Notably, the *Brazil-Tyres* Appellate Body stated that an import ban could satisfy the WTO exception when the alternatives were essentially managerial or remedial;[78] a valuable precedent for bans or reductions of climate-adverse substances such as fossil fuels.

4.1 Renewable Energy and the WTO

Evidently previous WTO panels have been conscious of the need for environmental protection measures, the *Brazil-Tyres* decision arguably illustrating receptivity to climate protection. Presently the global renewable energy sector is a battleground for testing the relationship between international climate and trade obligations. Renewable energy policies are shackled within a tripartite relationship of the international economic regime, the global climate regime, and state regulatory autonomy.[79] The lack of a clear means of resolving conflicting norms poses a significant challenge to transitioning to low-carbon economies. Feed-in tariff programmes (FITs), consisting of guaranteed purchase prices, grid access and longevity of contract, often incorporate local or domestic content requirements (DCRs) requiring a certain quantity of goods used to produce renewable energy to be locally sourced.[80] While a DCR is not an environmental measure per se, DCRs are arguably environmental measures in the long run, as the domestic benefits facilitate the accompanying environmental objective which may otherwise be outweighed by increased expense to consumers and thereby politically costly to the implementing party.[81] Various studies attest to the success of FITs for securing rapid and

75 At [151].
76 At [229]–[233].
77 At [151], [210].
78 At [150]–[151].
79 Vyoma Jha "Trade, Investment and Climate Change: How International Economic Disputes in Renewable Energy are Shaping New Norms of Regime Interaction" (1 July 2016) Social Science Research Network <https://ssrn.com/abstract=2802966> at 1.
80 At 2–3.
81 Luca Rubini "'The Good, the Bad, and the Ugly.' Lessons on Methodology in

effective renewables development.[82] FITs are being challenged for violating National Treatment rules and prohibitions on subsidies contingent on DCRs in the Agreement on Subsidies and Countervailing Measures (SCM). However, the proliferation of renewable energy is key to climate change mitigation.[83] Adjudication at the WTO has so far emphasised issues of protectionism, discrimination and competitiveness, rather than the transformative potential of renewable energy policies.[84]

4.1.1 Canadian-FIT *case*

In the *Canada — Certain Measures Affecting the Renewable Energy Generation Sector* (*Canadian-FIT* case) an Ontario renewable energy scheme promised long-term favourable pricing to wind, solar, hydro and biomass electricity producers where they purchased certain goods from local Ontario companies (a DCR).[85] Japan, the US and the EU complained that this FIT programme violated GATT's prohibitions on domestic sourcing, SCM subsidies rules, and non-discrimination provisions in TRIMs (Agreement on Trade-Related Investment Measures). Both the Panel and the Appellate Body found that the measures were inconsistent with GATT art III.4 and TRIMS art 2.1 non-discrimination rules.

However, for the purposes of this article the more relevant question was whether the FIT programme constituted a prohibited subsidy under art 3.1(b) of the SCM. The WTO legal definition of subsidy under SCM art 1.1 requires a "financial contribution" or "any form of income or price support", plus the

Legal Analysis from the Recent WTO Litigation on Renewable Energy Subsidies" (2014) 48 JWT 895 at 898.

82 Mark Fulton and others *Global Energy Transfer Feed-in Tariffs for Developing Countries* (Deutsche Bank, New York, 2010) <https://institutional.deutscheam.com/content/_media/GET_FIT_-_042610_FINAL.pdf>; Lucy Butler and Karsten Neuhoff "Comparison of Feed-in Tariff, Quota and Auction Mechanisms to Support Wind Power Development" (2008) 33 Renewable Energy 1854.

83 Intergovernmental Panel on Climate Change "Summary for Policymakers" in O Edenhofer and others (eds) *Climate Change 2014: Mitigation of Climate Change — Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, Cambridge and New York, 2014) at 12.

84 Jha, above n 79, at 1.

85 Markus Gehring, Marie-Claire Cordonier Segger and Jarrod Hepburn "Climate Change and International Trade and Investment Law" in Shirley V Scott and Rosemary Rayfuse (eds) *International Law in the Era of Climate Change* (Edward Elgar, Cheltenham, 2012) 84 at 86; *Canada — Certain Measures Affecting the Renewable Energy Generation Sector* WT/DS412/AB/R, 6 May 2013 (Appellate Body Report).

conferral of a "benefit".[86] Assessing whether the FIT programme was a subsidy primarily involved whether the programme conferred a "benefit", in the sense that the programme conditions were more advantageous than the prevailing market conditions for the product in Ontario.[87] The Appellate Body concluded, although with different reasoning from the Panel, that they could not complete the "benefit" analysis on the evidence presented, and thereby could not rule on whether the FIT programme indeed conferred a benefit and whether Canada had in fact been subsidising renewable energy production inconsistently with the SCM Agreement.[88] While welcome from the climate perspective, this does not clarify the compatibility of FIT schemes with WTO law. Yet, the *Canadian-FIT* case suggests that WTO adjudicatory bodies could imbue these financial support schemes with a sustainability dimension through progressive interpretations. For instance, the expansive interpretation of "prevailing market conditions" for the purposes of determining the adequacy of remuneration for goods and services, which may be determinative of whether renewable energy production is being subsidised. In an important development, the Appellate Body accepted that states could themselves create markets in renewable energy separate from the open market for energy. Overall, this indicates that carefully designed policies providing financial support to renewables may not violate WTO subsidies law due to their environmental/climate public considerations.[89]

Nonetheless, the Appellate Body majority's reasoning has been criticised for allowing policy considerations to outweigh methodologically correct legal application.[90] The Panel was caught between two powerful policy aspects: the DCR element which discriminated between domestic and imported products, juxtaposed with the desire to reiterate the legitimacy of the underlying sustainability goals.[91] Attempting to reconcile current WTO law with good climate policy, the Appellate Body unambiguously struck down the DCR aspect of the FIT programme whilst creating a judicial carve-out for certain types of green energy incentives under subsidy laws.[92] Analytically, the DCR was condemned and eviscerated in the least intrusive way, sidestepping the subsidy issue. Dialogically, this avoided creating a symbolically dangerous precedent for green energy by an internationally recognised dispute settlement organ.[93]

86 Rubini, above n 81, at 902.
87 Jha, above n 79, at 3.
88 Appellate Body Report, above n 85, at 5.242–5.246.
89 Jha, above n 79, at 7.
90 Rubini, above n 81, at 904.
91 *Canada — Certain Measures Affecting the Renewable Energy Generation Sector* WT/DS412/R, 19 December 2012 (Panel Report) at 7.7 and 7.153; Rubini, above n 81, at 919.
92 Rubini, above n 81, at 914.
93 At 925.

The question remains whether the proper role of WTO adjudicatory bodies is to make rulings like that in *Canadian-FIT*. Policy considerations and desired outcomes have a natural role in legal interpretation, as international rules are the expression of agreement on general policy choices made by sovereign states.[94] The creative legal ambiguities within WTO agreements are generally the result of negotiated results and compromises. Consequently, if members cannot muster the political will to provide guidance on interpretation of these rules in a climate-friendly manner, it is left to adjudication to clarify. However, legitimate policy goals are better recognised in the rules by law-makers, not forced into the fabric of the rules by adjudicators.[95] Moreover, by declining to rule that the FIT was not a subsidy, the *Canadian-FIT* decision lacked legal analysis to fortify an enduring safe haven for renewable energy FITs, which remain vulnerable to being redefined as subsidies in future WTO cases.[96]

4.1.2 China-Wind *case*

The extra-legal impacts of WTO adjudication decisions are exemplified by the *China-Wind* proceedings. The US complained that China's wind power equipment financial support systems were contingent on use of domestic goods, a DCR which violated GATT art XVI.1 and the SCM.[97] Similarly to the Ontario scheme, the Chinese model granted subsidies to wind energy producers when equipment was purchased from China. The climate change dimensions of the dispute opened the possibility of a necessity exception under GATT art XX, especially as it involved implementing clean energy, by a developing nation, the scale and speed arguably requiring a DCR to achieve the particular policy goal of climate change mitigation.[98] This would arguably bring the DCR under the ambit of being "necessary" to protect human, animal or plant life or health under GATT art XX(b), or otherwise "related to" the conservation of exhaustible natural resources under art XX(g). China could have harnessed a *Brazil-Tyres* line of argument that the DCR was likely to contribute to achieving a legitimate environmental objective — the urgent climate change problem —

94 At 904.
95 At 906.
96 Aaron Cosbey and Petros Mavroidis "A Turquoise Mess: Green Subsidies, Blue Industrial Policy and Renewable Energy: The Case for Redrafting the Subsidies Agreement of the WTO" (2014) 17 JIEL 11 at 28.
97 *China — Measures Concerning Wind Power Equipment* WT/DS419/1, 22 December 2010 (Request for Consultations).
98 Robert Howse "GATT Article XX and Domestic Production of Environmental Goods" (3 April 2011) International Economic Law and Policy Blog <http://worldtradelaw.typepad.com/ielpblog/2011/04/article-xx-domestic-production-of-environmental-goods.html>.

by efficiently ensuring the security of large-scale, independent domestic renewable energy sources.

As the impacts of climate change increase, eventually a WTO panel may make such a ruling. Nonetheless, the final hurdle of arbitrary or unjustifiable discrimination remains a significant one in the case of DCRs which blatantly prefer domestic over foreign products. As a precursor, the Appellate Body would have to make the novel determination that GATT art XX applies to the SCM Agreement. Regardless, in 2011 China withdrew its subsidies programme, resulting in the discontinuation of the formal WTO dispute.[99] This shows the dissuasive power of established WTO rules and jurisprudence to impact states' attempts to introduce clean energy under conventional understandings of WTO-compatibility, when legitimate grounds may exist for considering such measures justifiable under the aforementioned progressive interpretations of WTO rules.

4.1.3 India-Solar *case*

The recent *India — Certain Measures Relating to Solar Cells and Solar Modules* case (*India-Solar*) also concerned mandatory DCRs for solar power producers to try to achieve India's ambitious goal of 175 gigawatts of solar energy production by 2022. India's DCRs were ruled inconsistent with WTO non-discrimination obligations under GATT art III.4.[100] The art III.8(a) government procurement exemption was held not to apply.[101]

India's alternative arguments invoked two GATT exceptions. First, India relied on the GATT art XX(j) exception that the domestic solar manufacturing capabilities resulted in "products in general or local short supply". This was rejected on the basis that this meaning could only refer to the situation in which the quantity from all sources, foreign and domestic, fails to meet demand in the region or market.[102] More significantly, India specifically relied on its international commitments to combating climate change.[103] India invoked the art XX(d) exception that the DCRs were "necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement", specifically that the DCR secured compliance with international obligations to promote sustainable development. The Panel held that to be "laws and regulations" international agreements must have direct effect or otherwise

99 Gehring, Cordonier Segger and Hepburn, above n 85, at 87.

100 *India — Certain Measures Relating to Solar Cells and Solar Modules* WT/DS456/AB/R, 16 September 2016 (Appellate Body Report) at 6.2.

101 At 5.1.5.

102 Jha, above n 79, at 4.

103 *India — Certain Measures Relating to Solar Cells and Solar Modules* WT/DS456/R, 24 February 2016 (Panel Report) at 7.268; Appellate Body Report, above n 100, at 5.78.

form part of the domestic legal system of the member concerned. The Panel ruled that these international instruments were not laws or regulations, and that the DCR could not secure compliance with these, therefore art XX(d) was not satisfied.[104]

In September 2016 the Appellate Body substantively agreed, holding that India's national policies to address climate change could not be read together to constitute a "rule" to ensure ecologically sustainable growth.[105] To justify an inconsistent measure under GATT art XX(d) requires the existence of rules that form part of its domestic legal system which can be considered "laws or regulations" for the purposes of that article.[106] The Appellate Body accurately found that the international agreements India had adopted committed to climate change action could not alone constitute "laws or regulations" under GATT art XX(d), specifically, the WTO Agreement preamble, the UNFCCC, the Rio Declaration 1992 and UN Resolution A/RES/66/288 (Rio+20 Outcome Document).[107] Furthermore, the Appellate Body's statement that "the mere fact that the executive branch takes actions in pursuance of the international instruments at issue is not sufficient" may come to be an obstacle for implementing climate change action.[108] Cumulatively, all this implicitly rejects the normative force of sustainable development, undermining the efficacy of climate action.

However, it is important to recognise that while the decision is not positive for climate action, the ruling is merely that the DCR violates WTO discrimination prohibitions. This resonates with the WTO view that climate change is a global issue to be addressed by non-discriminatory trade measures. Yet such a perspective neglects that DCRs facilitate countries such as India producing clean energy which without local content requirements would otherwise be vastly more expensive and challenging.[109] While there are other means of including domestically produced aspects, such as government procurement of the solar modules themselves rather than electricity, the decision indicates that the urgent battle against climate change is tangibly impeded by decades-old trade rules.

104 Jha, above n 79, at 5.
105 Appellate Body Report, above n 100, at 5.132–5.133.
106 At 5.140.
107 At 5.149.
108 At 5.148.
109 Jan-Christoph Kuntze and Tom Moerenhout "Local Content Requirements and The Renewable Energy Industry — A Good Match?" (2012) ICTSD <http://unctad.org/meetings/en/Contribution/DITC_TED_13062013_Study_ICTSD.pdf>.

4.2 Does WTO Adjudication Present a Coherent and Climate-orientated Approach?

The recent decisions of the WTO dispute settlement bodies have openly engaged with the policy dimensions of climate issues. This suggests that the existing trade regime could accommodate urgent climate action if supported by a reorientation of the global trade system towards environmental protection.[110] Despite positive indicators from earlier Appellate Body decisions, the lack of a doctrine of precedent combined with the trade-lens' narrow perspective suggests that in the face of increasing trade distortions from the implementation of climate change measures WTO panels and the Appellate Body feel compelled to apply conservative interpretations of WTO rules.[111] This was seen in the *India-Solar* case, an entirely reasonable reading of current conventional exceptions that indicates the art XX(b) necessity argument is better harnessed for defending climate change measures. Both free-trade and social regulatory policy objectives are incorporated in WTO rules, yet the cases illustrate that the former are always the starting point and the latter a battle to be realised.[112] Arguably even the minor concessions witnessed in the *Canadian-FIT* case simply add more complexity, in an attempt to achieve real or perceived just outcomes.

Based on the foregoing analysis of leading decisions it is impossible to distil conclusively a coherent approach by WTO adjudicators to climate change issues. Professional legal argument may justify the correctness of these practices and rules, yet there remains a deep structural bias within the relevant legal institutions which supports engrained preferences despite the deep sense of a political wrong.[113] Legal rules have a role in liberating powerful actors and reinforcing a sense of inevitability regarding highly contestable aspects of the prevailing socio-political order, largely because indeterminate legal concepts intrinsically support the status quo.[114] Significantly more critical engagement with these issues is required by adjudicators and legislators to achieve climate justice. WTO dispute settlement bodies have an important role in revealing these deficits, articulating statements of principle, and framing the dialogue between various states, stakeholders and civil society. These decisions suggest that instead of a judicially forged trade–environment solution, the key may lie in stronger, franker critique and reform of current trade and environmental objectives to facilitate climate-orientated trade policy.

110 Gehring, Cordonier Segger and Hepburn, above n 85, at 117.
111 van Asselt, above n 65, at 65.
112 Martti Koskenniemi *From Apology to Utopia: The Structure of International Legal Argument* (Cambridge University Press, Cambridge, 2005) at 607.
113 At 607.
114 At 606.

5. INTERNATIONAL INVESTMENT ARBITRATION AND CLIMATE CHANGE

Climate change mitigation requires developing innovative regulatory responses to reduce carbon emissions, increase energy efficiency, and transition the global economy from fossil fuels to more sustainable technology and energy sources. Accordingly, attempts to impose subsidies, taxes, command-and-control measures and market-based mechanisms to counter climate change are likely to meet heavy resistance and multiple legal challenges from the entrenched interests of existing industries and energy suppliers.[115] In particular, international investment law provides a direct mechanism for private-sector interests to initiate investor-state arbitration, known as investor-state dispute settlement (ISDS), to oppose the adoption or implementation of climate change carbon-reduction measures. However, foreign investors play a dual role, as multinational corporations are massive emitters of GHGs yet can contribute to greening the economy, financing the adoption of low-carbon solutions.[116]

Over 3000 separate international investment agreements (IIAs), agreed between two or more states, define investor entitlements in the absence of a comprehensive global treaty.[117] The system is reasonably cohesive as IIA provisions share commonalities and arbitral tribunals reference earlier awards in the absence of *stare decisis*.[118] Arbitral tribunals influence global climate governance, as their decisions have tangible impacts on the regulatory landscape. The effects of any individual dispute transcend the immediate parties to influence governmental decision-making, compel corporate divestment or investment in sectoral activities, and directly foster, inform and ignite public discourse.[119] Investment arbitration has been criticised for having a direct effect in the form of payment of damages and an indirect effect in the form of "regulatory chill".[120] The key issues are whether a government measure taken for the public welfare objective of climate change mitigation can be held to be indirect expropriation, discrimination, or a breach of fair and equitable

115 Scott and Rayfuse, above n 3, at 12.

116 Vadi, above n 4, at 1313–1314.

117 UNCTAD *World Investment Report 2015: Reforming International Investment Governance* (UNCTAD, Geneva, 2015) at 106 <http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf>.

118 Vadi, above n 4, at 1314.

119 At 1317.

120 Freya Baetens "Foreign Investment Law and Climate Change: Legal Conflicts Arising from Implementing the Kyoto Protocol Through Private Investment" (November 2010) Research Gate <https://www.researchgate.net/publication/256028595_Foreign_Investment_Law_and_Climate_Change_Legal_Conflicts_Arising_from_Implementing_the_Kyoto_Protocol_Through_Private_Investment> at 11.

treatment (FET). Several environmentally motivated disputes contain generally applicable statements which inform the approach arbitral tribunals could take towards climate change issues.[121]

Ethyl v Canada illustrates how an ISDS claim causes regulatory "chill" in governmental environmental policy-making, with Canada repealing its newly implemented ban on a fuel additive after a tribunal rejected its protest to jurisdiction, despite genuine environmental concerns regarding effects of vehicle emissions systems.[122] As governments implement climate change measures similar issues could arise, particularly as many countries' carbon-intensive industries are dominated by multinational extractive enterprises possessing the skill and capital not only to explore and develop those harmful activities but also the tenacity, resources and standing to bring claims under investment treaties.[123] Developing countries face even greater pressure to avoid the necessary regulatory changes under the threat of arbitration, given many are unlikely to be able to compensate the expropriation.

Methanex v United States demonstrates that arbitral tribunals can take a more restrictive interpretation of investment treaties' effect on regulators. *Methanex* was another North American Free Trade Agreement (NAFTA) Chapter 11 dispute concerning a fuel additive. The tribunal found that "as a matter of general international law, a non-discriminatory regulation for a public purpose, which is enacted in accordance with due process" that affects a foreign investor or their investment is not an expropriation and is not compensable unless "specific commitments have been given by the regulating government to the then putative foreign investor contemplating investment that the government would refrain from such regulation".[124] Evidently environmental protection and sustainable development protections are not entirely subjugated to investment priorities. Tribunals, aware of these concerns, try to strike the appropriate balance.

The decision in *Methanex*, followed by the tribunal in the non-environmental case of *Saluka*,[125] represented an important departure from the conservative, pro-investor approach of tribunals in *Metalclad* and *Tecmed*,[126] as non-discriminatory environmental regulation in the public interest was

121 Gehring, Cordonier Segger and Hepburn, above n 85, at 102.

122 *Ethyl Corporation v Canada (Award on Jurisdiction)* NAFTA/UNCITRAL, 24 June 1998.

123 Gehring, Cordonier Segger and Hepburn, above n 85, at 109.

124 *Methanex Corporation v United States of America (Final Award on Jurisdiction and Merits)* (2005) 44 ILM 1345 at [7].

125 *Saluka Investments BV v The Czech Republic (Partial Award)* UNCITRAL, 17 March 2006 at [263].

126 *Metalclad Corporation v Mexico (Award)* (2000) 40 ILM 36; *Tecnicas Medioambientales Tecmed SA v Mexico (Award)* (2003) 43 ILM 133.

considered beyond the reach of investment arbitration.[127] If future tribunals consistently adopt the *Methanex* "police powers" reasoning, then the risk of governmental policy space being infringed is reduced and as such the threat to climate change-related policies lessened. This strong interpretation of police powers is increasingly adopted by tribunals, including in the recent *Philip Morris* decision.[128] However, as illustrated by the post-*Methanex*, non-environmental, decision of *Azurix*, where the tribunal preferred the *Tecmed/Metalclad* approach, investment jurisprudence is not guaranteed to develop in this manner.[129] The lack of a doctrine of precedent and the open question of how regulatory expropriation rules should be interpreted leaves environmental regulation, and thus climate action, exposed to investor challenges of indirect expropriation.[130]

Non-discrimination remains an important issue. An investment project's consideration of the public interest in lower emissions compared to a project that lacks such considerations may serve to distinguish "like" circumstances and thereby be non-discriminatory.[131] In *Parkerings v Lithuania* the state imposed more onerous requirements on an investment which impacted a UNESCO World Heritage Site than on another investment without such impacts. The tribunal found that the state could legitimately take into account a proposed project's environmental impacts.[132] Satisfying Kyoto requirements and future international climate commitments could be valid grounds to distinguish different economic activities.[133]

5.1 ISDS and Renewable Energy

5.1.1 Renewables investors utilising ISDS to attack regressive state policies

Renewable energy programmes, in particular FITs, are expensive for governments and are often targeted by domestic policy as a means to reduce deficit. International investment law can therefore operate as a legal mechanism to

127 Kate Miles "Arbitrating Climate Change: Regulatory Regimes and Investor-State Disputes" (2010) 1 Climate Law 63 at 74.
128 *Philip Morris v Uruguay (Award)* ICSID ARB/10/7, 8 July 2016 at [287]–[307].
129 *Azurix Corporation v Argentina (Award)* ICSID ARB/01/12, 14 July 2006 at [309]–[310]; Miles, above n 127, at 74–75.
130 August Reinisch "Expropriation" in Peter Muchlinski, Federico Ortino and Christoph Schreuer (eds) *The Oxford Handbook of International Investment Law* (Oxford University Press, New York, 2008) 407 at 437–438.
131 Gehring, Cordonier Segger and Hepburn, above n 85, at 106.
132 *Parkerings-Compagniet AS v Lithuania (Award)* ICSID ARB/05/8, 11 September 2007 at [375], [392].
133 Vadi, above n 4, at 1327.

protect the economic interests of renewable energy providers and thereby protect climate change mitigation measures.[134]

In *Nykomb* a Swedish company was awarded compensatory damages for a change of Latvian government policy relating to the double-tariff payment incentive for green energy investment.[135] While the tribunal did not find that withholding the incentive constituted an indirect expropriation, the tribunal found that withholding payment of double-tariff from the claimant but not from two Latvian power companies constituted discriminatory treatment.[136] Enforcing stability and certainty encourages investment in renewable energy and technology, disincentivising governments from reneging on climate change commitments.[137] As private, non-state actors are largely responsible for excessive emissions, stable and clear investment rules could encourage private funding of clean development and renewable energy projects.[138] Seven claims are pending against the Czech Republic relating to the government changing a guaranteed FIT payable to solar generators who fed electricity into the grid.[139] Under Czech law the FIT could not be lowered by more than 5 per cent per year; in 2010 the government reversed its support for solar energy and applied a retrospective levy of 26 per cent on profits from private solar plants.[140] Investors claim the Czech Republic violated its investment treaty obligations by reneging on its incentive commitments. Without ISDS, the investor would have a futile claim in a Czech court.[141]

Similarly, Spain faces approximately 30 different solar claims. Spain passed laws in late 2010 imposing a production cap on Spanish solar power plants and reducing a guaranteed subsidy period from the lifetime of the installations to 30 years. Investors claim these laws will adversely impact their investment in solar

134 At 1318.
135 *Nykomb Synergetics Technology Holding AB v Latvia (Award)* SCC 118/2001, 16 December 2003.
136 At 33–34.
137 Vadi, above n 4, at 1350.
138 Gehring, Cordonier Segger and Hepburn, above n 85, at 102.
139 Luke Eric Peterson and Zoe Williams "The Czech Republic: Updates on Fifteen Investment Treaty Disputes" *Investment Arbitration Reporter* (Santa Monica, 24 May 2016) <http://www.iareporter.com.ezproxy.auckland.ac.nz/articles/the-czech-republic-updates-on-fifteen-investment-treaty-disputes/>.
140 Jarrod Hepburn "Renewable Energy Arbitration Claims on Horizon, but States take Differing Approaches to Public Disclosure" *Investment Arbitration Reporter* (Santa Monica, 7 September 2011) <http://www.iareporter.com.ezproxy.auckland.ac.nz/articles/renewable-energy-arbitration-claims-on-horizon-but-states-take-differing-approaches-to-public-disclosure/>.
141 Alex Weaver "Between ICSID and a Hard Place" (10 April 2015) Columbia Journal of European Law <http://cjel.law.columbia.edu/preliminary-reference/2015/between-icsid-and-a-hard-place/>.

technology.[142] The first arbitral award, *Charanne BV*, was in favour of Spain, finding that there had been no indirect expropriation nor violation of the FET standard. The decision indicates that the regulatory framework in force at the time of the investment could not in itself have generated legitimate expectations without a specific commitment.[143] The tribunal also quoted the comments of the *El Paso v Argentina* tribunal rejecting that the stability of the legal and business framework is an essential element of FET.[144] However, this is not a binding precedent for other Spanish solar cases. Nevertheless, given in *Charanne BV* the investors could not successfully use ISDS to protect their renewables, this adds weight to the argument that renewable programmes should be public rather than private investment.[145] The evidence indicates that the large-scale development of renewable energy will be more effective with an active role of government and public-sector utilities compared to any expensive system of public subsidies for private investors, which while capable of producing substantial renewables have been proven to lack reliability.[146] An increasingly popular perspective is that an effective climate action plan needs to be insulated from the turbulence of the private market and removed from the volatile ISDS system.

Conversely, in October 2016, the *Windstream* decision was announced.[147] Although not publicly available at the time of writing, public statements confirm that Canada was held to have breached the FET standard by imposing a moratorium on offshore wind farms due to environmental and sanitation concerns, with the tribunal ruling the project should go ahead.[148] However, the reasoning appears to be that Canada cited scientific uncertainty about the project's harmful environmental effects without thorough investigation, which suggests that states should methodically establish the climate impacts of projects before abandoning them on those grounds.

142 Hepburn, above n 140.
143 *Charanne BV and Construction Investments SARL v Spain (Award)* SCC 062/2012, 21 January 2016 at [499].
144 At [502]; *El Paso v Argentina (Award)* ICSID ARB/03/15, 31 October 2011 at [350], [352].
145 Klein, above n 10, at 101.
146 David Hall, Steve Thomas, Sandra van Niekerk and Jenny Nguyen "Renewable energy depends on the public not private sector" (2013) The University of Greenwich, Public Services International Research Unit at 2.
147 *Windstream Energy LLC v Canada (Award)* PCA 2013-22, 27 September 2016.
148 Luke Eric Peterson "Breaking: US Investor Awarded $25 Million for NAFTA Breach by Canada" *Investment Arbitration Reporter* (Santa Monica, 13 October 2016) <http://www.iareporter.com.ezproxy.auckland.ac.nz/articles/breaking-u-s-investor-awarded-25-million-for-nafta-breach-by-canada/>.

5.1.2 Arbitral tribunals upholding governmental climate action in the face of attacks

Climate change-related arbitration cases have the potential to be an effective tool for enforcing climate change principles in disputes between states and non-state actors, as well as highlighting the strengths, flaws and interplay of the respective branches of public international law.[149] There have been some significant environmental successes. In *Mesa Power v Canada* a Texas-based energy company owning wind farms in Ontario brought a claim against Canada in relation to the province's renewable energy programme. After its subsidiaries unsuccessfully applied for multiple long-term fixed-price feed-in tariff (FIT) contracts to sell renewably generated energy into the Canadian power grid, Mesa argued that the province changed the rules regarding power purchases by renewable energy producers in favour of other investors.[150] Notably this decision concerned the same project as the *Canadian-FIT* WTO dispute, which produced some dialogue between the trade and investment regimes. In contrast to the WTO decision, the arbitral award is a stepping stone towards greening of the NAFTA economies given it is highly facilitative of climate mitigation strategies such as the FIT. Contrasting outcomes regarding compliance under the respective rules of trade and investment for substantially the same climate policy highlights broader issues for a coherent, comprehensive international response to climate change.

While finding no breach of the art 1105 FET standard, the majority made some important comments on governmental policy-making. Significantly, despite criticising some policy choices as imprudent or mistaken, the majority cited deference to state decision-making that offered real benefits.[151] Indeed, deference was inherent in the legal standard applied. Moreover, despite certain changes being departures from the FIT rules, the tribunal held these changes were envisaged in the overall framework, going as far as to hold that investor protection "provides no guarantee against regulatory change".[152] Evidently conscious of the vulnerability of these programmes, the tribunal was willing to grant flexibility where the state was upfront and transparent with the possibility of regulatory modification.[153] These important reiterations of principle perhaps signal that the entrenched fossil-fuel industry may not be impervious to regulatory change. Juxtaposing the views of the majority with the dissenting member's views illustrates the avenues open to the tribunal to find

149 Vadi, above n 4, at 1318.
150 *Mesa Power Group LLC v Canada (Award)* PCA 2012-17, 24 March 2016 at [42], [207].
151 At [553], [583]–[585].
152 At [614].
153 At [614], [619].

the government had acted arbitrarily and unjustly by discriminating through the agreement with the Korean Consortium. This strongly indicates that the tribunal was orientated towards preserving governmental sustainable policy-making.

The tribunal in *Al Tamimi v Oman*, a dispute relating to the application of environmental regulations to a mining operation, rejected a claim of expropriation where Oman terminated the investor's lease for non-payment of a fine for exceeding his mining permit conditions.[154] Crucially, the FTA's environmental chapter was found to expressly qualify the protections in the investment chapter.[155] These environmental provisions were relevant to interpreting the minimum standard, and the tribunal noted that where "the impugned conduct concerns the good-faith application or enforcement of a State's laws or regulations relating to the protection of its environment", this is a particularly weighty factor telling against a breach of the minimum standard.[156] Additionally, in an encouraging move, the tribunal ordered the investor to pay 75 per cent of Oman's costs, for ignoring "serious barriers" to his claim.

5.1.3 Potential remains for investors to successfully attack climate-friendly regulation

While some arbitral tribunals have appeared accepting and accommodating of environmental protections, recent decisions indicate that ISDS's inherent flaws actively constrain the ability of arbitral tribunals to effectively integrate climate change mitigation into investment rules. The gains of *Al Tamimi* and *Mesa* must be viewed in light of the earlier decision of *Bilcon*. While admittedly not directly related to climate change, the majority gave unsuitable credence to the investors' claims that there was "inappropriate political interference in the regulatory process".[157] This had involved the Canadian environmental assessment committee taking into account community core values in declining permissions.[158] The issue is that countering climate change involves making a value judgement to prefer long-term sustainability over short-term profitability. Nevertheless, the decision is an important reminder that, as per *Waste Management Inc*, specific commitments, representations, assurances or promises aimed at inducing a specific investor to make an investment can, if not fulfilled by a host state, found a claim for breach of the minimum

154 *Al Tamimi v Oman (Award)* ICSID ARB/11/33, 3 November 2015.
155 United States–Oman Free Trade Agreement (signed 19 January 2006, entered into force 1 January 2009), chh 17 and 10 respectively.
156 At [390].
157 *Bilcon of Delaware Incorporated v Canada (Award)* PCA 2009-04, 17 March 2015 at [15].
158 At [450]–[454].

standard of treatment.[159] This is pertinent given the numerous registered cases relating to oil, gas and mining disputes, especially as reneging on guarantees or representations is a common allegation.

The arbitral proceedings taken by Vattenfall against Germany are particularly concerning. A local authority imposed more onerous water-quality regulations than had been originally guaranteed, partly on the grounds of the contribution made by the coal-fired plant to climate change.[160] Vattenfall argued that this made the investment unviable.[161] After Vattenfall filed arbitration proceedings with the International Centre for Settlement of Investment Disputes (ICSID), the dispute was settled with Germany agreeing to an environmentally weaker permit.[162] In 2012 a second suit was filed by Vattenfall (*Vattenfall II*) regarding Germany's nuclear power phase-out, which entails eliminating nuclear power plants by 2022 and reaching 60 per cent renewable energy by 2060.[163] While details are not known, the tribunal appears to have dismissed Germany's preliminary objections that the claim was "manifestly without legal merit", as the parties have exchanged a first round of written pleadings and are carrying out document production.[164] The *Vattenfall* litigation reinforces that it is desirable to comprehensively apply the "police powers" doctrine to climate change-related investment claims. Crucially, the legitimate purpose of climate-related measures is substantiated by the extensive scientific evidence compiled and recognised by numerous international institutions and treaties.[165] While we should remain alive to the possibility of illegitimate host-state expropriation or disguised discriminatory behaviour, the urgent need for immediate action supports giving states the benefit of the doubt.

Additionally, the secrecy of the *Vattenfall II* proceedings raises serious concerns regarding the international arbitration system's suitability to deal with issues such as climate change. While lack of transparency and private

159 *Waste Management Incorporated v Mexico (Award)* ICSID ARB(AF)/00/3, 31 May 2004 at [98].
160 Gehring, Cordonier Segger and Hepburn, above n 85, at 87.
161 Nathalie Bernasconi-Osterwalder and Rhea Tamara Hoffmann "German Nuclear Phase-Out Put to the Test in International Investment Arbitration? Background to the new dispute *Vattenfall v. Germany (II)*" (2012) IISD Briefing Note at 4.
162 *Vattenfall AB, Vattenfall Europe AG, Vattenfall Europe Generation AG v Germany (Award)* ICSID ARB/09/6, 11 March 2011.
163 Christoph Pauly "Europeans Fear Wave of Litigation From US Firms" (26 January 2015) Spiegel Online <http://www.spiegel.de/international/business/eu-fears-ttif-free-trade-agreement-could-spur-litigation-a-1015013.html>.
164 Jarrod Hepburn "European Commission to Pursue Germany under EU Law for Failing to Enforce Environmental Laws at Vattenfall Power Plant" *Investment Arbitration Reporter* (Santa Monica, 31 March 2015) <http://www.iareporter.com.ezproxy.auckland.ac.nz/articles/european-commission-to-pursue-germany-under-eu-law-for-failing-to-enforce-environmental-laws-at-vattenfall-power-plant/>.
165 Vadi, above n 4, at 1328.

adjudication without appeal or review are common criticisms of ISDS, arguably these are even more powerful in the context of climate change, where arbitral tribunals are making decisions that will determine whether climate change-related action is legal, and whether states, and thereby their citizens, will have to pay significant sums of compensation when those funds could be channelled towards climate change mitigation.[166] However, there is nothing in the ICSID rules that requires confidentiality unless agreed by the parties or ordered by the tribunal, as supported by the decision in *Abaclat*.[167] If ISDS is to deal with climate change-related disputes in a procedurally satisfactory manner, tribunals should recognise the inherent public interest in these issues. Transparency invites investors to consider their reputation, provokes public scrutiny, and stimulates discussion on international investment rules and their interplay with the environment and climate, thereby strengthening transition to renewable energy and promoting sustainable development.[168] Only then can the full benefits of climate-related litigation be achieved.

5.2 Implications for Investment Arbitration and Climate Change

Despite seminal arbitral decisions such as *Methanex* and *Saluka* providing scope for climate change measures within traditional investment rules, recent decisions illustrate that the results for climate action are varied. Thus it cannot be unequivocally stated that the ISDS cases where governmental climate policy was overruled were clear instances where climate action was a mere facade. Overall, the evidence indicates that the current investment arbitration legal framework is too unpredictable to support climate action effectively. However, the Paris Agreement represents an international commitment of unprecedented strength to combat climate change. Where the respondent state is a signatory, a tribunal could utilise the Agreement to apply the novel climate regime principles ex officio, as part of international law, through references in the IIA or as incorporated within domestic law, putting such matters to the parties in the course of proceedings and inviting comment and argument.[169] Article 31.3(c) of the Vienna Convention on the Law of Treaties (VCLT) provides

166 Nathalie Bernasconi-Osterwalder and Martin Dietrich Brauch "The State of Play in *Vattenfall v. Germany II*: Leaving the German public in the dark" (2014) IISD Briefing Note at 5.

167 *Abaclat and Others v Argentina (Confidentiality Order)* ICSID ARB/07/5, 27 January 2010 at [72].

168 Bernasconi-Osterwalder and Brauch, above n 166, at 12.

169 Nahila Cortes "Climate Change in Investor State Arbitration: Ideas on Application Ex Officio and Transnational Public Policy" (30 September 2016) Kluwer Arbitration Blog <http://kluwerarbitrationblog.com/2016/09/30/climate-change-investor-state-arbitration-ideas-application-ex-officio-transnational-public-policy/>.

that any relevant rules of international law applicable in the relations between the parties shall be taken into account when interpreting a treaty. Accordingly, the international climate change obligations of states should be considered in disputes before investment arbitral tribunals.[170] Even where the Paris Agreement is not binding on a state, the principles and norms could be applied through the nebulous concept of transnational public policy — that is, the vitally important fundamental interests of the international community.[171] Given that the touchstone of arbitration is consent, applying climate principles may be presumptive, yet in *Indus Waters Kishenganga Arbitration* the PCA ruled that even when interpreting treaties enacted before the development of international environmental law such principles must be taken into account.[172] Adoption of this approach could be expedited by agreement or indications of approval from parties at climate negotiations.

The international trade and investment regimes are heavily implicated in the causes and solutions to climate change. It would be naive to ignore their integral role in achieving more progressive international climate policy when significant alterations to these regimes are essential for successful climate change mitigation. Based on the findings from parts 3, 4 and 5, part 6 of this article seeks to sketch some of these possibilities and outline the relevance of adjudication for the future in the context of climate change.

6. LOOKING FORWARD

6.1 ICJ Findings and Projection

Recent decisions of the ICJ contribute to the international dialogue in a manner which is increasingly positive yet at present provides insufficient guidance on climate issues. Despite posing an existential threat, climate change is not a regulatory challenge easily solved through inter-state dispute settlement.[173] The role of the ICJ should be viewed as complementary to a broader political strategy to decisively mitigate climate change.[174] Nevertheless, the significance of formal ICJ adjudication should not be neglected, given the symbolic and political import of such a decision.[175]

170 Vadi, above n 4, at 1348.
171 Cortes, above n 169.
172 *The Indus Waters Kishenganga Arbitration (Pakistan v India) (Final Award)* PCA 2011-01, 20 December 2013 at [111].
173 Stephens, above n 23, at 187.
174 Strauss, above n 35, at 356.
175 French and Rajamani, above n 22, at 455.

Regardless of successfully imposing state responsibility, the capacity of the ICJ to rule on the science should not be overlooked. Precedent for the ICJ's willingness to assess competing scientific claims is found in the *Whaling* case, where cross-examination of the parties' scientific experts was key to the Court reaching its conclusions.[176] Thus the ICJ could affirm the factual basis underpinning climate change, recognising that scepticism on these central issues is no longer tenable, sending a strong message to states and political actors and ideally accelerating meaningful negotiations. Resolving the remnants of the scientific dispute would be significantly authoritative for future actions in other international tribunals and national courts.[177]

Given the significant political and economic considerations and purely legal obstacles to be surmounted, climate change has understandably not been the core subject of a dispute before an international adjudicatory body:[178]

> Ultimately, it is the nature, quality and extent of the primary substantive obligations (and this includes, but stretches beyond, the conventional rules to include regional and domestic law) which are foundational. Dispute settlement is consequently synergistic upon that.

The climate regime's vague and quite possibly non-binding obligations need strengthening before significant reliance is placed on an ICJ ruling on climate-related principles. If a climate dispute were to come before the ICJ the current status of international legal obligations relating to climate change may lack sufficient content for a positive ruling to provide clarification, potentially impeding climate action in other forums too. Positive developments suggest growing potential for ICJ guidance regarding climate change as transboundary harm, yet negotiations to improve international obligations remain invaluable in the climate context.

6.2 Deficiencies in WTO Adjudication

While WTO jurisprudence has sought to clarify that WTO rules are sufficiently flexible to accommodate legitimate environmental measures, WTO dispute settlement risks undermining the political legitimacy of the trade and environment policy process by interpreting the rights and obligations of WTO members in the absence of a negotiated consensus on controversial trade and environment issues.[179] There are inherent limitations in the use of dispute

176 Sands, above n 29, at 29–30; *Whaling in the Antarctic (Australia v Japan, New Zealand Intervening)* [2014] ICJ 226.

177 Sands, above n 29, at 29.

178 French and Rajamani, above n 22, at 455.

179 Shaw, above n 63, at 24.

settlement to resolve multilateral legal questions. Policy-making through litigation breeds unpredictability, and as the legitimacy of the WTO stems from its membership, trade and environmental policy should also be sourced from this constituency.[180] There is also the need for a litigant, whose case also sets the boundaries of the law under consideration. Nothing under the WTO Dispute Settlement Understanding empowers the Appellate Body to "make law" or offer interpretative guidance regarding provisions of the covered agreements in an abstract manner beyond the scope of what is necessary for a particular dispute, which would exceed the Appellate Body's adjudicatory function. There is a compelling argument that legitimacy is about process, involving a settlement on policy issues as the result of transparent deliberation, which can only be achieved predominantly by legislative processes inclusive of all stakeholders.[181]

In essence, a number of leading decisions illustrate that while WTO adjudicators are willing to engage with the conflicting policy dimensions to these cases, they are constrained by obsolete aspects of the trade regime's legal framework, which at its inception did not comprehend the existential nature of climate change and continues to actively entrench an unsustainable global economy. Combined with adjudication's intrinsic limitations, this indicates that we cannot rely on WTO dispute settlement to transform the trade regime to be more climate-friendly. For climate change to be tackled successfully, both developed and non-Annex I industrialised states have to be part of a carbon management and control regime, and if international trade rules impede this, modification to WTO obligations may have to be part of the solution.[182] Trade liberalisation and the globalisation of production and transport have certainly increased the challenge of regulating emissions, and maintaining current trade and consumption patterns would undoubtedly make climate change harder to solve, indicating that WTO free trade in its current form cannot survive if we are serious about fossil-fuel consumption and deforestation.[183]

The greatest potential for enhancing synergies between regimes lies with shared concepts such as sustainable development, which could bridge the disconnect between trade rules, environmental principles and the urgency of climate measures.[184] This principle was invoked by the Appellate Body in the *US-Shrimp* case as an interpretative guide, indicating that sustainable development infuses WTO law, but without clarifying its legal status.[185]

180 At 24.
181 Rubini, above n 81, at 935.
182 Boyle and Ghaleigh, above n 36, at 31.
183 At 50.
184 van Asselt, above n 65, at 70.
185 Appellate Body Report, above n 70, at [129]–[131]; Christina Voigt *Sustainable Development as a Principle of International Law: Resolving Conflicts between Climate Measures and WTO Law* (Brill, Leiden, 2009) at 136.

By doing so with reference to its inclusion in the WTO Agreement preamble, as an objective it would appear to infuse all WTO agreements.[186] Voigt rightly proposes that sustainable development provides the overarching framework under WTO rules to invoke exceptions and pursue non-trade objectives.[187] However, its role in the politics and adjudication of institutions must increase if it is to have meaningful climate impact. Greater emphasis on sustainable development as an objective of international trade law could justify necessary exceptions and deviations from core principles of free trade and non-discrimination to combat climate change.[188] Moreover, confirming that sustainable development has legal status as a general principle of law, independent of international trade law, would have the advantage of producing a more balanced assessment of environmental considerations in a WTO dispute relating to measures taken pursuant to climate treaties.[189] Leadership on climate change by the WTO through sustainable development could increase collaboration between different national and international bodies and allocation of greater resources to tackling the issue.[190]

6.3 Modification of Investment Rules

Arbitral decisions illustrate that investment tribunals are not the best forum to adjudicate climate-related disputes due to their limited jurisdiction, highly specialised mandate, and inherent averseness to fully considering environmental aspects of the cases before them.[191] The brief, vague wording of various expropriation clauses cultivates uncertain jurisprudence. By nature, arbitration is retroactive rather than prospective and can only address the specific issue in the case at hand, with the requirement that the claimant win or lose, which prevents multifaceted solutions to complex interpretational challenges. Accordingly, extra-arbitral methods of interpretation have significant benefits. For instance, Canada, Mexico and the USA entered into the 2001 Free Trade Commission Note. The *Mesa* tribunal accepted that this clarified that FET under NAFTA is no more onerous than the minimum standard of treatment defined by customary international law and was binding on all NAFTA tribunals.[192] This demonstrates the importance of states remaining engaged with the arbitral

186 At 143.
187 At 143.
188 At 144.
189 van Asselt, above n 65, at 65.
190 Doaa Abdel Motaal “The Trade and Environment Policy Formulation Process” in Adil Najam, Mark Halle and Ricardo Meléndez-Ortiz (eds) *Trade and Environment: A Resource Book* (IISD, 2007) 17 at 25.
191 Vadi, above n 4, at 1350.
192 *Mesa Power v Canada*, above n 150, at [479].

process and actively elucidating their preferred legal standpoint. Official reinterpretations of expropriation provisions to give clear guidance to tribunals would have similar advantages. States would not be bound by obligations they did not contemplate and consent to, and interpretations outside of the adversarial process can contribute to the development of an epistemic community more dedicated to comprehensive solutions.[193] Similarly, civil society should have more access to ISDS via amici curiae — while decisions like *Glamis Gold* are promising,[194] such participation in public-interest issues is not the norm.

Most investment treaties are relatively short, listing only standards of treatment and a clause on dispute settlement, lacking reference to general environmental issues let alone climate change.[195] Yet increased criticisms have resulted in attempts at rebalancing investor-state interests. Reference to climate change or multilateral environmental agreements can foster the cross-pollination of ideas and increase coherence across different branches of international law to deal with common challenges.[196] The wording of the FTA in *Al Tamimi* is the same as the Trans-Pacific Partnership Agreement (TPPA). Despite its apparent defeat after the 2016 US presidential election, ongoing efforts to revive the TPPA include retaining the ISDS provisions in their current form rather than reopening negotiations. Future agreements may also replicate this language. It is therefore encouraging that, in the right circumstances, a tribunal can rigorously interpret strong environmental provisions as colouring the investment obligations. Nevertheless, preserving policy space for climate action remains the responsibility of negotiating governments. These preferential trade agreements should ambitiously set the gold standard for climate protection. Some recent investment treaties expressly refer to climate change in their preambles,[197] and specific provisions even exclude environmental measures from the ambit of the dispute mechanism entirely.[198] Such explicit drafting reduces the potential for ambiguity to be construed in a way that undermines legitimate government climate-focused regulation, and promotes certainty, stability and transparency in the investment environment. Other IIAs contain

193 Michael Ewing-Chow and Junianto James Losari "Which is to be the Master? Extra-Arbitral Interpretative Procedures for IIAs" in Eric De Brabandere and others (eds) *Reshaping the Investor-State Dispute Settlement System* (Brill, Leiden, 2015) 91 at 92.

194 *Glamis Gold Limited v United States of America (Award)* (2009) 48 ILM 1038.

195 Vadi, above n 4, at 1343.

196 At 1344.

197 Agreement on Free Trade and Economic Partnership Between Japan and the Swiss Confederation, Japan-Switzerland 2642 UNTS 3 (signed 19 February 2009, entered into force 1 July 2009), preamble.

198 Agreement Between Belgium-Luxembourg Economic Union and Barbados for the Reciprocal Promotion and Protection of Investments (signed 29 May 2009), art 11.

environmental exceptions similar to those seen in GATT. The decisions indicate that until investment law evolves to better accommodate climate change policies, governments should carefully design and implement necessary climate action in a way that minimises their risk of breaching investment obligations.[199]

Fundamental changes to the investment regime would be undeniably vital for effective climate action, and could even accelerate the process of reform. A proactive role of investment law would have to include low-carbon investment promotion, investment liberalisation or market access to support low-carbon investments, and comprehensive regimes for technology transfer addressing the intellectual property rights of investors. This more significant role is currently hindered by the inadequacy of international investment law itself, with its fragmented, narrow focus, and the unwillingness of stakeholders to engage in a comprehensive multilateral discussion on the matrix of investment, trade, competition and environment.[200] Some scholars and practitioners have proposed the adoption of a multilateral declaration to achieve a comprehensive approach across the investment and climate change regimes.[201] However, the vast number of bilateral investment treaties currently in force creates practical obstacles to multilateral declarations and interpretative notes potentially not providing the legal certainty needed to satisfy the requirement that changes be implemented in all agreements.[202] Institutions are established to stabilise behaviour, and often develop in an insular, sectoral fashion with narrow objectives, to the exclusion of other policy areas, making alterations to achieve interplay management challenging.[203] The outcomes of arbitral decisions illuminate this narrow approach, fostering cognisance and stirring interest in bridging these structural gaps. Coherence could be increased by strengthening the climate regime, indirectly setting the rules for the energy sector to support country-level policies for transition to a low-carbon society.[204]

199 Nigel Bankes "Decarbonising the Economy and International Investment Law" (2012) 30 JENRL 497 at 510.

200 Aerni and others, above n 6, at 186.

201 Wolfgang Alschner and Elisabeth Tuerk "The Role of International Investment Agreements in Fostering Sustainable Development" in Freya Baetens (ed) *Investment Law within International Law: Integrationist Perspectives* (Cambridge University Press, Cambridge, 2013).

202 Aerni and others, above n 6, at 186.

203 Sylvia I Karlsson-Vinkhuyzen and Marcel TJ Kok "Interplay Management in the Climate, Energy, and Development Nexus" in Sebastian Oberthür and Olav Schram Stokke (eds) *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (MIT Press, Cambridge, 2011) 287 at 287.

204 At 300.

6.4 Broader Considerations

6.4.1 Litigation's awareness-building capacity

One of international environmental law's key roles is to ensure that the procedure for determining how to balance the objectives of development and environmental protection has appropriate information and participation by state and non-state actors.[205] The preceding cases reveal that despite the unsuccessfulness of individual climate cases indicating significant scope for improvement in adjudication and policy-making, nevertheless climate-related litigation has awareness-building effects, influencing the development of climate law and policy.[206] The process of preparing, announcing, filing, advocating, challenging and forcing a response from emitters, states, courts and policy-makers has significant repercussions.[207] One of the greatest benefits is that all climate-related proceedings necessitate the collation and presentation of climate science to support the claims made. The value of this process in emphasising key aspects of climate science and facilitating its dissemination to a wider audience through the media traction that litigation inspires cannot be understated.[208] The highly credible standing of courts and tribunals validates the fundamental climate science, assisting in shifting the public's perception of the climate change debate from whether it is occurring to what the best remedies are.[209] Collectively, litigation across adjudicatory forums identifies strengths and weaknesses of international climate policy and contributes immensely to reflection upon the coherence between international legal regimes, which is crucial for both sustainable development generally and climate action specifically.[210] As states begin to design new policy infrastructure for achieving the low-carbon economy demanded by the ambitious Paris Agreement, understanding the interaction between existing rules in different regimes is crucial to international and domestic policy-making.[211] Adjudication will remain a vital means of assessing this process.

The purpose of this article is to highlight that legislators, negotiators, the international community and the world as a whole cannot rely on adjudicators in their respective forums to utilise obsolete international legal rules to coherently and comprehensively respond to the challenge of climate change. While climate litigation has an indisputable role in the dialogical process by inciting further

205 Stephens, above n 23, at 178.
206 Hunter, above n 1, at 375.
207 At 378.
208 At 360.
209 At 364.
210 At 368.
211 Jha, above n 79, at 1–2.

momentum, we cannot fool ourselves that the solution lies within current paradigms. We cannot win the game being played with the environment: we have to change the rules. Part of this certainly involves critical analysis of existing institutional structures and the way allegedly neutral legal language reinforces a particular worldview. Fundamentally, merely mitigating climate change cannot be the goal; we must strive for climate justice. Climate justice cannot be achieved without social justice. Litigation is one tool to help catalyse more change; we cannot rely on litigation to provide the solution.

6.4.2 Human rights

Litigation in international human rights forums has recognised potential to achieve shifts in behaviour and attitudes. Critical discussion of the human rights dimensions of climate change is a vitally necessary element to achieve climate justice. While human rights can provide a powerful vessel by which to champion environmental protection, poorly executed environmental protection measures can cause human rights deterioration.[212] Despite the symbiotic relationship between human rights and the environment, human rights have thus far failed to substantively address climate change and global environmental degradation.[213] Most notably, the Inuit Petition filed before the Inter-American Commission on Human Rights claimed that US climate change policy violated the Inuit's human rights.[214] Despite being declined by the Commission on predominantly procedural grounds, this legal action first explicitly connected climate change and human rights.[215] In addition to seeking specific remedies, the Petition was aimed at using the moral and political rhetoric of human rights to increase both domestic and international pressure to take political action, as well as influencing public opinion on the costs and stakes of climate change.[216] The relatively weak protection of social and economic rights under regional human rights treaties confers scant environmental protection. However, judicial interpretation and elaboration contributes to developing rights-based

212 Frances Seymour "Forests, Climate Change, and Human Rights: Managing Risks and Trade-offs" in Stephen Humphreys and Mary Robinson (eds) *Human Rights and Climate Change* (Cambridge University Press, New York, 2009) 207 at 217.
213 Kate Donald "Human Rights Practice: A Means to Environmental Ends?" (2013) 3 OSLS 908.
214 Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States (7 December 2005).
215 Sara Aminzadeh "A Moral Imperative: The Human Rights Implications of Climate Change" (2007) 30 Hastings Int'l & Comp L Rev 231 at 239.
216 Hunter, above n 1, at 372–373.

environmental protection.[217] For instance, the Inter-American Court of Human Rights has recognised that the right to property includes the rights of indigenous communities to communal property, which in turn includes ownership of the natural resources necessary to enable them to continue their traditional way of life.[218]

Nevertheless, the 2009 Report of the Office of the United Nations High Commissioner for Human Rights perceptively noted that human rights litigation is not well suited to achieve precautionary measures based on risk assessment.[219] While important developments in regional courts have potential to draw new interconnections between rights, communities and the environment, there are few international forums through which climate rights can be invoked.[220] Giving human rights greater weight in future climate negotiating process, particularly through the right to a decent environment under international economic, social and cultural rights, would provide greater scope for rights-based reasoning to contribute to climate justice.[221] Another crucial aspect is utilising civil and political rights to guarantee wide-ranging, robust debate on climate change whilst enhancing participation in political processes.[222] Amplifying human rights will not automatically remedy operational rules of international environmental and economic law, yet utilising rights-based dialectic to identify and frame normative foundations and objectives within the climate framework may have significant benefits. The human rights dimensions of environmental issues have the potential to be responsive to structural and systemic causes of obstacles to rights fulfilment.[223] Claims-making provides the unique transformative advocacy to produce compelling narratives and arguments which elicit intervention and shifts in consciousness, and speaks to the discursive power of human rights as an idea animating activist resistance. This is vital to achieving a new, alternative future beyond the frequently criticised yet solidifying paradigm of trade-obsessed, market-friendly, environmentally hostile human rights — the struggle for environmental justice helping rejuvenate human rights in a more radical form.[224]

Cumulatively, this is part of the dialogical effect, in that meaningful human rights discourse surrounding climate change could impact political moods, prompting reactions from legislators and negotiators, as well as affecting WTO

217 Evadne Grant "International human rights courts and environmental human rights: re-imagining adjudicative paradigms" (2015) 6 JHRE 156 at 158.
218 *Saramaka People v Suriname* Series C No 172 (IACHR), 28 November 2007 at [121]–[122].
219 *UNHCHR Report*, above n 2.
220 Grant, above n 217, at 160.
221 John H Knox "Climate Change and Human Rights" (2009) 50 VJIL 163 at 213.
222 Aerni and others, above n 6, at 158.
223 Donald, above n 213, at 921.
224 At 922.

and ISDS adjudication itself. The human rights framework complements the UNFCCC by refocusing the human person as the central subject of development, emphasising that international cooperation is not simply the obligation of a state towards other states, but also towards individuals.[225] Potentially, WTO rules and international human rights law provide mutually beneficial synergies, increasing the social functions and democratic legitimacy of the global system.[226] Arguably, the universal nature of human rights within international law dictates that various public interest clauses in WTO rules must be construed in conformity with human rights requirements. Specifically, the necessity requirements in the general exceptions therefore give clear priority to the sovereign right to restrict trade if necessary for the protection of human rights.[227] Likewise, if human rights are invoked in the investment context by respondent states to justify the measures complained of, they could function as a defence to claims under the applicable IIA.[228] While arbitral tribunals are yet to fully consider human rights issues, international human rights are unlikely to automatically preclude specific investment obligations given tribunals' investment focus.[229] Requirements for the proportionality and reasonableness of host states' measures will remain central unless a recalibration of investment treaties occurs.

By reformulating existing human rights in the environmental context the powerful reach of existing and developed international and regional monitoring regimes could be harnessed to facilitate more environmental protection.[230] Simply the characterisation of the issue as human rather than merely environmental would increase international scrutiny of state activities.[231] Framing climate change as a human rights problem and highlighting the present and impending human impacts emphasises the urgency of the issue and gives actors a moral imperative to act, which while not automatically remedying political stagnation, may accelerate the advent of a renewed global climate change ethic.[232]

225 *UNHCHR Report*, above n 2, at [87].
226 EU Petersmann "Time for United Nations 'Global Compact' for Integrating Human Rights into the Law of Worldwide Organizations: Lessons from European Integration" (2002) 13 EJIL 621 at 623.
227 At 645.
228 Andrew Newcombe and Lluis Paradell *Law and Practice of Investment Treaties: Standards of Treatment* (Kluwer, Alphen aan den Rijn, 2009) at 108.
229 At 109.
230 Aminzadeh, above n 215, at 259.
231 At 260.
232 At 265.

6.4.3 Compliance procedures

A new form of dispute management is developing in the context of international environmental law — compliance procedures. Established under multilateral environmental regimes, these are driven by the governance institutions of the regime themselves rather than state complainants, negating the reluctance of states to bring proceedings against one another.[233] Compliance procedures such as that under the Kyoto Protocol are quasi-judicial, consisting of assessment by independent experts. They focus on due process, while being more pro-active and preventative than courts, often helping states with transitioning economies to improve internal governance structures.[234] These features will make them invaluable for climate change mitigation. However, full analysis lies beyond the scope of this article, and traditional forums of adjudication and arbitration remain central to combating climate change as their decisions are respected and generally complied with. Moreover, while the successful soft-law mechanisms of the climate regime are commendable, the discretionary and contextual language of mitigation obligations affects compliance with and effectiveness of such provisions. Legally binding obligations, formal hard law, truly sets standards, communicates expectations, exerts reliance and generates compliance.[235] Hard law should be the ultimate goal of climate negotiations as successful climate change governance is so integral to our future.

6.4.4 Political will

It is well recognised that addressing climate change requires a revolutionary shift in the global socio-economic patterns of production and consumption through coordinated multilateral efforts.[236] In order to achieve environmental justice both locally and globally, national and international courts will play a critical role in highlighting the climate policy and human rights dimensions of cases to policy-makers. Yet the role of courts and tribunals in developing effective legal norms is inevitably limited by the convergence of institutional coherency, strategic participation, and ultimately the strength of political will.[237] Simultaneously, climate change litigation, including in the ICJ,

233 Stephens, above n 23, at 176.
234 At 185.
235 French and Rajamani, above n 22, at 446.
236 Francesco Sindico "National Measures and WTO consistency — Border Measures and Other Instruments to Prevent Carbon Leakage and Level the Carbon Playing Field" in Cinnamon Carlarne, Kevin Gray and Richard Tarasofsky (eds) *The Oxford Handbook of International Climate Change Law* (Oxford University Press, Oxford, 2016) at 314.
237 French and Rajamani, above n 22, at 455.

the WTO and ISDS, has a crucial role in raising awareness and provoking responses which put political pressures on world leaders to take action, even if proper comprehensive solutions are out of reach within the current international adjudicatory framework. Legislators and negotiators are likely only to succeed if their constituencies demand results with sufficient force and vigour. International institutions, intergovernmental bodies and civil society groups should mobilise to pressure key states into taking more effective action to deliver on their pledges made under the climate regime.[238]

7. CONCLUSION

Legal thought often views adjudication as a last bastion to vindicate legal rights and achieve justice. This article has endeavoured to demonstrate that placing such hopes in international adjudication would be misguided in the search for climate justice. Viewing these events dialogically elucidates the deficiencies and strengths of various regimes and institutions. Despite international adjudicators' awareness of the climate dimensions, until there is reform in international economic law, trade and investment rules provide little protection for climate change mitigation measures. While that should not detract from the role that climate litigation can play in facilitating that solution, the objective of climate litigation must be realistic. Accordingly, the challenge is essentially political rather than legal, and climate change should be on the negotiating agenda of every institution whose mandate is affected by it.[239]

Despite significant hurdles, a climate case before the ICJ could be beneficial for clarifying factual and legal aspects of climate change with significant authority. A positive finding and signal to prioritise climate considerations would arguably provide further interpretative scope for other adjudicatory bodies to permit green policies in breach of trade and investment rules. Despite the WTO judiciary's efforts at resolving the tension between trade and environment, significantly more negotiating efforts are required to make current trade rules climate-friendly. Likely there would be positive WTO decisions for the climate in the right case and with the right bench. However, urgency necessitates these decisions be swiftly made. This impetus must come from civil society across the international community to rectify prevailing norms. While some of the benefits of the ISDS system theoretically could work to protect climate change measures, the preponderance of cases indicates that while tribunals have endeavoured to be accommodating of green measures to maintain social and political confidence in the system, ISDS by its very nature

238 Boyle and Ghaleigh, above n 36, at 53.
239 At 53.

presents an insidious threat to environmental measures. Overhaul of the system is required if investment protection is to support renewables, nevertheless particular reflection on the desired role and place of investment arbitration is necessary given ISDS's structural flaws. There is untapped potential for human rights dimensions to emphasise climate issues in the trade and investment contexts, yet international human rights' true power lies in their ability to compel political action.

For an article focusing on adjudication and arbitration, it may seem counter-intuitive to claim that the potential fruits of litigation are small. Nonetheless, the conclusion from the decision-making surveyed is that the failures of adjudication to effectively support climate change mitigation and adaptation is symptomatic of greater failings of the international order, as its total and separate parts, to effectively prioritise climate action over an outdated global economic model. This will continue until negotiations successfully establish a legally binding framework. Adjudication can have a vital dialogical role to contribute to achieving concerted climate justice, yet alone it will remain purely palliative. Litigation can raise vital awareness, nevertheless this energy must be channelled into negotiations and institutional development if we are to achieve real and immediate results to prevent irreversible climate catastrophe.